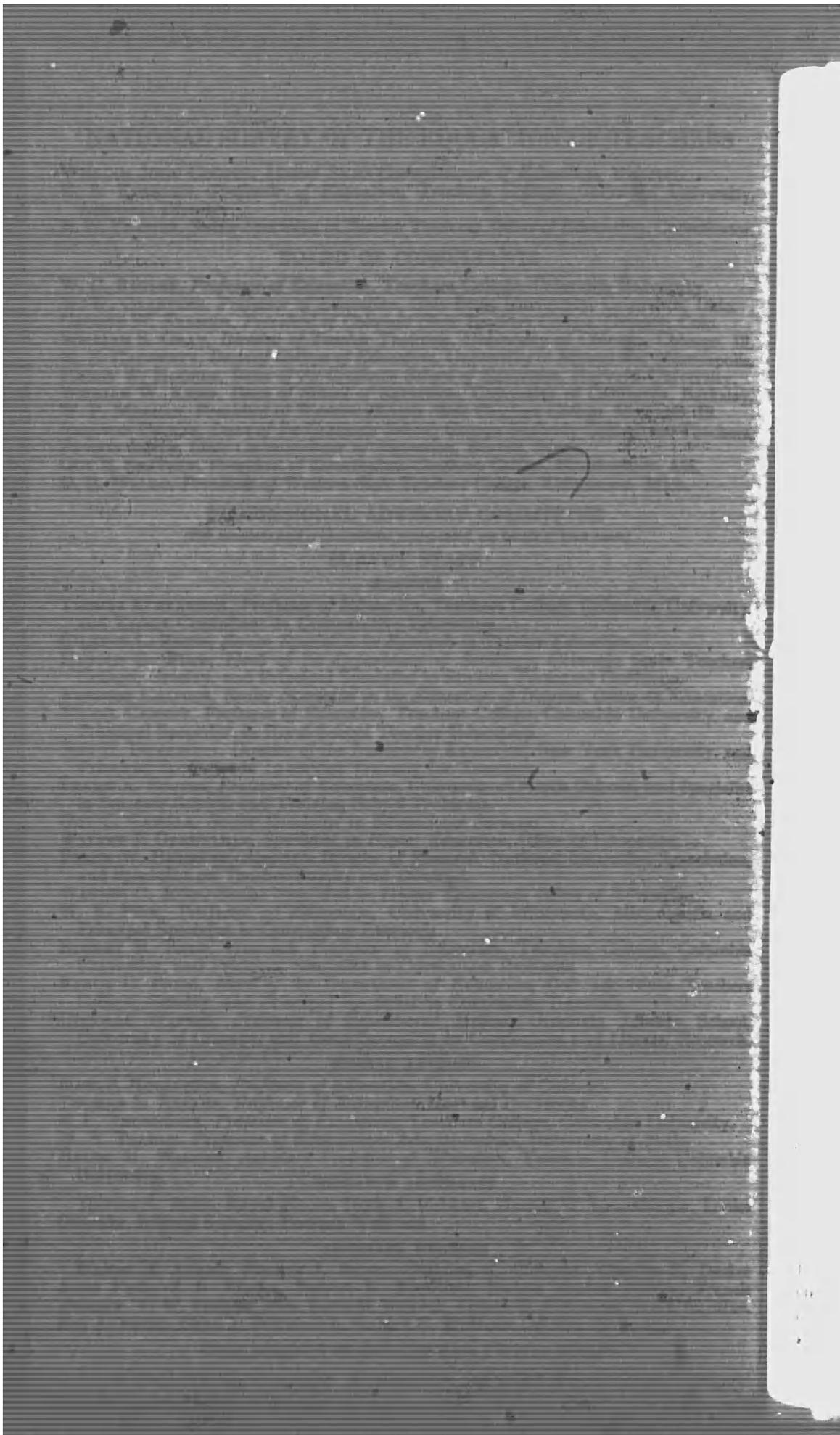
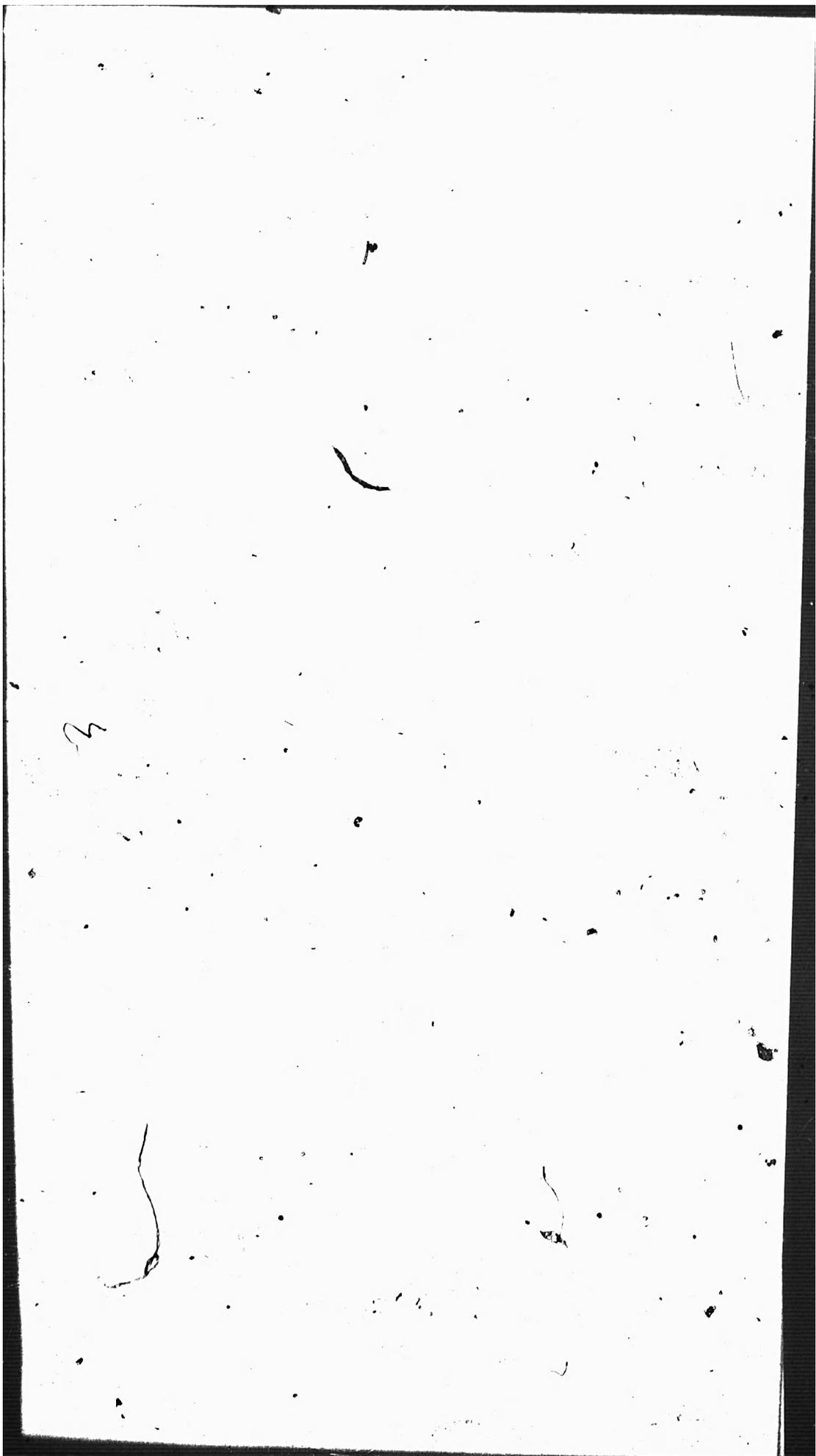


UNIVERSITY OF MICHIGAN





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IN SIX VOLUMES

Volume III

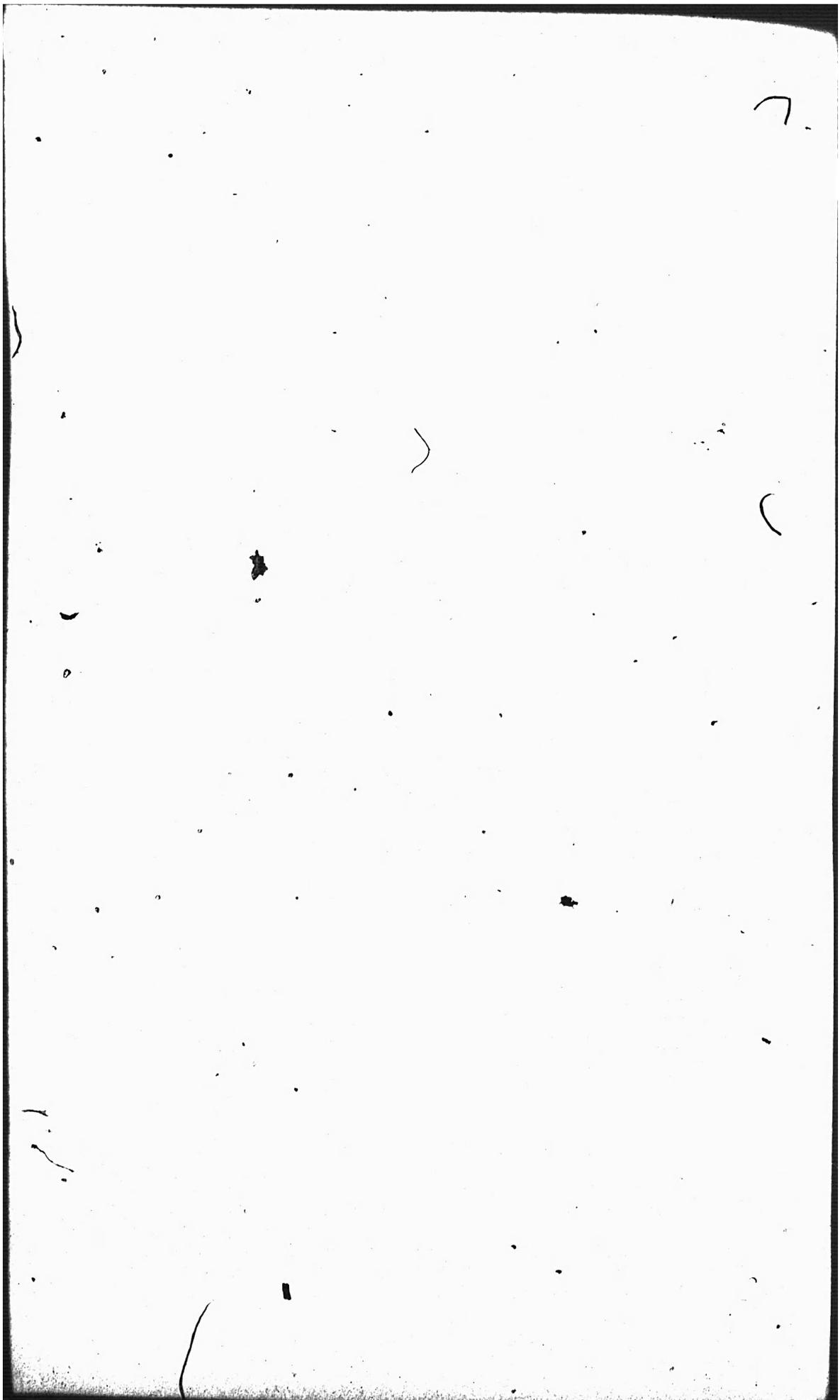
**TEACHER EDUCATION CURRICULA  
IN SEVEN PARTS**

By

**EARLE U. RUGG, WESLEY E. PEIK, FRANK K. FOSTER,  
WALTON C. JOHN, and ROBERT B. RAUP**



**UNITED STATES DEPARTMENT OF THE INTERIOR - - - Harold L. Ickes, Secretary**  
**OFFICE OF EDUCATION - - - - - George F. Zook, Commissioner**  
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## LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,  
OFFICE OF EDUCATION,  
*Washington, D. C., June 1933.*

SIR: The first State normal school in America was founded by the colleagues of Horace Mann at Lexington, Mass. It was legally established during the panic of 1837. The law which gave it birth passed in 1838, and the school opened in 1839. Later it was moved to West Newton and still later to Framingham, where it still exists. This, the first State institution especially designed for the preparation of teachers, was a specialized type of secondary school to which pupils who passed an examination in common-school subjects were admitted. A few States still recognize high schools and junior colleges as adequate teacher-preparatory institutions, but it is believed that such arrangements are now passing.

In 1894 Massachusetts again took the lead in making graduation from the high school necessary for admission to the normal schools. This step automatically put these institutions on the college level. The presidents of these schools now undertook to establish the proper standards for teaching. It was logical that they should find themselves preparing teachers for a profession. In the meantime the universities and the liberal arts colleges gave some attention to teaching. Iowa began in 1873, and Michigan founded a chair of pedagogy in 1879. In general, these schools prepared the high-school teachers and the normal schools prepared elementary school teachers.

Since these early beginnings much progress has been made in the preparation of teachers. The majority of the normal schools have increased the length of their curricula and have become degree-granting teachers colleges and nearly all of the colleges and universities have larger numbers of their graduates going into teaching than into any other line of work. It was only natural that such a diversity of teacher-educating agencies should raise a great many controversial issues and that there should be numerous instances of overlapping and unnecessary duplication of effort. This was evident at the 1915 meeting of the National Education Association in Oakland, Calif., when the desirability of a survey was discussed and a committee to investigate its possibility was appointed. Dr. D. B. Waldo, president of the teachers college at Kalamazoo, was a member of that early committee. At the time of the appointment of the board of consult-

ants of this survey only he and Dr. Lord were still living and in active service.

The Seventy-first Congress authorized a survey of the education of teachers on a Nation-wide scope which has been conducted during the last 3 years under the immediate direction of Dr. E. S. Evenden, professor of education, Teachers College, Columbia University, who has served as associate director.

Of the many perplexing problems that are now attracting attention in the education of teachers more are connected with curricula than with any other phase. Curricula for the preparation of teachers are characterized by extreme diversity on such matters as: Length of time needed, arrangement of subjects, essential content of courses, the place and amount of practice teaching, and many similar elements. This diversity in practice is supported by, and in some cases is the direct result of, conflicting theories as to the best methods of preparing teachers.

Economic maladjustments have recently shown the need for revisions in the curricula for the education of teachers and these revisions should be made in the light of all available information. For this reason the survey gave special emphasis to an analysis of existing curricula for educating teachers and also attempted to assemble the judgments of authorities in this field upon curriculum policies.

The major responsibility for this section of the survey was carried by Dr. Earle U. Rugg, professor of education, Colorado State Teachers College, Greeley, Colo., and Dr. Wesley E. Peik, associate professor of education, University of Minnesota, Minneapolis. Dr. Rugg studied the curricula of normal schools and teachers colleges and Dr. Peik those of junior colleges, colleges, and universities.

Other sections of this volume were prepared as follows: The training school and the summer session by Dr. Frank K. Foster of the survey staff, and now professor of education, University of North Dakota, University; the graduate school in the education of teachers by Dr. Walton C. John, senior specialist in higher education of the United States Office of Education; and the educational theories of staff members of institutions educating teachers by Dr. Robert B. Raup, associate professor of education, Teachers College, Columbia University. Because of the timeliness and importance of the material contained in this volume we recommend that it be published as part of the report of the National Survey of the Education of Teachers.

Respectfully submitted.

WM. JOHN COOPER,  
*Commissioner.*

The SECRETARY OF THE INTERIOR.

## FOREWORD

The professional preparation of teachers for American public schools is a matter of general interest and of national importance. Recent years have shown a noticeable tendency to increase the amount or length of a teacher's preparation, but even though this is true as a country-wide generalization there is great variety in the standards of different States. Some States still permit the certification as teachers of persons who have completed only a high-school course. The range of acceptable preservice preparation is from the low standard just given to a required minimum of 4 years of college.

Problems connected with the length, arrangement, presentation, and content of curricula for teachers are among the most important and the most difficult now confronting American educators.

These problems are among the most important because their solutions will control in vital ways the kinds of teachers prepared and, to the extent that teachers influence them, the kinds of schools to which society will delegate the education of its children. Furthermore, it is believed by increasing numbers of educational and lay readers that in the future teachers are going to exercise a much more dynamic influence in the molding of the new social order now so certainly emerging. If this responsibility is to be assumed by teachers the curricula by which they are prepared become not only important but crucial, because many of their ideals—professional as well as social, economic, political, and moral—will be molded during the preservice period of preparation. Curricula for teachers, therefore, affect directly the education of children and the preparation of a group of citizen-leaders, and both directly and indirectly, immediately and in the future affect the national welfare.

These curriculum problems are also among the most difficult now confronting American educators because curricula for the education of teachers are so complicated in the number of elements involved and the great number of balances and checks which exist among those elements. It is practically impossible to change any element in a curriculum without upsetting a number of balances which have been developed, thereby creating a series of other problems oftentimes more difficult of solution than the first. One illustration will show the difficulties involved. If it is decided that teachers should have specific instruction in the field of speech correction it must be decided: Whether the new course is to be included in the offering of the English department or made the beginning of a new department; whether it is

to replace some course or courses now offered or made an additional requirement in an already crowded curriculum; if it is to replace some existing course from which field is the time to be taken and which course of that field is to be replaced. Even when time has been found for the new course there remains the question of determining the year in which to place it in order to have it render the greatest service. But placing the speech course in the desired year may necessitate changing the time location of one to perhaps several other courses, some of which may have sequential relationships to still other courses.

A few of the problems connected with curricula for teachers which are separately or in many-patterned combinations now pressing for solution grow out of the necessity of answering such questions as:

1. What courses will produce the best teachers for any specific kind of position?
2. What should be the subject-matter content for each course required?
3. What is the most effective order or sequence of prescribed courses in each field?
4. What should be the relationship between prescribed courses and electives?
5. What should be the ratio between professional and nonprofessional subject-matter courses in teachers' curricula? Should these ratios vary in the different college years? Should they vary for teachers preparing for different positions?
6. What are the values and limitations of orientation courses? Of survey courses? Of honors courses? Of integration courses?
7. To what extent is differentiation desirable in the curriculum for different groups of teachers and which elements of which courses should be different?
8. What degree of teaching skill should be secured by the completion of the preservice period of preparation?
9. How much and what kind of practice teaching will produce the required degree of teaching skill? When can this be most effectively offered?
10. What is the relative effectiveness in the development of teaching skill of supervised observations and demonstrations compared with practice teaching?
11. To what extent should the work of the junior college years be general and nonprofessional? Is a separate junior college organization desirable?
12. What proportion of any curriculum should be devoted to the major field of work, to related minors, to education courses, to fields of general culture, and to individual interests?
13. What are the best methods for revising curricula in schools for teachers?
14. In what ways may the practice schools be utilized in the professional treatment of subject-matter courses?
15. What is the place and value of "methods" courses in the preparation of teachers?
16. If curricula for teachers are lengthened to include 5 years, should the fifth or first graduate year be a separate superimposed year or should it become an integrated extension of the undergraduate preparation?
17. What should be the relationship of the summer session to the work of the regular year? Should it have distinctive features or be merely another term or quarter?
18. Should curricula for the education of teachers be made consistent with a prevailing philosophy of education or should they exemplify different philosophies?

19. What curriculum changes should be made in order to prepare teachers to assume more active leadership in the communities in which they work?
20. What extra class activities should be provided for teachers?
21. What are the possibilities of developing final comprehensive functional examinations which will admit only capable-recruits?

These questions are but a few examples of the many which are confronting administrators and teachers in institutions preparing teachers and which are being answered. The answers are being determined by existing data, prevailing practices, predominant theories, financial resources, and political expediencies in such varied mixtures that the resulting practices are kaleidoscopic. Variability is further increased by such elements as type of institution, size of institution, geographical location, size of city in which institution is located, other institutions serving the same area, control—public, private, or denominational—and the social and economic background of students.

Because of all these elements there is a variety of practice which gives empirical support to almost every conceivable plan for teacher education. The resulting confusion of theory and practice is most noticeable in its effect upon the curricula for the preparation of teachers. The obvious need for more agreement in this field combined with the pressure to restrict programs which has been placed upon all of these institutions by the economic situation have made curriculum reforms imperative. Those responsible for the education of teachers in the thousand or more institutions in the United States whose graduates are going into some form of education have realized that the time for temporizing with this situation is past. This realization has rendered them anxious for any additional information concerning the curricula in different types of schools and ready to make their modifications and readjustments in the light of any scientific investigations which have been made in this field.

Because the problems which arise in changing curricula are so troublesome and because the need for revision is so urgent it was decided to devote a considerable part of the Survey's resources to the study of curricula for teachers in the different types of institutions of higher education. It was hoped that the Survey would make a distinct contribution in the field of teacher education if it could make available to junior colleges, normal schools, teachers colleges, colleges, and universities on a Nation-wide basis: (1) Descriptions of present practices regarding the organization of curricula for teachers; (2) enumerations of the most persistent and most controversial issues in curriculum practice; (3) statements of the objectives in the education of teachers which are held by different groups of institutions and by different teaching groups within these institutions; (4) comparisons between theory and practice in the education of teachers; (5) discussions of some of the outstanding examples of innovations and of well-organized programs for preparing teachers; and (6) the attitudes

and opinions of various teaching and administrative groups concerning many of the problems arising in the education of American teachers.

The survey was so organized as to make the curriculum a focal point of attack not only for the major curriculum studies reported in this volume but for most of the other sections of the survey. For example, the history of teacher education cannot be presented without much attention to the changes in curricula, nor can the reading interests of teachers be analyzed without producing suggestions for needed changes in the curricula by which those teachers were prepared.

In the preliminary investigation of the studies which could and should be made by the survey it became apparent that many curriculum problems seemed to involve the differences in practices and theories of the normal schools and teachers colleges on the one hand, and the liberal arts colleges and universities on the other. These differences were also the points at which convictions seemed to be deepest, statements most dogmatic, and emotions most easily aroused. For these reasons the curricula of normal schools and teachers colleges were studied separately from those of colleges and universities. The study of each group was under the direction of a man whose background and educational theories made him a sympathetic interpreter of that group. The plans to be followed in the study of the two groups were agreed upon in conference. In order to make the results comparable every effort was made to have the two studies cover the same fields and the same issues but no attempts whatever were made to harmonize the findings.

Those responsible for the seven parts to this volume are listed in the Letter of Transmittal and are also indicated in connection with each of the parts. The entire study was, of course, developed cooperatively and although limitations in time and staff personnel made it necessary to have some parts of the larger problem studied separately these separate studies were carefully integrated with the two main studies in order to avoid overlapping, and prevent the omission of any important topics.

The fact, however, that different persons were responsible for different topics accounts for some of the minor differences which will be observed in the recommendations at the close of each part. These differences are largely the result of approaching a problem from different angles and with different backgrounds. They represent differences of opinion and interpretation rather than inconsistencies. In cases where the presentation or the recommendation is quite clearly influenced by the personal point of view of the author, as for example, in part VII, that fact is either stated directly or is evident from the text. In such cases the opinions are those of individuals whose study of the problem under discussion justified including their opinions for the consideration of other students of this field. There will also be

numerous instances of repetition of recommendations. These have been allowed to remain because many people will read only the part of a volume which pertains to their own group of institutions.

It is difficult and in many cases impossible with the data now available to make, with any degree of finality, pronouncements about curricula for teachers. The work of teachers is changing so rapidly and so continuously that in the very nature of things the curricula for their preparation must change too rapidly to permit conclusions or recommendations with any expectation that they are final. In order to have the recommendations as complete and usable as possible those responsible for this volume have drawn upon a wide variety of sources for supporting data. A listing of these sources at this point will assist the reader in identifying the various sources as they are referred to in the different chapters as well as to indicate the extensive background of the study.

1. A general inquiry blank concerning curriculum practices was sent to a higher educational institutions which agreed to cooperate and about 450 returns were received in time to be used.

2. The catalogs of 123 institutions selected by a competent jury as representative of the better practices in the education of teachers in the different sections of the country were analyzed for some of the data.

3. The curricula for teachers in 63 of the 123 selected institutions were studied more intensively. The study of these institutions included:

(a) Analysis of catalogs.

(b) Analysis of the most frequently given courses in the major fields and personnel data of the teachers of those courses.

(c) Visits to the institutions and conferences with administrative officers and faculty members.

(d) Analysis of the transcripts of more than 3,700 recent graduates who prepared for teaching in 44 of the institutions.

4. Questionnaires on special topics were sent in connection with the studies of practice teaching facilities, the summer session, and the place of the graduate school in the education of teachers.

5. Two forms were filled out by teachers and administrators which served as the basis for the analysis of educational and social theories and attitudes reported in part VII.

6. Visits were made to many of the institutions in connection with one or more of the studies.

7. National meetings of groups directly concerned with the education of teachers were attended when possible and guidance obtained from their deliberations.

8. Recent literature, especially that describing experiments, investigations, or innovations in curriculum procedure, was reviewed and drawn upon for supplementary data whenever possible.

This volume is the third in a series of six in which the findings of the survey will be reported. It was thought that the publication of separate volumes, each dealing with a division of the survey, would result in a wider distribution of the findings to persons interested only

in parts of the total study. For those interested in curriculum problems, however, it will be desirable to consult in addition to this volume: (1) Volume IV, *Education of Negro Teachers*, by Dr. Ambrose Caliver, which analyzes for this important group of teachers many of the same problems discussed in this volume; (2) volume V, *Special Survey Studies in the Education of Teachers*, each of which has an important bearing upon curricula for teachers; and (3) volume VI, *The Education of Teachers in the United States* which presents in summary form the findings of the entire survey and so far as possible harmonizes the conflicting views.

In the studies of this volume (III), more perhaps than in those of any other volume the survey staff was compelled to depend upon others for essential data. We therefore wish to acknowledge our indebtedness and to express our sincere appreciation of their cooperation. The list is too long to permit specific mention since it includes: Hundreds of presidents, deans, and other administrative officers; nearly 5,000 college teachers; several groups of superintendents; about 500 recent graduates; the two groups of graduate students, one at Minnesota and the other at Greeley, who worked on the analysis of representative courses; and the members of the regular staff of the Office of Education. Many of these individuals were called upon more than once for essential data while others, especially among the teachers of representative courses, gave from 5 to 20 hours of time in supplying the data requested. We hope that the usefulness of the studies which they made possible will repay their professional loyalty.

E. S. EVENDEN,  
*Associate Director,*  
*National Survey of the Education of Teachers.*

# PART I

## TEACHER EDUCATION CURRICULA

### PART I: INTRODUCTION<sup>1</sup>

#### CHAPTER I

#### THE PLAN AND SCOPE OF CURRICULUM STUDIES

Without doubt one of the significant facts related to the education of teachers today is a reliance on prolonged formal preparation, both prior to and after the assumption of the duties and responsibilities of actual teaching.

While theory and practice vary sharply in regions and in various types of public and private institutions on the college level, there are at least two important assets to aid in solving the fundamental question of the proper education of teachers. First, all concerned are conscious of the many problems involved, and second, there is a pronounced trend to gather facts as the basis for any reorganization. Already there is a very considerable amount of evidence to support these two statements.<sup>2</sup>

This volume deals mainly with the curriculum problems in the education of teachers. The evidence summarized will be reflected in the main curricular conditions as they had evolved for the preparation of teachers by 1931, not as such provisions should be, perhaps, in terms of the current crisis and future needs. Various philosophies of teacher education were canvassed; the facts revealed in the various inquiries of this phase of the survey were studied; and several hundred administrators and professors in 58 teacher-preparing institutions of all types, selected as representative of better practices in the education of teachers, were interviewed. Hence, it is felt that suggestions and proposals for consideration by all those concerned in the better preparation of teachers are in order. These will be presented in each main section and will also be brought together systematically in the summary chapters.

*Difficulties of curriculum analysis.*—There are several complexities in teacher-preparing institutions which have made adequate interpretation of the curriculum evidence difficult. First, the variety of types of institutions engaged in preparing teachers is an obstacle. Second, size of institution is a factor; the large institution can seem-

<sup>1</sup> Part I was prepared by Dr. Earle U. Rugg and Dr. W. E. Pelt. It serves as a common basis for parts II and III.

<sup>2</sup> Betts, G. L., Frazer, B. W., and Gamble, G. O. Selected bibliography on the education of teachers, National Survey of the Education of Teachers. Washington, U.S. Government Printing Office, 1933. (Office of Education Bulletin, 1933, no. 10, vol. I.)

ingly attempt to realize a greater variety of objectives or even can attempt to prepare more kinds of teachers than can the small institution. Third, regional variations in philosophy of teacher education are apparent. Fourth, under the typical method of State-educational organization most teacher-preparing agencies are given broad powers without reference to possible duplication of efforts with other State institutions. Fifth, variety in length of curricula, reflecting similar variety in State certification standards, is a barrier to homogeneous interpretation of data collected from these special teacher-preparing agencies. Sixth, studies of selected institutions are representative of the larger schools. Finally, the limitations of catalog statements and questionnaire blanks are obvious. Yet the nature of the survey was such that the data had to be drawn from these sources. Extreme care was used in the interpretations of the catalog statements and in phrasing questions in each inquiry. There is much evidence of internal consistency of the data collected from such sources; hence it is believed that statements which follow in this volume are at least based upon actual conditions and practices in the institutions under review.

TABLE 1.—Classification of institutions of higher education, 1933<sup>1</sup>

Type of institution	State			City			Private			Denomina- tional			All
	Men	Women	Coeducational	Men	Women	Coeducational	Men	Women	Coeducational	Men	Women	Coeducational	
	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Colleges and universities:</b>													
White.....	8	8	78	1	1	9	21	32	71	75	86	217	607
Negro.....			10			1		2	5	2	3	22	45
<b>Independent professional schools:</b>													
White.....	8		10				19	3	67	64		33	204
Negro.....									1	1		1	3
<b>Teachers colleges:</b>													
White.....	0	7	130		2	5		3	6			1	154
Negro.....			9		1	1			1				12
<b>Normal schools:</b>													
White.....			43	1	6	7		21	7	1	2	2	90
Negro.....			7			2						2	11
<b>Junior colleges:<sup>2</sup></b>													
White (2 years).....	2		71			77	8	82	21	16	45	81	353
Negro (2 years).....						1			3		1	6	11
Including 1 year.....													493
All white colleges.....	18	15	332	2	9	98	48	91	172	156	133	334	1,408
All Negro colleges.....			26		1	5		2	10	3	4	31	82
Grand total.....	18	15	358	2	10	103	48	93	182	159	137	365	1,490
<b>Institutions of all types.....</b>													
Men.....	391				115			323			661		1,490
Percent of institutions of all types.....	26				8			22			44		100

<sup>1</sup> Compiled from advance sheet of U.S. Office of Education. Educational directory: 1933.

<sup>2</sup> About 130 more junior colleges would be added if some 1-year institutions had been included. A directory (Junior College Journal, Jan. 1933) lists 493 junior colleges.

<sup>3</sup> Of the denominational institutions, 166, or 11 percent, are Roman Catholic.

NOTE.—The 1933 directory shows 1,496 institutions; the difference is in the mailing list, which included University of California at Berkeley and at Los Angeles as 2 institutions, and 3 other coordinate colleges for women. Texas Christian College (junior college) is closed, making 353 junior colleges for white students instead of 354 in the directory.

*The plan of the curriculum studies.*—The official directory of all higher institutions published by the United States Office of Education early in 1933 showed approximately 1,500 such institutions—all potential teacher-preparing agencies.

Three levels of analysis were decided upon. First, a brief inquiry into curriculum practices in all of those institutions which would agree to cooperate was undertaken. A total of 598 universities, colleges, and junior colleges, and 184 teachers colleges, normal schools, city training schools, and special teacher-preparatory agencies agreed to cooperate. Returns were actually obtained from 344 (58 percent), universities, colleges, and junior colleges and from 145 (79 percent) teachers colleges and normal schools.

Next, a more intensive analysis was undertaken of selected institutions judged to be representative of better practices in the education of teachers. From the data furnished by all higher institutions<sup>2</sup> concerning enrollments, size of faculties, number of volumes in the libraries, value of building and grounds, and income for maintenance combined with judgments of specialists in higher education, two lists of institutions were drawn up. The geographical distribution of these institutions represented 12 regions of the United States, sectioned on the basis of population, number of teachers, and number of institutions of higher education. Later 10 junior colleges were added which sampled types rather than regions. List I included 31 universities, colleges, and junior colleges and 29 teachers colleges and normal schools. List II added 38 selected universities, colleges, and junior colleges and 37 selected teachers colleges and normal schools; a requisite for this selection was that the list should include at least one teacher-preparing institution of both general types under review for each State having such teacher-preparing agencies.

A total of these 135 institutions comprised the source of catalog analysis for the study of practices and policies followed and the pattern of prescription. It constituted the second level of study.

The following normal schools and teachers colleges, selected as representative of better practices in the education of teachers, were used for intensive studies of curricula:

*List I.*—State Teachers College, Tempe, Ariz.; State Teachers College, San Jose, Calif.; State Teachers College, Greeley, Colo.; State Teachers College, Athens, Ga.; Wilson Teachers College, Washington, D.C.;<sup>3</sup> Chicago Normal School, Chicago, Ill.;<sup>4</sup> State Teachers College, Macomb, Ill.; State Teachers College, Muncie, Ind.; State Teachers College, Cedar Falls, Iowa; State Teachers College, Emporia, Kans.; State Teachers College, Richmond, Ky.; State Normal College, Natchitoches, La.; State Normal School, Towson, Md.;<sup>5</sup> State Teachers College, Westfield, Mass.; Western State Teachers College, Kalamazoo, Mich.; State Teachers College, Kivksville, Mo.; Harris Teachers College, St. Louis, Mo.;<sup>6</sup>

<sup>2</sup> Statistics of universities, colleges, and professional schools, and statistics of teachers colleges and normal schools. In Biennial Survey of Education in the United States. Chs. 4 and 5, vol. II. Washington, U.S. Government Printing Office, 1931. (Office of Education Bulletin, 1931, no. 20.)

<sup>3</sup> City training school.

<sup>6</sup> Normal school.

State Teachers College, Montclair, N.J.; State College for Teachers, Albany, N.Y.; State Teachers College, Ada, Okla.; State Teachers College, Indiana, Pa.; College of Education, Providence, R.I.; George Peabody College for Teachers, Nashville, Tenn.; State Teachers College, Denton, Tex.; State Teachers College, Farmville, Va.; State Normal School, Bellingham, Wash.; State Teachers College, Milwaukee, Wis.

*List II.*—State Teachers College, Florence, Ala.; State Teachers College, Conway, Ark.; State Teachers College, Santa Barbara, Calif.; State Normal School, New Britain, Conn.; \* State Normal School, Lewiston, Idaho; † National College of Education, Evanston, Ill.; † State Teachers College, Normal, Ill.; State Teachers College, Terre Haute, Ind.; State Teachers College, Pittsburg, Kans.; State Teachers College, Bowling Green, Ky.; State Normal School, Farmington, Maine; State Teachers College of the City of Boston, Boston, Mass.; † State Teachers College, Bridgewater, Mass.; Detroit Teachers College, Detroit, Mich.; † Michigan State Normal College, Ypsilanti, Mich.; State Teachers College, St. Cloud, Minn.; State Teachers College, Hattiesburg, Miss.; State Teachers College, Springfield, Mo.; State Normal School, Dillon, Mont.; † State Teachers College, Kearney, Nebr.; Keene Normal School, Keene, N.H.; State Teachers College, Trenton, N.J.; State Teachers College, Silver City, N.Mex.; State Normal School, Oswego, N.Y.; † State Teachers College, Buffalo, N.Y.; New York Training School for Physical Education, New York; † State Teachers College, Greenville, N.C.; State Teachers College, Valley City, N.Dak.; School of Education, Western Reserve University, Cleveland, Ohio; † † State Teachers College, Kent, Ohio; State Normal School, Monmouth, Oreg.; † State Teachers College, West Chester, Pa.; State Teachers College, Aberdeen, S.Dak.; State Teachers College, Johnson City, Tenn.; State Teachers College, Commerce, Tex.; State Normal School, Castleton, Vt.; † State Teachers College, Fairmont, W.Va.

The catalogs of all the foregoing schools were used in the analysis of curriculum practices. The institutions in list I with three exceptions were visited by Dr. Rugg and all of them supplied the data on representative courses. The transcripts of student records were made from the institutions in list I with the exception of the institutions located at—Tempe, Ariz.; Chicago, Ill.; Westfield, Mass.; St. Louis, Mo.; Oswego, N.Y., and Milwaukee, Wis.

The following universities, colleges, and junior colleges, selected as representative of better practices in the education of teachers, were used for intensive studies of curricula:

*List I.*—Birmingham-Southern College, Birmingham, Ala.; Pomona College, Claremont, Calif.; University of California, Berkeley, Calif.; Colorado College, Colorado Springs, Colo.; George Washington University, Washington, D.C.; Florida State College for Women, Tallahassee, Fla.; Junior College, Joliet, Ill.; University of Chicago, Chicago, Ill.; University of Notre Dame, Notre Dame, Ind.; Grinnell College, Grinnell, Iowa; State University of Iowa, Iowa City, Iowa; Goucher College, Baltimore, Md.; Harvard University, Cambridge, Mass.; Smith College, Northampton, Mass.; University of Michigan, Ann Arbor, Mich.; Carleton College, Northfield, Minn.; University of Minnesota, Minneapolis, Minn.; Millsaps College, Jackson, Miss.; Stephens College, Columbia, Mo.; † University of Missouri, Columbia, Mo.; University of Nebraska, Lincoln, Nebr.:

\* City training school.  
† Normal school.

‡ Private training school.  
§ Junior college—not indicated by name.

Columbia University (Teachers College) (Barnard College) New York, N.Y.; University of North Carolina, Chapel Hill, N.C.; Oberlin College, Oberlin, Ohio; University of Cincinnati, Cincinnati, Ohio; Reed College, Portland, Oreg.; University of Pittsburgh, Pittsburgh, Pa.; Swarthmore College, Swarthmore, Pa.; University of Texas, Austin, Tex.; College of William and Mary, Williamsburg, Va.

List VI.—University of Arizona, Tucson, Ariz.; Hendrix-Henderson College, Conway, Ark.; Wesleyan University, Middletown, Conn.; Junior College, Augusta, Ga.; Agnes Scott College, Decatur, Ga.; University of Idaho, Southern Branch, Pocatello, Idaho; <sup>1</sup> University of Idaho, Moscow, Idaho; Rockford College, Rockford, Ill.; Morton Junior College, Cicero, Ill.; Junior College, Independence, Kans.; Washburn College, Topeka, Kans.; Berea College, Berea, Ky.; Tulane University of Louisiana, New Orleans, La.; Bowdoin College, Brunswick, Maine; Junior College, Grand Rapids, Mich.; Junior College, Kansas City, Kans.; State University of Montana, Missoula, Mont.; University of Nevada, Reno, Nev.; Rutgers University, New Brunswick, N.J.; University of New Mexico, Albuquerque, N.Mex.; Cornell University, Ithaca, N.Y.; Jamestown College, Jamestown, N.Dak.; Ohio State University, Columbus, Ohio; Oklahoma Christian College, Cordell Okla.; <sup>1</sup> Oklahoma College for Women, Chickasha, Okla.; Bryn Mawr College, Bryn Mawr, Pa.; Brown University, Providence, R.I.; Winthrop College, Rock Hill, S.C.; Huron College, Huron, S.Dak.; Maryville College, Maryville, Tenn.; John Tarleton Agriculture College, Stephenville, Tex.; <sup>1</sup> Brigham Young University, Provo, Utah; University of Vermont, Burlington, Vt.; Virginia Intermont College, Bristol, Va.; <sup>1</sup> Whitman College, Walla Walla, Wash.; University of West Virginia, Morgantown, W.Va.; Beloit College, Beloit, Wis.; University of Wyoming, Laramie, Wyo.

The catalogs of all the foregoing schools were used in the analysis of curriculum practices. The institutions in list I with two exceptions were visited by Dr. Peik and supplied the data on representative courses. Transcripts of student records were made from the institutions in list I with the exception of Pomona College, George Washington University, Joliet Junior College, Goucher College, Stephens College, Barnard College, and Swarthmore College.

For the third analysis, list I (31 universities, colleges, and junior colleges, and 29 teachers colleges and normal schools) was made the source of still more intensive studies of curricular practices. This intensive analysis included studies of: (1) Selected courses in the important fields of specialization, based upon returns from more than 1,600 instructors and more than 3,500 course blanks; (2) transcripts or permanent record cards of about 4,000 recent bachelor's degree graduates and 450 graduate-level graduates in 44 different institutions; and (3) visits to 58 of these institutions by either Dr. Rugg or Dr. Peik or by both. The interviews with presidents, other administrative officers, many department heads, and instructors (about 900) which were made possible through the personal visits, aided greatly in the interpretation of teacher-preparation problems in various parts of the country.

<sup>1</sup> Junior college—not indicated by name.

Unless specific statements are made to the contrary, the practices in the teachers colleges and normal schools will be presented as a composite picture.

When segregation of teachers colleges and normal schools was attempted variations over and beyond those inevitable in degree- and nondegree-granting institutions were slight. It is also believed that the selected institutions represent adequate samples. In most matters the curriculum findings for independent colleges of liberal arts, and for that matter, of the junior colleges which were studied, were very similar to those of the universities; and many of the data were combined. Where important differences were discovered the facts will be mentioned. Comparisons of the practices on selected points in the inquiries by split-group techniques for both major groups showed slight variations.

*Terms used.*—For convenience of discussion, the use of the term "teachers colleges" will include "normal schools", "city training schools", and "private teacher-training institutions", unless distinctions are specifically made. As will be shown subsequently, the trend is pronounced for traditional non-degree-granting normal schools to become degree-granting teachers colleges. The term "college" will be used to refer to the independent 4-year college of liberal arts and the term "junior college" will designate the 2-year institutions.

*Other curriculum studies.*—A brief appraisal of teacher preparation was obtained from about 600 recent graduates of teacher-preparing institutions and from more than 100 administrators of small school systems in which new teachers usually begin teaching. A special study of the characteristic features and functions of schools and colleges of education as distinguished from departments of education in universities and colleges was likewise made.

The work of the training school is such an integral part of the curriculum for teachers that it cannot be considered separately. Its presentation in a separate part of this volume is the result of a division of labor and also represents an attempt to give increased emphasis to its place in any plan for the professional preparation of teachers. Even though a section is specifically devoted to the training school it will also appear in the discussions of all the other sections.

The sections devoted to the summer session, the graduate schools, and the educational theories of staff members were included in this volume because it was thought that they were more intimately involved in curriculum problems than with other divisions of the survey.

## CHAPTER II

### THE EXPANDED PROGRAM AND SCOPE OF TEACHER EDUCATION

*The expanded scope of education and teacher preparation.*—Recent problems in the education of teachers are intimately connected with the effects of an expanded system of schools and colleges in the United States. The transformation of schools from the rudimentary types of the early colonies to a system which by 1890 comprised elementary, secondary, and higher education in tax-supported schools open to all children is a history of enormous changes brought about by powerful social and political forces. One of these was the industrial revolution which eliminated the home factory, replaced home handwork with machines in industry, and created a new wealth and a new way of living for which the old informal modes of home education were no longer effective.

The expansion of the American school with its assumption of functions other than the religious objective of colonial times has resulted in an expanded curriculum at all levels and suited to all classes. This has been enhanced by the enormous increase of knowledge through research, inquiry, and investigation. The very complexity of modern democratic civilization places a premium on trained intelligence to guide and direct it intelligently. Particularly is this true of teachers. Though textbooks and courses of study have been improved and standardized, nevertheless, the greatest responsibility falls upon the teachers at each level. Their task is that of selection, adaptation, interpretation, and application of the social heritage. They must have command of the knowledge, skills, insight, attitudes, appreciations, and spirit by which the youth of America can become progressively self-directive. They must impart an education that will produce informed thinking citizens for a democracy. The teacher of today must be prepared to utilize what is known on what to teach, and how to teach, and he must know the potential capacities and aptitudes of the pupils to be taught.

The implications of a prolonged infancy, educationally speaking, cannot be overestimated. Contrast the opportunities of the formal school in the 1800's, limited for most children to the bare tools of communication, with those of the modern school with its varied program guided by a philosophy which recognizes the potentialities of the indi-

vidual child, the implication of the school as a miniature society, and more and more the implications also of a planned social order. The necessity today for a more comprehensive education for teachers is evident.

Many teachers are inadequately prepared for the particular work that they undertake. Teaching suffers as an art with a scientific background from lack of proper requirements—both quantitative and qualitative, from high annual turnover in teaching personnel, and from lack of social insight on the part of the people—failure to recognize the fact that the safety of the Nation's democracy demands prolonged education under specially and adequately prepared guides.

There are, however, two important elements which react favorably to education: (1) An increasing consciousness by all of the responsibilities of education as well as of its deficiencies; and (2) the development of techniques for meeting the responsibilities. Without doubt the most significant fact related to the education of teachers today is an increased reliance on prolonged formal preparation for its improvement. While the standard qualifications in State certification practices for teachers still range from almost no formal study above high school<sup>1</sup> to 5 years of college work, and the standard requirement for elementary teachers is only 2 years, there is an apparent trend toward more and more prolonged collegiate preparation. The early notion that "those who can, do and those who can't, teach" has largely disappeared, as has also the naive idea that anyone is fitted to teach without formal preparation.

Statistics based on advance sheets for the Educational Directory of the United States Office of Education for 1933 show approximately 1,500 institutions of higher learning (table 1), most of which contribute directly or indirectly to teacher education.

*Teacher education in universities, colleges, and junior colleges.*<sup>2</sup>—The exact number of universities, 4-year colleges of liberal arts, and junior colleges which participate in one way or another in the general and special education of any type of teacher is difficult to ascertain. According to the tabulation of the Office of Education in table 1 there are 603 white colleges and universities and 354 independent white junior colleges doing 2 full years of work, a total of 957 institutions, all of which may in one way or another, directly or through transfer of credits, participate. A more inclusive list of all types of junior

<sup>1</sup> The implication that the minimum is now high-school graduation is in itself an important advance over practices even 20 years ago. Practically all teachers now meet this standard, whereas even a decade or more ago there were thousands of teachers in service with less than the equivalent of 4 years of high-school preparation.

<sup>2</sup> In this report separate land-grant colleges were not included as a special group for separate study because the Survey of Land-Grant Colleges and Universities of the Office of Education included a thorough study of teacher training; the reader is referred for data which may be recommended as supplementing this report to section of Bulletin, 1930, no. 9, vol. 2, pt. III, pp. 113-297 entitled "Teacher Training."

colleges compiled by Dr. Doak Campbell<sup>3</sup> for the American Association of Junior Colleges reports 484 white public and private institutions, which would increase the total list to 1,084 institutions. Altogether there are listed in the Office of Education at Washington, 105 separate colleges or schools of education, exclusive of teachers colleges, largely located in universities, and 485 departments of education which are more characteristic of the 4-year colleges of liberal arts and some of the junior colleges.

The increase in number of junior colleges is perhaps the most striking recent development.<sup>4</sup> In 1900 there were 27 private junior colleges and no public institutions. Even as late as 1925 there were but 88 public and 204 private junior colleges, whereas in 1933 the January issue of the *Junior College Journal* listed 189 public and 304 private junior colleges.<sup>5</sup> As implied above, graduates of these institutions are eligible by virtue of current certification practices (2 years or less) to teach in many States at least in rural and elementary schools and sometimes in small unaccredited high schools. A large number of prospective teachers who transfer to colleges, teachers colleges, and universities are also laying the subject-matter foundation for their general education and for their teaching fields in these institutions.

Universities and colleges, according to the supply and demand data of this Survey for the year 1930-31, supplied nearly one third of the elementary teachers, two fifths of the junior high school teachers, and four fifths of the high-school teachers. At the graduate level, universities and colleges almost exclusively prepare instructors of higher educational institutions of all types.

Data adapted from Kelly and McNeely's recent study of higher educational institutions in 10 States<sup>6</sup> show that according to bulletin statements elementary teachers are being prepared in 75 percent of 141 colleges and universities, and in 75 percent of 98 junior colleges; that secondary academic subject teachers are being prepared in 95 percent, and special subject teachers in 68 percent of the colleges and universities. The relative number of these institutions preparing special subject teachers of each kind is indicated by the following percentages: Music, 54; home economics, 44; physical education, 28; art, 16; industrial education, 11; and agricultural education 10.<sup>7</sup>

Several extensive studies of the percentage of graduates from 4-year colleges of liberal arts who go into teaching have been made. All of

<sup>3</sup> Campbell, Doak S. Directory of the Junior Colleges, 1922. *Junior College Journal*, 2: 217-231, January 1923.

<sup>4</sup> Ellis, W. C. *The Junior College*. Boston, Mass., Houghton Mifflin Co., 1923. p. 74.

<sup>5</sup> This figure includes some 1-year institutions.

<sup>6</sup> Colorado, Indiana, Kansas, Michigan, Oklahoma, South Carolina, South Dakota, Texas, Virginia, and Washington.

<sup>7</sup> Kelly, Fred J., and McNeely, John H. *The State and Higher Education*. Carnegie Foundation for the Advancement of Teaching in cooperation with the United States Office of Education, 1923.

them indicate that about 45 percent of the graduates from 1923 to 1931 prepared for teaching. Meyer<sup>8</sup> studied the trend in 156 small liberal arts colleges, each having an enrollment of 1,000 or fewer regular full-time students. He found that the proportion going into teaching increased from 18 percent during the 5-year period 1900-1904 to 45 percent during the 5-year period 1925-1929, and that the median number in the latter period was more than 10 times as great as the median number going into teaching from these institutions during the former period. The data on the occupational distribution of the graduates of small colleges show that 54 percent had undertaken teaching. Withers,<sup>9</sup> reporting for the teacher-training committee of the articulation commission of the department of superintendence, found that 45 percent of the graduates from 199 liberal arts colleges of all sizes went into teaching during the years 1923 to 1927, inclusive.

The limited number of liberal arts colleges visited by the writer in connection with this Survey were asked to ascertain from the records the percentage of graduates who had taken enough work in education to qualify for a certificate in some State during 1930-31. The median percentage was 40 in a range which extended from 23 percent to 75 percent. These percentages did not include those who subsequently may have decided to enter teaching nor that 10 percent who, according to Withers' report, went into teaching of some kind from 1923 to 1927 without courses in education. Blue, in his study in connection with this Survey, found that 42 percent of the graduates of the colleges studied went into teaching.

All the studies thus show that from about 1923 to 1932, about 45 percent of the graduates of colleges of liberal arts went into teaching, but it is practically impossible to arrive at the exact figure that will include all who immediately or ultimately go into teaching with or without special preparation for it.

The 105 schools and colleges of education located in the universities and larger liberal arts colleges prepare, at undergraduate and graduate levels, for many, sometimes all, types of position in the public schools and for many types of positions in higher institutions. They include the largest teacher-education institutions in the country and employ on their faculties many leaders and research workers in the field of education. They give professional preparation to a large proportion of the superintendents, supervisors, and special subject teachers in the public schools of the United States. They also have additional contact, through summer schools, with a large number of teachers whose fundamental training was taken elsewhere.

<sup>8</sup> Meyer, Jacob G. *Small Colleges and Teacher Training*. Bloomington, Ill., Public School Publishing Co., 1928. 162 p.

<sup>9</sup> Withers, John W., ed. *The Arts College as a Teacher-training Institution*. Department of Superintendence, Seventh Yearbook, ch. 25. Washington, D. C., National Education Association, 1929.

The graduate schools of the universities in a very important sense prepare teachers. Of 2,325 doctors of philosophy, Betts and Kent found that 71 percent had gone into teaching.<sup>10</sup> Haggerty states that nearly three fourths of the recipients of the doctor's degree from Harvard, Princeton, and Johns Hopkins Universities and the Universities of Chicago, Wisconsin, and Minnesota are engaged in teaching or other educational work.<sup>11</sup>

The personnel study of the Survey (vol. II) shows that universities, colleges, and junior colleges prepared 40 percent and that teachers colleges prepared 50 percent of all elementary and secondary teachers of the public and private elementary and secondary schools and that 10 percent of the teachers came from other sources, largely county normals, high schools and high-school normal departments, and junior colleges.

The universities, liberal arts colleges, and junior colleges of the United States are, therefore, by virtue of actual performance, teacher-preparing institutions.

It is difficult even to estimate approximately the number of prospective teachers with degrees that are graduated yearly from these institutions. An estimate based upon the 91,623 first degrees granted in 1929-30 would place the number in the neighborhood of 45,000. The number who have taken short-term curricula of less than 4 years in junior colleges, colleges, and universities is not known but the number is large. In Iowa, for example, Peterson<sup>12</sup> found that 23 percent of the city elementary teachers came from this source.

In addition, a large proportion of the 16,832 graduate degrees granted went to persons who qualified to teach in elementary, secondary, and higher institutions but again the proportion is not known; it is certainly not less than one half and probably closer to three fourths at the master's degree level; and the percentage found in the two studies of doctorate degrees described above approaches 75.

It is quite probable, however, that if preparation for specific types of positions were distributed in proportion to need, the universities, colleges, and junior colleges have turned out practically enough persons qualified to receive teaching credentials to supply all needs in 1929-30 and more than enough to supply the present diminished demand.

The increased number of bachelor's degrees granted in colleges and universities in 1930 over the number granted in 1920 was 138

<sup>10</sup> Betts, George H., and Kent, Raymond A. *Foreign Language Equipment of 2,325 Doctors of Philosophy*. Evanston, Ill., Northwestern University. (Contributions to Education, School of Education series, no. 2. p. 135.)

<sup>11</sup> Haggerty, M. E. Occupational destination of Ph.D. Recipients. *Educational Record*, 9:209-218, October 1928.

<sup>12</sup> Peterson, E. T., and others. *Teacher Supply and Demand in Iowa*. Iowa City, Iowa, State University of Iowa, 1932. (University of Iowa, Studies in Education, vol. 7, no. 2, June 1932.)

percent; for all graduate degrees it was 247 percent; for graduate degrees to women, 354 percent. There is thus seen to be an acceleration of teacher education in universities, colleges, and junior colleges, both in the relative number and in the absolute number of teachers who are graduated.

*The education of teachers in teachers colleges and normal schools.*—Table 1 shows that there are now 154 white 4-year teachers colleges and 90 normal schools, a total of 244 independent institutions whose primary purpose is the education of teachers. The fact that there is now a greater number of teachers colleges than normal schools is of much significance. Originally, separate institutions called normal schools were created in most States to prepare elementary and rural teachers. Since the turn of the present century, there has been a steady transformation of these institutions.

The last Biennial Survey of Education<sup>12</sup> showed an enrollment in all teachers colleges and normal schools of 279,195 in 1929-30. From this number 11,073 graduated with the baccalaureate degree, 430 with graduate degrees, and 49,227 completed short-term curricula without degrees—a total of 60,730. If all of these graduates were prospective teachers and were properly distributed according to training required for specific types of positions, there would have been almost enough to supply three-fourths of all the teachers needed at that time; and no doubt, enough to exceed the number demanded during the current years of the depression. Degree graduates in teachers colleges have increased 854 percent since 1920 and nondegree graduates have increased 432 percent since 1920. It is evident that a tremendous acceleration in the number of teachers being trained is taking place in these institutions.

It is assumed that the reduction in the number of States having high-school normal departments—from 26 States in 1926 to 7 States in 1934—will continue until there is none, and that the same fate probably awaits the county normals now found in only 2 States. The forward-looking program to which this report is largely devoted cannot be served by special study of these institutions, which have made a valuable contribution to the development of the professional education of teachers in the past, but which must soon give way to other types of institutions as the period of preparation demanded is increased and as the idea that teacher education is a State function becomes generally accepted.

<sup>12</sup> Biennial Survey of Education, 1928-30. Washington, U.S. Government Printing Office, 1931. (Office of Education, Bulletin, 1931, no. 20.) P. 614.

*Number of teachers needed—an indicated oversupply.*—At the present time there are thus two groups of institutions each preparing enough teachers to fill all needs for new recruits to the profession if the amount and kind of training were properly distributed. There is at present a great excess of teachers for high schools, while only a beginning has been made to produce elementary teachers with an equal amount of preparation.

In 1930-31, it was found from data of inquiry I, more completely discussed in volume II, that 23 percent of the elementary teachers had had less than 2 years of college work; 49 percent had had exactly 2 years; and 28 percent had more than 2 years. Thus 72 percent, or nearly three-fourths, of them had only 2 years or less of college work. These facts suggest the probability of a necessary shift to longer periods of preparation for elementary teaching and a decrease of emphasis on preparing secondary teachers. The situation is presented in part in table 2. These data, based upon the latest tabulation in the Office of Education of the number of teachers in elementary, junior high, and senior high schools in 1931-32, and with the use of the index of mobility derived from a canvass of 370,595 teaching positions in 1930-31, show the number of new recruits needed and the type of institutions from which they would be obtained if the 1930-31 distribution prevailed.

It is found that in 1930-31, 174,976 positions would have a teacher who did not hold it the previous year. Of this number 44.7 percent, or 78,603 teachers, were new recruits to the profession from institutions of higher learning. This figure represents the number of teachers that should have been prepared to meet the indicated demand. If the nearly 50 percent sampling of teachers for 1930-31 was representative, this figure shows an actual need which is considerably below estimates of 100,000, 125,000, or even 150,000, that have been made. The succeeding years of the depression have further reduced the demand. North Dakota, which had made complete annual surveys of need, and which required 1,600 new teachers in 1928-29, needed only a few more than 800 in 1932-33, a decrease in demand for new teachers of nearly 50 percent.

The distribution of teachers needed for the whole country in 1931-32 (table 2, column 7) was 58,866 new elementary teachers, 4,433 new junior high school teachers, and 15,309 senior or 4-year high-school teachers—a total of 78,603. In the supply of this number about 1,500 institutions participated at the college level alone.

14 NATIONAL SURVEY OF THE EDUCATION OF TEACHERS

TABLE 2.—Analysis of the source of new teachers needed in the United States in 1931-32, by types of institutions if 1930-31 conditions of need level prevailed

Type of teachers by grades	1931-32 total number of teachers, Foster's data <sup>1</sup>	1930-31 index of mobility <sup>2</sup>	Number of teachers in new positions from all sources column 2+3	Type of institution preparing each kind of teacher in column 1	Percent of each kind of teacher (column 1) in new positions who are new teachers from each type of institution	Number of new teachers from each type of institution column 4×6	Percent of all teachers of each kind furnished in 1930-31 by each type of institution
1	2	3	4	5	6	7	8
<b>Elementary:</b>							
1-8.....	640,957	4.78	134,092	Colleges and universities.....	12.7	17,030	28.9
1-7.....				Teachers colleges and normal schools.....	21.4	35,400	60.1
1-6.....				Other.....	4.8	6,436	11.0
Rural.....				<b>Total.....</b>	<b>43.9</b>	<b>58,866</b>	<b>100.0</b>
<b>Junior high school:</b>							
7, 8, 9.....	61,817	6.63	9,324	Colleges and universities.....	30.5	2,845	66.1
7-8.....				Teachers colleges and normal schools.....	12.9	1,203	20.7
8-9.....				Other.....	4.1	385	13.2
				<b>Total.....</b>	<b>47.5</b>	<b>4,433</b>	<b>100.0</b>
<b>Senior high school:</b>							
9-12.....	151,489	4.8	31,560	Colleges and universities.....	36.7	11,583	75.7
10, 11, 12.....				Teachers colleges and normal schools.....	8.4	2,653	17.2
				Other.....	3.4	1,073	7.1
				<b>Total.....</b>	<b>48.5</b>	<b>15,309</b>	<b>100.0</b>
<b>All types of public-school teachers.....</b>	<b>854,263</b>	<b>4.88</b>	<b>174,976</b>	Colleges and universities.....	17.8	31,458	40.0
				Teachers colleges and normal schools.....	22.4	39,254	49.9
				Other.....	4.5	7,891	10.1
				<b>Total.....</b>	<b>44.7</b>	<b>78,603</b>	<b>100.0</b>

<sup>1</sup> Compiled from State reports by the U.S. Office of Education.

<sup>2</sup> This column is read as follows: Of each 4.78 elementary school positions in 1930-31, 1 position was occupied by a teacher who did not hold it the previous year. This figure is the index of mobility for elementary teachers.

If these conditions prevail generally, probably not more than 40,000 to 50,000 new teachers were needed during 1933-34. One State, Minnesota, through a careful canvass has located an actual oversupply of 5,000 trained elementary teachers for 1933-34, enough to fill all needs for 3 years without providing any further teacher education.<sup>14</sup>

The supply data in column 8 of table 2 show that teachers colleges prepared 60 percent and colleges and universities 29 percent of the elementary teachers. On the other hand, colleges and universities supplied 66 percent of the junior high school teachers and 76 percent of the senior high school teachers, while the teachers colleges supplied 21 percent of the junior high school teachers and 17 percent of the senior high school teachers. It should be borne in mind, however, that most of the teachers colleges as a source of high-school teachers

<sup>14</sup> Minnesota Unemployed Elementary Teacher Study, December 1932, St. Paul, Minn., Department of Education, Statistical Division.

have been in the field as degree-granting institutions for scarcely more than 10 or 15 years and will, no doubt, supply an increasing proportion of secondary teachers. Up to the present, the marked increase (nearly double in the last decade) in high-school enrollment has demanded so many additional teachers that there has been no decrease in actual numbers prepared by colleges and universities.

With increased enrollments on high-school levels and lagging enrollments on elementary levels, a far greater tendency to create new fields of specialization on the secondary level than on elementary levels and the conventional traditions which magnify high-school teaching to the prospective teacher, it would appear that an increasing number of high-school teachers may come from teachers colleges.<sup>15</sup>

One further point should be noted concerning the supply data, insofar as it bears on the problem of new teachers to be prepared. It involves regional variations. There is evidence that the teacher-college movement has been a midwestern and southern movement, possibly influenced by the accrediting activities of college associations, and that the school and college of education movement, similarly, has been a midwestern and western movement. In some States the universities exceed teachers colleges in preparation of elementary teachers, and vice versa, the teachers colleges exceed the colleges in the preparation of junior and senior high school teachers. In 15 States, besides 5 other States where no teachers colleges exist, more new elementary teachers are educated in the universities and colleges than in the teachers colleges and normal schools. On the other hand, in 8 States the teachers colleges exceed the universities and colleges in preparation of junior high school teachers. This does not hold on the senior high school level, though in a dozen States, principally in the Western and Midwestern areas, very sizable percentages of new teachers on the senior high school level come from the teachers colleges.

Of course it is difficult to generalize about these sources of supply because of such variables as certification standards, strengths and weaknesses of one type or the other of teacher-preparing units in a given State, and tastes and opinions of employing officials (superintendents, principals, school boards). Yet it is apparent that many (probably too many) State and private institutions are now permitted to prepare teachers, and many, undoubtedly too many, prospective undertrained teachers are being produced in these institutions.

*State supervision of the teacher-education program.*—This chapter has shown thus far the scope of formal education involving both length of the program from the elementary school through higher education and breadth of program in an expanding curriculum. This expansion

<sup>15</sup> In the institution of one of the writers this tendency is very evident. There has been even in 5 years a great shift in choice of majors of freshmen from elementary education to high-school teaching fields.

has resulted in a greatly increased student personnel now comprising one-fourth of the whole population in formal school attendance, and has called for more teachers, their number increasing from 417,081 in 1890 to 1,037,605 in 1930, an increase of 149 percent while the population has increased 95 percent. In spite of these increases in demand, the number of certified teachers prepared has outrun the demand; the situation is due in no small part to the number and variety of higher institutions now engaged in the education of teachers, and the resulting competition which tends to emphasize numbers prepared rather than adequacy of preparation. This emphasis on numbers has prevented the necessary attention to curriculum problems.

Certain proposals related to the general factors in the education of teachers were checked by more than 1,700 administrators and instructors in universities, teachers colleges, and normal schools, colleges, and junior colleges. In theory, most groups of respondents indicated strong opposition and the total group as a whole was opposed to the proposition that "Any higher educational institution, irrespective of its specific function may properly undertake to educate teachers." The reactions of respondents were as follows in terms of percentages of each group:

Group	Number replying	Percent replying—					
		Yes	Yes, with reservation	No, with reservation	No	Total yes	Total no
1	2	3	4	5	6	7	8
Teachers college presidents.....	143	0	1	10	89	1	99
College and university presidents.....	301	2	10	23	65	12	88
Teachers college instructors.....	690	4	13	31	52	17	83
University and college instructors.....	587	16	21	27	36	37	63

The groups agreed to another proposal, that "It is desirable where several State-supported educational institutions exist that each should limit its curricular offerings to types of teacher education most feasible for each of the respective institutions." In this case the percentages of approval and disapproval were:

Group	Number replying	Percent replying—					
		Yes	Yes, with reservation	No, with reservation	No	Total yes	Total no
1	2	3	4	5	6	7	8
Teachers college and normal school presidents.....	141	40	44	7	9	84	16
University, college and junior college presidents.....	275	45	42	9	4	87	13
Teachers college and normal school instructors.....	671	36	45	12	7	81	19
University, college, and junior college instructors.....	579	46	38	11	5	84	16

This attitude implies either cooperation among the institutions or restriction from State authorities. To a related proposal that "all State-supported higher educational institutions preparing teachers should be unified under one control in each State", the responses of faculty groups in the institutions canvassed were as follows:

Group	Number replying	Percent replying—					
		Yes	Yes, with reservation	No, with reservation	No	Total yes	Total no
1	2	3	4	5	6	7	8
Teachers college and normal school instructors.	672	47	33	13	7	80	20
University, college, and junior college instructors.....	558	41	31	16	12	72	28

This proposal had not been suggested and drawn up in time to be included in the inquiry form sent to presidents, but instructors in this general expression of approval revealed a belief in coordination of activities in State institutions of higher education. Each group included both public and privately controlled institutions. Adaptation and coordination of teacher-education programs are generally approved for State-supported institutions. Of course, to make supply and demand regulation effective, similar coordination would be needed for all private teacher-preparing agencies in the State.

A first step in a State program for regulating the supply of teachers would be for the State department of education to ascertain, through direct annual or biennial reports from each local district, the new teachers of every type that were needed during the preceding year. On the basis of that measure of demand the need in every subject field for the ensuing year could be estimated. This is not being done. Few States know the facts of demand by subjects and by levels. The United States Office of Education through the use of uniform blanks by the several States for the purpose of reporting State statistics could assemble this information and then supply a summary of teachers needed for the United States as a whole.

An example of the type of study needed and of its findings is that made by Berning of the State Department of Education in Minnesota. He ascertained that the State's demand for new elementary teachers based on the experience of recent years was not more, and was perhaps less, during 1933, than 1,400 rural school teachers with 1 or 2 years of training and 400 elementary school teachers with not less than 2 years of training, a total need of not more than, but probably fewer than 1,800. The supply of available teachers on the basis of an intensive study of unemployed teachers prepared in Minnesota

showed that there would be available 2,407 unemployed elementary teachers and 2,275 more to be graduated during 1933, a total of 4,682 available teachers of whom 2,272 had had 2 or more years of training. This supply was more than enough to fill all needs, yet the State had also paid for the education of 1,964 teachers with only 1 year of experience to compete with the 2,275 2-year people for the 1,800 or fewer positions.

A similar study is being made of the supply of secondary teachers, and though it is not yet completed, the distributions reveal a similar situation of oversupply; that is, enough available teachers to more than supply the needs for 3 years.

A proposal sometimes made but not yet adopted is that States should certify only a specified percentage above the number actually needed in each subject or grade. Those who are best qualified would be the first to receive certificates. Others would be kept on the waiting list and given certificates only as needed. This proposal might act as a regulatory device: It would automatically limit the supply to those who are judged to be best prepared and would keep the less well prepared out of competition. It would also act as a check upon the propaganda for limitless enrollment and would further the progress of more careful recruiting, admission, selection, guidance, and final recommendation.

Uniform terminology among States which would designate all low-grade certificates granted to graduates of short-term curricula as "limited", those granted to graduates of 4-year curricula, as "standard" certificates, and those granted to graduates of 5 or more year curricula as "advanced" certificates, would have a strong upgrading pull toward improved preparation.

Duplication of work in State institutions through instructors in different institutions doing the same work with very small classes increases State costs. On the other hand, there is no reason why any institution which has sufficient enrollment, a prepared faculty, and adequate facilities should not cover as wide a program of teacher education as can be carried out at reasonable unit costs and without creating oversupply.

Another necessary feature of a State program of teacher education would be the allotment of types of teacher preparation at least in State institutions to those institutions which have sufficient students in a given field to prepare teachers without excessive unit costs to the State. There is no reason why the State function to control and regulate education cannot be used in some such plan as proposed above to regulate supply and to raise the standards of the teaching profession rapidly.

Under a State plan of careful supervision of teacher education within its borders, there should be inaugurated more rigid standards for

State accreditation of private institutions for the preparation of teachers. These standards should cover not merely the amount and kinds of education courses, as at present, but also the student teaching facilities, amount and type of student teaching, definition of teaching fields, specification of certain minimum requirements in major or minor teaching fields, the qualification of instructors, and the like. Any legislation enacted, however, to provide better supervision of the State program of teacher education must safeguard institutions from petty interference with the curriculum, with personnel, and with forward-looking experimentation. Certain types of standardization of practice can only result in stagnation.

#### PROPOSALS IN SUMMARY

1. The needs of an expanded education call for emphasis upon better and more complete preparation of teachers rather than production of more teachers.

2. By virtue of present sanctions, the types of institutions of higher learning considered in this chapter are all teacher-preparing institutions. Because of the large number of institutions so engaged, each must in the future earn again its right to continue as a teacher-preparing agency through voluntary adoption of or compliance with increasingly higher standards of preparation.

3. The oversupply of elementary teachers completing short-term curricula and the relatively larger number of graduates holding degrees and prepared for secondary-school positions call for:

(a) Restriction of certification of teachers for secondary education to the 4-year type and less emphasis given to quantity production in that area.

(b) Abandonment, as rapidly as possible, of short-term curricula for elementary teachers and universal adoption of the standard of 4 years of preparation for all elementary teachers, with increased institutional emphasis upon their preparation.

(c) The adoption of the 4-year standard as the minimum for all teachers except possibly rural teachers where an intermediate position of 2 or 3 years may be temporarily set up.

(d) Immediate gradual extension of the period of training of secondary teachers to 5 years.

(e) An ultimate standard of 5 years of preparation for all teachers.

4. States should make periodic studies of supply and demand concerning the number of new teachers needed for each type of position, the number prepared by higher institutions within the State, and the number coming from other States. Forms for the collection and tabulation of this information should be uniform among States so that the United States Office of Education can periodically supply a report for the whole country.

5. The situation of oversupply calls for either voluntary coordination of effort among State and private institutions within each State or State regulation of the situation. It is proposed:

(a) That States immediately enforce higher certification standards.

(b) That they accredit all institutions whose graduates may be permitted to obtain State certificates on the basis of the adequacy of teacher-education curricula, faculty training, practice-teaching facilities, and other essential items of professional preparation.

(c) That as a policy of sound administration and needed economy, States discontinue educating short-term graduates at State expense who enter into direct competition with graduates of 4-year curricula also educated at State expense.

(d) That they consider the possible feasibility of limited certification; that is, granting certificates to only a certain percentage of teachers beyond the ascertained need of each field and selecting for this purpose those placed on preferred lists by the institutions.

(e) That they endeavor to obtain cooperation of public and private teacher-preparing agencies so that present practices of overproduction and underpreparation may be minimized.

6. That a part-time or full-time officer of particularly high ability be employed to coordinate all teacher-preparing activities of the State. This officer should be a coordinator and a leader but not a dictator.

7. A recommended possible procedure for securing a State program is the organization of an advisory council to include administration leaders of all teacher-preparing institutions, public and private, and also representation from city superintendents, principals, teacher organizations, school boards, and parent-teacher organizations.

8. As will be shown in later sections, the present situation is compelling teacher-preparing agencies to face the question of higher quantitative and qualitative criteria for admitting candidates and for final selection of nominees to State departments for certification.

## CHAPTER III

# ADMISSION AND SELECTION OF PROSPECTIVE TEACHERS

*Criteria of admission.*—Issues of teacher education on preservice collegiate levels cannot be studied without involving questions of admission and selection of prospective teachers. Even now the traditional American philosophy of the fitness of all for any task is too prevalent in the choice of American teachers. In another volume the detailed data on oversupply of teachers are presented. At present, largely as a result of low certification standards which permit almost anyone with mediocre professional preparation to teach, there are thousands of teachers unable to meet the minimum quantitative preparation of other professions—graduation from a 4-year college.

The first normal schools were of secondary rank. At the outset they were concerned chiefly with the preparation of elementary teachers and sometimes served as preparatory schools for college. Hence high-school and college work were seriously intermixed.<sup>1</sup>

By 1920 normal schools were rapidly becoming degree-granting teachers colleges. Studies<sup>2</sup> of admission practices since 1920 show that as normal schools became degree-granting teachers colleges they developed the college-university standard of completion of high-school work as a condition of admission. These studies reveal in addition to high-school units some evidence of qualitative criteria such as psychological tests, age, health, and character requirements.

*Data from secondary survey.*—The most recent and most exhaustive study of admission is found in Monograph No. 10, National Survey of Secondary Education.<sup>3</sup> Data on admission practices were

<sup>1</sup> For a brief summarization of the difficulties see vol. V, ch. I, and references listed as nos. 189-202 in vol. I, Selected Bibliography on the Education of Teachers.

<sup>2</sup> Bugge, E. U., and Dearborn, N. H. *The Social Studies in Teachers Colleges and Normal Schools*. Greeley, Colo., Colorado State Teachers College, 1928. p. 133-134.

Linton, C. *A Study of Some Problems Arising in the Admission of Students as Candidates for Professional Degrees*. New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1927. (Contributions to Education, No. 287.)

McNell, Mellicent. *A Comparative Study of Entrances to Teacher-Training Institutions*. New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1930. (Contributions to Education, No. 443.)

For a recent summary of the situation in colleges, see Kurani, H. A. *Selecting the College Student in America*. New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1931. (Contributions to Education, No. 503.)

<sup>3</sup> Brammell, P. B. *Articulation of High School and College*. Office of Education, Bulletin, 1932, no. 17. The data in this monograph were collected prior to the organization of the inquiries of the National Survey of the Education of Teachers. Hence, findings of the secondary survey staff relative to college admissions and eliminations will be largely drawn upon in this section.

gathered from 517 institutions of higher education. The author of this latest study (Brammell) showed (1932) that these institutions reported 25 different methods of admission. The meeting of the requirements in one or more methods for particular institutions seemingly gave permission to pursue college study. Only 13 methods were employed frequently enough to be included in Brammell's tabulation.<sup>4</sup>

The data showed in general that methods of admission, whether based upon a single criterion or upon a battery of criteria, did not differ much in liberal arts colleges, universities, and teachers colleges. However, in standards set and in efforts to use criteria designed to admit only superior students and for articulation of college work with the high school, as well as for the elimination of the unfit, the colleges and universities as a whole were more cautious. The differences among institutions of each type were very much greater than the differences between types of institutions.

Colleges and universities, according to Brammell's data, appeared on the whole to use more widely the following types of admission and articulation standards:

1. They employed the method of entrance examination, either college board or other, much more often than did the teachers colleges.
2. They made more use of the rank in high-school class and of the principal's interview in selecting the more capable students.
3. They eliminated more students during the freshman year, but elimination seemed to be affected by size of student body.
4. For inducting students into college work and of articulating their work with the high school, they more often provided such administrative devices as orientation courses, ability grouping, freshman week, educational guidance, better instruction for freshmen, efforts at more reliable marking systems, review courses for freshmen week, and in general more rigorous entrance requirements as to accepted units; but in all cases except freshman week, each provision was made by a minority of all types of institutions and the percentage differences between types, although favoring colleges and universities, were not outstandingly greater. Furthermore, careful institutional check-ups and reports of the effect of admission and selective devices to secure valid selection were limited, although the need for them was great.

The specific effects of these methods upon the selection of the prospective teacher are as yet not known. The general findings of comparative studies indicate usually that so far as college ability tests are concerned, the college and the university on the whole attract a better average of student material than do the teachers college and the normal school.

*Data from transcripts of student records.*—In connection with the study of curricula for teachers, data were collected from the transcripts

<sup>4</sup> Op. cit., table 2, p. 12.

of approximately 4,000 students in colleges, universities, and teachers colleges.

Table 3 summarizes the results of the analysis of transcript data compared with requirements found in the studies by Brammell. Table 3 shows that not only did these students meet the typical entrance requirements in the academic field but they exceeded them by apparently significant amounts. Furthermore, the teachers colleges showed no marked variation in these practices from tendencies in the universities and colleges. Students in both the teachers colleges and universities and colleges presented practically six units or the equivalent of a year and a half of high-school work in excess of minimum entrance requirements demanded in catalogs of the institutions under review. The throttling effect that this practice may have upon any attempt of high schools to develop a better balance to the vocational activities, to the fine arts, to health work, and to the academic subjects is of significance.

TABLE 3.—Comparison of entrance requirements from Brammell's data and from analysis of transcripts, National Survey of the Education of Teachers

	English <sup>1</sup>		Mathematics <sup>1</sup>		Social studies <sup>1</sup>		Natural sciences <sup>1</sup>		Foreign language		Total		
	Number of high-school units required <sup>2</sup>	Number of high-school units presented <sup>3</sup>	Number of high-school units required <sup>1</sup>	Number of high-school units presented <sup>3</sup>	Number of high-school units required <sup>1</sup>	Number of high-school units presented <sup>3</sup>	Number of high-school units required <sup>1</sup>	Number of high-school units presented <sup>3</sup>	Number of high-school units required <sup>1</sup>	Number of high-school units presented <sup>3</sup>	Number of high-school units required <sup>1</sup>	Number of high-school units presented <sup>3</sup>	
	1	2	3	4	5	6	7	8	9	10	11	12	13
Universities and colleges:													
Private.....	2.9	3.55	2.0	2.8	1.2	2.95	1.0	1.85	2.0	3.6	9.1	15.05	
Public.....	3.0	3.85	2.2	2.8	1.3	2.95	1.1	1.85	2.3	3.6	9.9	15.05	
Teacher colleges:													
Public.....	3.2	3.73	1.7	2.7	1.7	3.01	1.2	1.9		2.6	7.8	14.94	
Total.....	3.0		2.1		1.3		1.1		2.2				

<sup>1</sup> Minimum requirements of Brammell's study for universities and colleges closely approximate those of Kurani, H. A. *Selecting the College Student in America*. New York, 1931. (Teachers college. *Contributions to Education*, no. 503). The latter reports a mean of 3 units for English, 2 units in mathematics, 1 unit in social science,  $\frac{1}{2}$  of a unit in science, and 2 units in foreign language.

<sup>2</sup> Number of entrance units required in various types of institutions, based on table 14 of Brammell's study.

<sup>3</sup> Number of entrance units actually taken in high school and presented for entrance by 1,457 students in 20 teachers colleges.

<sup>4</sup> For record card analysis, public and private universities and colleges not differentiated, hence the same percentages reported for both.

<sup>5</sup> No data are given for foreign language because few teachers colleges report foreign-language requirements.

<sup>6</sup> Inasmuch as few teachers colleges report foreign-language requirements, it has been arbitrarily assumed for the purpose of comparison, that the teachers college students have 2.2 units of foreign language.

Note.—This table should be read as follows: For the universities and colleges, the private institutions required 2.9 units of high-school English; the students whose transcripts were analyzed presented 3.55 units, etc.

*Limitations of admission practices.*—Some of the most traditional admission practices, however, can be challenged as the result of studies now available.<sup>5</sup>

Can it be maintained that the requirement of specific entrance units is valid if general intelligence and habits of work prove to be of greater predictive value for college success than subjects taken in high school?

Are high-school marks valid and reliable enough to be used as the principal or single basis for selection for all levels of ability?

Because of the interplay of so many factors in teaching success, the inability to isolate them for study, and the crudeness of measures used, the evidence of the low correlation of measures of certain factors with teaching success must be taken with reservation. But there is a strong possibility that the crudeness of the measuring instruments has the effect of showing lower correlations than actually exist. Enough is known now to justify the generalization that any single criterion now used to admit students into institutions of higher learning probably does not select as effectively as it is supposed to.

*Means of adaptations subsequent to admission.*<sup>6</sup>—In the methods of adaptation after students enter college, particularly in the freshman year, more qualitative means of adaptation were noted. According to Brammell's evidence, health ranked first as a standard considered for special appraisal of freshmen in all institutions. Then followed in order, type of secondary schools, rank in high-school class, character ratings, interviews, recommendations, rank in intelligence, social background, religion, and athletic prowess. For the teachers college, significant variations were noted in the fact that rank in intelligence rose to second place, next to health; then came type of secondary school, character ratings; and results of interviews.

In the matter of tests used, the greatest reliance was placed on intelligence and achievement tests. The former were used by 64 percent of all the institutions of higher learning, and the latter by 57 percent, whereas other tests, chiefly in specific subjects, were checked by few institutions. In the main, the tests used are standardized so that comparisons may be made with established norms.

*Modification of course requirements.*—Data on modification of work in terms of previous secondary study revealed slight evidence of this

<sup>5</sup> See, for universities and colleges: (1) Reeves, F. W., and Russell, J. D. *The Type of High-School Curriculum Which Gives the Best Preparation for College*. Bulletin of the Bureau of School Service, vol. 2, no. 1, September 1929. University of Kentucky. (2) Proctor, W. M. and Bolenbaugh, Lawrence. *Relation of Subjects Taken in High School to Success in College*. Journal of Educational Research, 15:87-92, February 1927; and (3) Brammell, P. R. *A Scientific Study of Entrance Requirements in the University of Washington*. Doctor's thesis. University of Washington, June 1930.

For teachers colleges and normal schools, see Stinnette, R. L. *An Evaluation of the Present Entrance Requirements at Colorado State Teachers College*. Teachers Journal and Abstract, 6:57-60, January 1931.

<sup>6</sup> In this section Brammell's investigation is also the main source of evidence. Appreciation to the staff of the National Survey of Secondary Education for use of these data is hereby expressed.

practice except in chemistry in the universities and to some extent in foreign language in the colleges.<sup>7</sup> Such modifications were less evident in the teachers colleges than in the universities and colleges for the usual subjects.

Another type of evidence of selection pertains to the percentage of the freshman class eliminated for poor scholarship. The public universities and colleges were apparently more severe than were the private institutions, particularly those institutions with enrollments above 2,000; 11.5 percent of the freshmen were dropped in the public institutions and 6.5 percent in the private institutions. The average in all institutions was 6.5 percent. The teachers colleges were slightly less severe. They reported that they dropped 5.5 percent of their freshmen for poor scholarship. Most institutions of higher learning have rules pertaining to scholarship. Many require each student to attain a certain average in his courses.

The situation reported by 287 colleges and universities and 132 teachers colleges responding to inquiry 12 is shown below:

Average required	Percent of universities and colleges responding	Percent of teachers colleges and normal schools responding
B.....	6	4.6
C+.....	10	9.8
C.....	62	63.6
C-.....	6	11.4
High in major.....	25	16

Administrators and instructors indicated agreement to a proposal of the Survey staff that high achievement in previous secondary work should be a condition of admission. By implication these respondents insisted upon the mastery of the subject matter that one expects to teach.

*Difficulties in articulation.*—The chief difficulties reported in the matter of articulation between high-school and college level all imply lack of guidance. Thus a weakness of the profession is brought to light—insufficient attention to student needs and interests. This point was confirmed in a study of the strengths and weaknesses of college instruction for three terms in selected courses in one institution—Colorado State Teachers College. Students employing a modification of the Purdue rating scale, in general, rated instructors strongest on knowledge and grasp of the subject being taught and weakest in adaptation to student abilities and interests.

There is certainly need for qualitative studies which will provide the institutions with more accurate information as to the elements making

<sup>7</sup> Only 44 percent of the universities and 33 percent of the colleges report adaptation in chemistry, and an average of about 26 percent of the colleges report modification in foreign language.

for success in college, particularly in curricula which lead to certification for teaching.

A significant illustration of qualitative efforts to adapt the college study of prospective teachers to their abilities and aptitudes is found in the two mimeographed reports<sup>9</sup> of the Teachers College Personnel Association, a cooperative movement of about 41 teachers colleges and normal schools in 27 States, organized in March 1931.

By use of the forms of the American Council psychological examination and achievement tests devised by the Teachers College Personnel Association, evidence was gathered concerning the abilities and aptitudes of more than 8,000 college students in the cooperating institutions for 1931-32 and 1932-33. Specific uses of the data are enumerated as follows in the 1933 report: (1) Discouraging students with low intelligence and achievement scores from attempting college study;<sup>9</sup> (2) adaptation of a student's course load—permitting those students with high scores to carry an extra course of 2 or 4 hours and restricting those students with low scores to a load less than the average; (3) exemptions from courses; and (4) improvement of instruction by virtue of teachers having objective evidence of the abilities and aptitudes of students.

Wide variations even in median scores on the various tests were found. The *Q* for the lowest-ranking teachers college is about one and one-half times that of the highest-ranking teachers college, due to the fact that the latter institution severely restricted its admission.<sup>10</sup>

On the psychological examination the tenth percentile point of one of the colleges lies above the national median. Within each college the scores on each test vary greatly in size. Moreover, on every test the quartile deviations for most colleges are twice as large as for others.<sup>11</sup>

In comparison with a group of colleges the teachers colleges on the average rank below the colleges but in five teachers colleges which employ selective admission based on the criteria here under review the scores of these five institutions compare very favorably with similar colleges.<sup>12</sup>

*The issue of selection.*—In the promotional days of higher education waste in time, energy, and even money, in attempting to fit all students who signified a desire for college study into a pattern of college curricula might possibly be condoned. Perhaps for general education that policy will be continued. But in the education of prospective teachers, the need for selection has been clearly shown by the evidence concerning supply and demand (Inquiry I) of the National Survey of

<sup>9</sup> Hellman, J. D. Reports of the Cooperative Testing Program of the Teachers College Personnel Association. February 1932 and February 1933. (In mimeographed form, published on behalf of the Association at Colorado State Teachers College, Greeley, Colo.)

<sup>10</sup> "It is our experience that the student's score is a far better basis for predicting college success than the fact that he came from either an accredited or an unaccredited high school." Report of J. D. Hellman, February 1933. p. 4.

<sup>11</sup> Op. cit., p. 12.

<sup>12</sup> Op. cit., p. 52.

<sup>13</sup> Op. cit., p. 15.

the Education of Teachers. Furthermore, results of testing programs show tremendous variations in abilities. With oversupply rampant, it seemingly is necessary to consider who may be permitted to prepare as teachers and to determine whether all students who can merely pass should be graduated and certified to teach.

Earlier the evidence was reviewed as to the variety of institutions preparing teachers, as to the marked increase in ratio of prospective teachers to teachers in service, and as to the implied competition of various institutions in the preparation of teachers for all types of teaching positions.

It is not the province of this report to make proposals as to how institutions shall prepare teachers. Rather the purpose is to point out the implications of oversupply in terms of quantitative and qualitative standards. As Brammell has admitted in his conclusions, a "sense of confusion prevails." Yet it is the responsibility of the profession to decide first of all who shall be permitted to become teachers. Certification to teach is not a right; it is a privilege to be granted only in terms of proved capacity—capacity in scholarship, knowledge, abilities, interests, health, personal and social qualities, character, and ideals deemed essential to education in a democracy.

It may be conceded that at present scientific evidence does not exist to substantiate the criteria of selection implied in the foregoing items. Yet the fact that many institutions now report their increasing satisfaction with the qualitative criteria used in various combinations is one sign of the possibility of better selection of prospective teachers.

*Effect of small high schools.*—The preponderance of small high schools in the United States is in part the reason why many beginning teachers are required to give instruction in 2, 3, or more fields. That situation supplies some basis for the contention that future teachers in secondary schools should be limited to those who have achieved on a higher level than that required for general cultural purposes not only in a major but in all their teaching subjects. This argument does not have quite the same force when applied to the elementary school teacher of primary or even, of intermediate grades, whose professional working tools are in the main the fundamental common branches. For such teachers the college scholarship required of the general student may be ample, if he qualifies otherwise. But he, too, must give evidence on his mastery of common branches, which are his professional tools.

*The junior college and selection.*—At least one advantage of the junior-senior college organization and of the practice of postponing the technical education to the third and fourth or fifth year in colleges and universities is that the selection of prospective teachers can be more easily made on the basis of demonstrated ability than in institutions where the 4-year plan admits students at once to curricula

for teachers. One institution using a 5-year plan selects only A and B students on the basis of marks for the fifth year which is devoted largely to professional work, after some general introductory work in education has been provided during the fourth and fifth years. This institution eliminates, after try-out in a second practice teaching situation subsequent to partial failure in a first, all those who do not in the judgment of a committee, the personnel of which changes for the second situation, demonstrate or develop a satisfactory teaching personality. The superintendent of the city which draws heavily upon this institution stated that highly superior teachers, the best on his staff, were obtained from this institution which attempted a program of selection and elimination. He believed the group system of passing on teaching personality on the basis of observed elementary room performance in the absence of more objective criteria was effective for all practical purposes.

Another institution requires all students who wish to do practice teaching to pass a general comprehensive test called the qualifying examination, first, on subject matter of the secondary level to be taught in the teaching major and, second, on related advanced subject matter of the college level at the close of the junior year. Students found deficient are advised to use the summer to remedy deficiencies and are given a second opportunity to make good on a qualifying examination in the fall preceding the practice teaching, observation, and special method courses.

Whether a given criterion of selection correlates with another principle such as teaching efficiency is in part irrelevant due to crudeness of definitions of teaching efficiency.<sup>13</sup> Further, whether one can provide guidance devices is at present of less importance than conducting careful research and experiments, eventuating in tested innovations. For example, two teachers colleges report (on a judgment basis) that a limitation at entrance to upper levels of ability as shown by objective examinations results seemingly in increased success of prospective teachers in college. Another teachers college reports more reliable predictions from a battery of classification tests given during freshman week than from high-school grades.<sup>14</sup> A further example of qualitative selection is found in the teachers colleges in one State committed to an organization of liberal arts work on the junior college level. In these institutions, as in most liberal arts colleges, professional work in education and psychology is postponed until the senior college. Administrators in these

<sup>13</sup> In a paper read before the American Educational Research Association at Minneapolis, February 1933, Dean M. E. Haggerty of the University of Minnesota suggested the need for applying techniques other than those of an individual psychology to determine teaching effectiveness, on the hypothesis that measures of teaching success should be based on social relationships.

<sup>14</sup> Stinnette, R. L. *Op. cit.* and also Hagis, C. E. *Selective Admission to Teacher Preparation*. Washington, U.S. Government Printing Office, 1933. (U.S. Office of Education, Leaflet no. 29.) (Abstract of unpublished Ph.D. dissertation, New York University.)

institutions claim that the 2 years of straight liberal arts work enables them to make careful appraisal of the students permitted to become candidates for teaching. Several principles of selection are employed. Over and beyond achievement on junior college courses, all students are rated independently for potential teaching abilities and personality by several officers of the administration. Students are also required to exhibit proficiency in the subject matter which they intend to teach. Deficiencies in the latter must be made up without college credit.

In certain institutions studied by Hagie<sup>15</sup> the quota concept appears. It is noteworthy that the institutions which he studied are either city training schools or teacher-preparing institutions in small and densely populated States where oversupply of teachers has particularly compelled selection. By implication of the criteria which he found and which he has listed, selection is being made on a combination of principles which include: Evidence of achievement; interviews; personality traits, particularly health, dependableness, cooperativeness, leadership, personal appearance, and voice.

#### SUMMARY

It is suggested that the teacher-preparing institutions agree on certain principles of selection. It is of no moment for the present that there are variations in the innovations. For example, let one institution experiment with a group of its students composed of the upper 50 percent in intelligence, and another with the middle 50 percent of its students on the intelligence distribution. Let another try the upper third in a combined intelligence-achievement test. Let still another experiment with other criteria now undefined and unrefined, such as those which are apparently being increasingly used—personal interviews, character ratings, etc., but do so in terms of objective evidence. In this matter, many ratings from many persons seem to be of considerable value, not alone to predict which students appear to be the best prospective persons to be encouraged to teach, but also for the wealth of guidance data which will come out of such a program.

A progressive program of selection, admission, elimination, and final recommendation for teaching should begin with matriculation and carry through to certification. The functioning of selective agencies may actually occur at any one of a number of stages of college or precollege progress and with the use of several agencies such as:

1. A guidance program at the secondary level.
2. Admission standards using a single criterion or a battery of selective features.
3. Elimination of the scholastically weak during the first year or two.
4. Selective senior college admission to a school or college of education.

<sup>15</sup> Hagie, *op. cit.*

5. Qualifying examination in the teaching fields.
6. Requirement of a health certificate.
7. Withholding of recommendation because of negative character traits; strong backing of the best prospects.
8. Committee or group judgment of teaching personality and group or committee evaluation of teacher success.
9. General faculty recommendations.
10. Special ability tests—English, etc.
11. Final selection for recommendation by faculty.
12. Comprehensive examination on general education in all fields.
13. Restricted State selection of most fit to meet actual needs from all applicants from all institutions.

While no evidence exists for the recommendation of any single outstanding basis or combination of bases, there is evidence of the positive value of many of these in a large number of studies.<sup>16</sup> What is needed now is experimental try-out and careful follow-up with the development of more accurate measuring instruments of teaching success, personal traits, and scholastic attainment. Until research supplies a better program, best current knowledge and common sense would support programs that select courageously on the basis of scholastic attainment, personality, character, and health, with the purpose of elevating the teaching profession above a level of mere mediocrity and of preventing an oversupply of teachers.

There is curriculum content as definitely in the field of selecting and guiding students in growth of personality and character as in selecting and teaching items (facts) of subject matter in English, history, science, and the like. The main weakness revealed is in guidance, but the remedy is not mere devices—orientation, interviews, freshman week, and tests. The remedy lies in what is done in the curriculum or the experiences which emerge from such evidence.

This task does not begin at the college level. It begins in the early formative years; it continues throughout high school and college, and even into inservice activity. It is a task of progressively developing students to the point where they are self-directive. This is the real problem of education and for teachers it has a dual purpose—a self-direction so that the teacher may not only teach others how to guide themselves but may guide himself as a citizen and an individual.

A real responsibility rests upon each teacher and his institution not alone to admit able students but to guide, direct, and appraise constantly their growth as potential teachers of the type demanded for the public schools.

The teaching profession stands in need of able recruits. High school teachers and administrators in the field can render service by encouraging talented students who appear to possess teaching apti-

<sup>16</sup> See references under topic on "Education in relation to related ability in the field." Selected bibliography on the education of teachers. National Survey of the Education of Teachers, vol. 1. Washington: U.S. Government Printing Office, 1933. (Office of Education Bulletin, 1933, no. 10), p. 50 ff.

tude and personality to prepare themselves as teachers by seeking admission to some teacher-education institution. Teachers colleges now have the advantage of receiving as prospective teachers, students who have completed at least 12 years of formal education in elementary and secondary schools. They also have the facts of supply and demand which point to the need for more selective standards.

#### PROPOSALS

1. Administrative leaders and teachers should furnish teacher-preparing agencies with the names of talented high-school seniors who appear to have aptitudes and personality commonly regarded as desirable in teachers.
2. Evidence of proficiency or mastery of socially valuable elementary and secondary studies should be insisted upon as a condition of admission.
3. Teacher-preparing institutions should experiment with the quota concept. They should base the number to be admitted on data of possible placement needs and should select the ablest and best qualified students on the basis of a combination of criteria.
4. Colleges for prospective teachers might well restrict admission to the upper two-thirds or half of those taking classification examinations.
5. It appears that a combination of criteria including such evidence of general intelligence, health, and personal and social traits should be used in addition to data as to previous secondary accomplishment.
6. Constant appraisal of each student should be made, not alone of his scholastic ability but of his teaching aptitude and teaching personality as well.
7. Selection and its corollary, elimination of the mediocre, are thus factors throughout the preparatory period—during freshman week, and the junior-college work, prior to candidacy for student-teaching privileges, and even prior to final certification by the institution in the form of a diploma or degree.

# PART 2

## PART II: CURRICULA OF NORMAL SCHOOLS AND TEACHERS COLLEGES<sup>1</sup>

### CHAPTER I

#### OBJECTIVES AND FUNCTIONS OF TEACHER EDUCATION

Teaching has long suffered in its efforts to attain the prolonged preparation considered essential to a profession. The normal school was originally noncollegiate in rank. Thus through most of its history this type of institution has had to assume that the student's previous study on the elementary and secondary level has resulted in the attainment of certain objectives rather generally sought in other types of institutions. The traditional normal school was in reality largely restricted to the so-called professional or vocational objectives. As noted earlier, the transformation of the normal school into the teachers college in recent years with completion of high school as a standard of admission and with a consequent lengthening of curricula from 1 and 2 years to 4 years, has brought recognition of broader objectives.

Colleges originally emphasized the values implied in such phrases as mental discipline, liberal education, morality and character, and religion. Within recent years, professional and vocational aims have obtained greater recognition, and relatively less emphasis has been placed on general liberal education, mental discipline, and moral and religious purposes. Higher standards, in certain professions, such as medicine and law, virtually compelled the liberal-arts colleges to assume preprofessional preparation. Further, the fact that graduates of general curricula entered teaching in increasing numbers brought about the problem of introducing some technical training for teaching.

#### 1. COMPARISON OF COLLEGE AIMS, PAST AND PRESENT

Before turning to data of this Survey dealing with the aims of teacher-preparing institutions, a brief summary of a study by Koos and Crawford<sup>2</sup> on college aims, past and present, should be given because the check-list of this Survey was adopted from their statement of aims. Their classification was based upon comparative study of stated purposes of colleges in a period centering on an average in 1867 and more recently in a period centering in 1918. The greatest

<sup>1</sup> This part was prepared by Dr. Earle U. Bugg, head of Department of Education, Colorado State Teachers College, Greeley, and principal specialist in curriculum research.

<sup>2</sup> Koos, L. V., and Crawford, C. O. College Aims, Past and Present. *School and Society*, 14: 499-509, December 1921.

shift in emphasis, which their comparison of the aims in 1867 and in 1918 revealed was the very sharp decline in the claims for mental discipline; more than three-fourths of the writers of the first period recognized it, as compared to about one-third in the latter period.<sup>3</sup> The dominance of the liberal function throughout was evident, though this purpose declined in recent years, from about 95 percent recognition in 1867 to 75 percent recognition in 1918. Almost an even balance was preserved in the claims for morality and character, about 55 percent in 1867 and about 60 percent in 1918. The narrower related ideal of religious preparation declined from slightly over 50 percent emphasis in 1867 to about 33 percent in 1918. The authors of that study found evidence of increasing attention in the more recent period to what might be termed functional objectives such as provision for experiences related to health, home and parental responsibilities, recreation, and the general phrase "training for life needs." The great shift of such functional goals was found in civic-social responsibility, from slightly over 25 percent recognition in 1867 to 75 percent in 1918. Their study found that certain concepts not recognized in the earlier era were considered in the latter period, such as: Selection, guidance, coordination, or synthesis of the student's work, attention to student needs, and democratizing college education.

## 2. AIMS IN TEACHERS COLLEGES AND NORMAL SCHOOLS

The study made by Koos and Crawford suggested a check-list in inquiry-12 on general curriculum policies by means of which further development of these purposes could be noted.<sup>4</sup> In the modified check-list of inquiry 12, each institution was asked to indicate for each aim whether it was (1) directly and specifically provided for throughout the institution; (2) directly and specifically provided for in some departments; (3) indirectly or incidentally provided for; and (4) not considered.

Table 1 shows the distribution of emphasis on three different methods of provision and also the percentage of institutions ignoring or not considering each aim. It is obvious that the narrow professional goal was most stressed, as shown in items v and l. These—the education of teachers and specific technical training—were stressed as institutional aims by 86 percent and 64 percent, respectively, of the administrative leaders. Only two other institutional goals were checked by more than half of the respondents. These are knowledge of subject matter, particularly in a special field, and command of the fundamental processes. In view of direct consideration of these aims in some departments, these two are of even greater significance. The first knowledge implies that even prolonged collegiate preparation is

<sup>3</sup> See chart, op. cit., p. 500.

<sup>4</sup> The phraseology of the check-list was changed slightly but as much as possible the meaning of each of their purposes was kept.

necessary for mastery. The second presents a peculiar situation. Command of the fundamental processes has been the preeminent objective of elementary education. Attention to it on the college level may be due to one of two reasons or to both—lack of command exhibited by college students in the past, and the conviction of its crucial significance to the equipment of all prospective teachers. The phrase "culture" was checked by nearly half (43.6 percent) of the respondents as an institutional aim and by an additional 37 percent as directly stressed in some departments.

TABLE 1.—Aims of 145 teachers colleges, normal schools, city training schools, and private training schools

Aim	Number of schools answering item	Number and percent of schools—							
		Directly and specifically providing for item throughout the institution		Directly and specifically providing for item in some departments		Indirectly or incidentally providing for item		Not considering item	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10
Education of teachers (knowledge, skill, etc.)	143	123	86.0	18	12.6	2	1.4		
Knowledge of subject matter (particularly in a special field)	139	108	77.7	28	20.1	3	2.2		
Specific or professional and technical training (occupational)	139	89	64.0	29	20.9	9	6.5	12	8.6
Command of fundamental processes	140	78	55.7	52	37.1	6	4.3	4	2.9
Cultural developments of prospective teachers	140	61	43.6	52	37.1	26	18.6	1	.7
Training for physical efficiency and health throughout life	141	56	39.7	77	54.6	7	5.0	1	.7
Scholarly and scientific attitudes	141	53	37.6	58	39.0	31	22.0	2	1.4
Liberal education	136	48	35.3	71	52.8	45	33.1	12	8.8
Attention to individual differences	143	48	33.6	55	38.5	37	25.9	3	2.1
Morality and character training	142	47	33.1	33	23.2	58	40.8	4	2.8
Training for life needs (more practical subjects)	140	45	32.1	64	45.7	23	16.4	8	5.7
Civic-social responsibility	141	39	27.7	76	53.9	28	17.7	1	.7
Training for leadership (social)	143	38	26.6	45	31.5	57	39.9	3	2.1
Coordination and synthesis of major fields of knowledge and experience	139	35	25.2	56	40.3	45	32.4	3	2.2
Preprofessional and pretechnical training (background)	135	32	23.7	36	26.7	23	17.0	44	32.6
Conserving accomplishments of mankind (race experience)	138	31	22.5	48	34.8	42	30.4	17	12.3
Training for wise use of leisure	140	30	21.4	48	34.3	54	38.6	8	5.7
Training of students in scientific techniques	137	22	16.1	77	56.2	24	17.5	14	10.2
Manners (acquaintance with established forms of etiquette)	142	21	14.8	40	28.2	71	50.0	10	7.0
Training for worthy home membership	142	16	11.3	61	43.0	57	40.1	8	5.6
Education of graduate students to master's degree level	117	10	8.5	9	7.7	1	.9	97	82.9
Mental discipline	134	10	7.5	22	16.4	60	44.8	42	31.3
Research (productive research by faculty)	139	9	6.5	29	20.9	50	35.9	42	30.2
Religious training	138	9	6.5	13	9.4	62	44.9	54	39.1
Education of graduate students to doctor's degree level	118	2	1.7	2	1.7			114	96.6

The ranks of the items in columns 5 and 6 (directly provided but only in some departments) indicate functional objectives such as health, civic-social responsibility, and worthy home membership.

*Aims provided for indirectly or not considered.*—Another significant set of interpretations is found in those purposes noted either as indirectly provided or not considered or in a combination of these two categories. It is worthy of attention that such goals as mental discipline,<sup>6</sup> research, and religious training are incidentally considered or ignored. Morality, character, manners, leisure, worthy home membership are purposes for which the respondents claim more incidental attention than direct provision in some departments.

For such objectives as liberal education, attention to individual differences, morality, leadership, synthesis, preprofessional technical training, race experience and leisure, there is approximately equal emphasis on "directly sought" in the entire institution, in some departments, and on "indirectly sought."

*Comparison between teachers colleges and normal schools.*—A separate tabulation of degree-granting teachers colleges and of normal schools (table 2) reveals for the ranking aims but slight variation from the data presented in table 1, wherein the institutional aims represent a composite picture of objectives in teachers colleges, normal schools, city training schools, and private technical-training schools. Comparison of the rank order of these first 10 aims is shown in table 2 for all types of teachers colleges and normal schools, and for teachers colleges and normal schools as separate types of teacher-preparing institutions.<sup>6</sup>

TABLE 2.—*Frequency rank of the first 10 aims of all teachers colleges and normal schools and of teachers colleges and normal schools as separate types of teacher-preparing institutions*

Aim	Composite of all teachers colleges, normal schools, city training schools, and private technical training schools	Degree-granting teachers colleges	Normal schools
1	2	3	4
1. Education of teachers.....	1	1	1
2. Knowledge of subject matter.....	2	2	2
3. Command of the fundamental processes.....	3	3	3
4. Specific professional and technical training.....	4	5	4
5. Training in physical efficiency.....	5	4	6
6. Providing for cultural development, guiding latent talents.....	6	6	5
7. Scholarly and scientific attitudes.....	7	8	.....
8. Civic-social responsibility.....	8	9	8
9. Attention to individual differences.....	9	.....	7
10. Coordination and synthesis of knowledge.....	10	.....	.....
11. Liberal education.....	.....	7	.....
12. Training for life needs.....	.....	10	.....
13. Morality and character.....	.....	.....	9
14. Training for wise use of leisure.....	.....	.....	10

<sup>6</sup> Kocs and Crawford found discipline to be preeminent in their study in the early period and somewhat recognized (26 percent) even in 1918. Mental discipline as an institutional aim drops to 6.5 percent in the present findings.

<sup>7</sup> When these institutions were segregated, returns from city training schools and private technical schools were so few that separate tabulations of these 2 types of institutions were not attempted.

Figure 1 (see appendix A) shows the relative emphasis given to those aims in teachers colleges and normal schools (on an index)<sup>7</sup> compared to the emphasis found in analysis of returns from universities, colleges, and junior colleges.

*General interpretations.*—First, it is evident that the indexes for various types of institutions tend, with few exceptions, to cluster closely together. In other words, agreement between the various types of institutions was close for most of the 25 aims. The reasons for the exceptions are apparent. Second, again with few exceptions, the index reveals that these aims are direct institutional or departmental matters; there is much less evidence of incidental seeking of objectives. Third, the greatest agreement between institutions is found in such aims as: (1) Knowledge implying specialization; (2) command of the fundamental processes; and (3) attention to individual differences.

*Specific comparisons.*—In the first place, the teachers colleges and normal schools as a composite group were concerned as institutions with knowledge implying specialized mastery of a major and yet they considered liberal education as a purpose more largely sought in some departments. In the second place, it is evident the teachers colleges were not concerned with graduate work as a goal. In the third place, while the variations were slight, in 10 of the 25 aims the teachers colleges led in the index of emphasis. The enumeration of these may reflect in part possible tendencies in the teachers colleges. As implied earlier they would be expected to lead in attention to the knowledge, skills, and traits involved in differentiated curricula for the education of teachers and in specific professional and technical training.<sup>8</sup> In addition the teachers colleges slightly surpassed the other types of preparatory agencies in attention to command of fundamental processes.<sup>9</sup> Teachers colleges also led slightly in claiming attention to physical efficiency, cultural development of prospective teachers, attention to individual differences, training for life needs, and synthesis. They lagged behind other types of institutions only in attention to liberal education, preprofessional training, and religious training.<sup>10</sup>

<sup>7</sup> This index was computed as follows from table 1: Each percentage in column 4, direct provision in all departments, was arbitrarily multiplied by 3; in column 6, direct provision in some departments, by 2, and in column 8, indirect provision, by 1. The percentages in column 10 were ignored. Thus the points on the scale, 300-200, indicate consideration throughout institutions, the points 200-100, consideration in some departments, and 100-0, incidental consideration.

<sup>8</sup> On this item, though, the university by virtue of its organization more closely approximated the index of the teachers colleges than did the colleges and junior colleges; in fact for the latter two the index indicates only direct provision in some departments.

<sup>9</sup> This statement does not imply proficiency; rather it may reflect a slightly greater recognition of the need for command of the fundamental processes due to the fact that the normal school was originally a preparatory agency for the elementary schools.

<sup>10</sup> But this qualification in interpretation should be noted for the first 2 phrases. From various types of other data there is some basis for believing that the teachers colleges are tending more and more to agree with such objectives. In other words, it may be that if one had collected this evidence 20 years ago, wider discrepancies would have been evident on these points and that in the future even the variations pointed out (fig. 1) will have disappeared. The reader is cautioned that interpretations are based on responses at a given time (in this case, fall, 1931).

A further comparison on this index is given from a sampling of 67 degree-granting teachers colleges and of 26 normal schools. In general there is slight variation when the two groups are isolated from the composite of all types of teachers colleges, normal schools, city training schools, and private technical schools. In 15 of the 25 aims, teachers colleges appeared to exceed in emphasis the normal schools, particularly in emphasis on liberal education. In the other 10 aims the normal schools appeared to give greatest stress to individual differences, to morality and character training, to training for the wise use of leisure, and to coordination and synthesis of the major fields of experiences.

*Comparisons within groups of aims.*—A final variation in presenting the picture of objectives is given in table 3. In this table the 25 aims have been classified as closely as possible under six groups and the ranks for various types of institutions given.<sup>11</sup> Several points in table 3 are worthy of comment. First, when the purposes are grouped, related items reveal wide variations in rank. For example, all types of preparatory agencies were most concerned with such outcomes as knowledge and command of the fundamental processes; yet they were much less concerned with such outcomes as character, training in scientific techniques, and manners. Second, fundamental aims implied in training for general life needs ranked relatively low except for physical efficiency and civic-social responsibility. Similarly, aside from technical training, professional objectives were at the bottom of the list. Third, the rank-order technique revealed variations between types of preparatory agencies. Three in particular should be mentioned. The greatest variation pertained to liberal education; it ranked first or second in the university, college, junior college group of institutions and thirteenth in the teachers college group.

In summary, it may be concluded that: (1) there was great spread or variety in aims sought; almost all aims were considered directly or indirectly; (2) on each specific aim the various types of preparatory agencies tended to agree, with but few exceptions; (3) there were disparities between related groups of aims both within one type of institution and among the four types of teacher-preparing institutions; (4) trends or shifts in emphasis were evident as follows: Continuous diminution of interest in mental discipline as a value, a slight decline in the liberalizing goal from 1867 to 1918 but a continuous emphasis on it since 1918; the increased attention to functional aims, particularly civic-social responsibility; a recognition of a greater variety of objectives of higher education; and the increased attention to technical and professional preparation.

<sup>11</sup> One must bear in mind that rank does not imply great disparity on the index of emphasis. However, it does reveal, even though the indexes for various types of institutions do cluster, the relative placement of aims.

TABLE 3.—Summary—Rank of aims of institutions of higher education by related classes

Aims	Rank				
	Universities	Colleges	Junior colleges	All universities, colleges, and junior colleges	Teachers colleges
1	2	3	4	5	6
I. General education:					
d. Coordination and synthesis.....	23	18	16.5	18	11
g. Liberal education.....	2	2	1	2	13
II. Direct provision for functional aims:					
b. Civic-social responsibility.....	15	13	5	11	8
o. Religious training.....	20.5	5.5	12	9	23
q. Training for leadership.....	18.5	12	11	13	14
r. Training for life needs.....	14	16	13	15	9.5
s. Physical efficiency.....	9	7.5	10	8	5
t. Wise use of leisure.....	20.5	20	16.5	20	16
u. Worthy home membership.....	18.5	19	18	19	18
III. Indirect provision for functional aims:					
e. Conserving the accomplishment of mankind, the race experience.....	16	15	21	17	17
f. Mental discipline.....	25	21	22	22.5	22
IV. Outcomes expected (provision for essential social knowledge, skills, attitudes, etc.):					
c. Command of the fundamental processes.....	3	4	3	3	3
f. Knowledge of subject matter.....	1	1	2	1	2
h. Manners.....	24	22.7	15	21	19
j. Morality and character training.....	17.5	8.5	4	5	12
n. Training in scientific techniques.....	7.5	14.7	19	14	15
p. Scholarly and scientific attitudes.....	4	3	9	4	7
V. Provision for individual values:					
a. Attention to individual interest and aptitudes.....	12	10	8	10	9.5
w. Providing for culture or latent talent of students.....	13	11	14	12	6
VI. Professional objectives:					
k. Preprofessional training.....	6	9	7	7	20
l. Specific professional training.....	7.5	17	20	16	4
m. Research.....	11	23	23	22.5	21
v. Education of teachers.....	10	7.5	6	6	1

## 3. FUNCTIONS OF TEACHER EDUCATION

The preceding section has attempted to show what higher institutions of learning hold as goals. Perhaps the presentation should have been reversed and consideration given to what kind of prolonged preparation<sup>12</sup> is necessary in the education of a teacher rather than what kind of college education can be adapted to teachers.

There is rather general agreement in the discussions and publications dealing with the education of teachers<sup>13</sup> that several types of preparation are needed. In the first place the essential technical knowledge and skills of teaching are necessary. In the second place, a background of subject matter and its related application is required. This obviously demands mastery and greater depth than mere analysis of the exact material that the teacher will be expected to teach on the elementary or secondary level. In the third place, the broad preparation which will enable the teacher to assume leadership

<sup>12</sup> This term is used to connote the desire to dignify teaching as a profession.

<sup>13</sup> See the files of Educational Administration and Supervision, a journal devoted largely to teacher education, and the yearbooks of the American Association of Teachers Colleges.

and to make education a constructive tool for the betterment of individual and social living is assumed.

Distinction should be made in the following: (1) that background of culture which teacher-preparing agencies can build upon by virtue of present admission standards requiring the completion of at least 12 years of elementary and secondary work; (2) the teacher-education activities (both professional and cultural) in a preservice period of formal preparation in a teachers college; and (3) the teacher-education activities on inservice levels, after the teacher obtains a teaching position. In other words teacher education should recognize the principle that a prolonged period of education is necessary in order to prepare teachers properly. It should, therefore, articulate its essential preservice activities with previous elementary and secondary study and with subsequent needs for growth in the field.

*Appraisal of functions.*—Another appraisal of functions is revealed in certain proposals made to representative administrators and to instructors of education and of the academic and special subjects. Altogether, there were 63 proposals in the inquiry to the instructors and 50 in the inquiry to the administrators.<sup>14</sup> Each respondent (nearly 1,000 in all) was asked to indicate his judgment on each proposal<sup>15</sup> by voting in one of four ways—complete agreement, agreement with reservation, disagreement with reservation, and complete disagreement.<sup>16</sup> Since certain of these proposals express functions of a teacher-education program they are summarized in table 4.

TABLE 4.—Reaction to certain proposals, of about 1,000 respondents (presidents of normal schools and teachers colleges and instructors of academic and special subjects and of education)<sup>1</sup>

Implied function	Typical reaction
1. Criteria:	
(a) Better school practices.....	Agreement of all groups with reservation.
(b) Both technical training and general culture.	Complete agreement of all groups.
(c) Provision for direction of latent abilities of each student.	Do.
(d) Preparation to teach several secondary subjects.	Do.
(e) Leadership rather than followership in development of programs of public education on all levels.	Do.

<sup>1</sup> See fig. 2, appendix A.

<sup>14</sup> Hence there were 13 in the former list which were not submitted to the presidents.

<sup>15</sup> This technique was suggested by other studies of Dr. M. H. Harper and Dr. R. B. Raup. For the use of these techniques see also part VII.

<sup>16</sup> For summary on the complete inquiry, an index has been used (see fig. 2, appendix). This index was completed by multiplying arbitrarily complete agreement by +2, agreement with reservation by +1, disagreement by -2, and disagreement with reservation by -1; the difference of the sums yielded the index.

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TABLE 4.—*Reaction to certain proposals, of about 1,000 respondents (presidents of normal schools and teachers colleges and instructors of academic and special subjects and of education)*—Continued.

Implied function	Typical reaction
2. Differentiations:	
(a) Urban and rural curricula-----	Complete agreement by teachers, agreement with reservation by presidents.
(b) Coordination of various teacher-preparing agencies, differentiation in terms of curricula most favorable to each institution.	Agreement on the index at a point between complete agreement and agreement with reservations.
3. (a) Provision for general education—a considerable number of survey courses, less specialization, less differentiation.	Complete approval of a considerable number of general survey or orientation courses, agreement with reservation to more integration and less specialized course work, disagreement with reservations to less differentiation in curricula.
(b) Provision for electives for varied interests and aptitudes.	Complete agreement.
4. Provision for prescription-----	Agreement on 2-year curricula, agreement with reservations on 4-year curricula.
5. Professional implications:	
(a) Emphasis on accepted practices in comprehensive courses without much emphasis on scientific research.	Academic and special subject teachers agree with reservations, education instructors disagree with reservations.
(b) Need for teachers to be made critical of various changes.	Complete agreement of all groups.
(c) Practice teaching in situations typical of placement.	Do.
(d) Professionalization of most courses.	Agreement with reservations.
(e) Need for much demonstration and observation.	Complete agreement on the latter, and agreement with reservation on the former.
(f) Need for special method courses.	Agreement with reservation by all groups.
6. Standards:	
(a) Promote increasing capacity for self-direction on the part of the students.	Complete agreement.
(b) Recognition of growth on in-service levels.	Complete agreement with general implication, reservation on statement, that teaching skill develops in the job.
(c) Mastery or proficiency, in one's field or fields of specialization as first essential.	Complete agreement of academic and special subject teachers, agreement with reservations by education teachers.
(d) By implication most preparation now in residence.	Complete agreement of all groups.

TABLE 4.—*Reaction to certain proposals, of about 1,000 respondents (presidents of normal schools and teachers colleges and instructors of academic and special subjects and of education)*—Continued.

Implied function	Typical reaction
6. Standards:—Continued.	
(e) By implication—just any higher institutions permitted to prepare teachers.	Complete disapproval of all groups.
(f) Curricula more than a major field of specialization.	Agreement with reservation of all groups.
7. Values:	
(a) Attitudes, appreciations and ideals promoted incidentally.	Agreement with reservation of all groups except education teachers who disagree with reservations.
(b) Insight into both individual and social behavior.	Complete agreement of all groups.
(c) Cultivation of physical, social, and esthetic experiences as well as the intellectual.	Complete approval of all groups.
(d) Main consideration to preparation of minimum essentials.	Agreement with reservation of academic group, disapproval with reservation of other group.
(e) Provision for development of social and individual traits of teachers.	Complete approval of all groups.
(f) Modification of program in terms of social-economic background of student personnel.	Agreement with reservation by all groups.
(g) Preparations to teach contemporary life as well as race experiences.	Complete approval of all groups.

*Summary.*—To attain the full realization of these functions certain methods may be considered. First, there should be selection of those persons who seem to be most fitted for teaching.<sup>17</sup> Second, definite specifications should be drawn up for teaching in terms of research into the totality of the in-service teachers, duties, responsibilities, and opportunities.<sup>18</sup> The broad outlines of the work of teaching have been sufficiently analyzed as revealed in studies of time allotment, courses of study, textbooks, and the like, to make this procedure possible. Third, there should be a separate educational unit, either a teachers college, a school of education, or a department of education to make certain that the essential adaptations be made. Fourth, it is important that the faculties of higher institutions who prepare prospective teachers should be imbued with a recognition of all the

<sup>17</sup> These statements are purely hypothetical; as yet there are no reliable data as to selective criteria.

<sup>18</sup> The most elaborate attempt at this phase of functional procedure is the study made by Charters and Waples. *The Commonwealth Teacher-Training Study*. Chicago, Ill., University of Chicago Press, 1929. Spaulding has a pertinent criticism, namely, that preparation for specific activities is impossible and unnecessary. It assumes transfer and thereby must necessarily emphasize the establishment of useful and usable generalization. Thus the real crux of the problem is to discover the student's ability to generalize. See Spaulding, F. T. Perplexities in Teacher-training. *Elementary School Journal*, 30: 270-290, December 1929.

implications of teacher education. Fifth, it is necessary that the curricula for teachers be organized to insure the outcomes and values enumerated in preceding paragraphs. Sixth, and finally; there should be facilities for internship analogous to hospitals for the medical profession, model schools and laboratories wherein prospective students may observe, practice, and see demonstrated in varieties of situations teaching activities representative of better practices.

#### 4. PROPOSALS

##### I. Objectives:

1. In teachers colleges the specific task of educating teachers should not be minimized in order to realize outcomes unrelated to those implied in a professional institution.
2. Where size permits it is desirable that separate staffs be delegated to prepare elementary and secondary teachers.
3. Vague, all-inclusive phrases such as "knowledge", "discipline", "culture", and "liberal education" should be abandoned, and objectives should be formulated to specify in some detail what is implied in terms of the outcomes expected on the college level and in terms of subsequent applications as teachers in service on secondary and elementary levels.
4. There should be careful differentiation of aims related to:
  - (a) General social education—the survey orientation courses.
  - (b) Individual education—electives.
  - (c) Fields of specialization, including either special methods or professional treatment of subject matter or both.
  - (d) Professional work in education, psychology, observation, and teaching.

##### II. Functions:

1. Inasmuch as teachers colleges and normal schools have been provided to prepare teachers for the schools of their respective States, they should be concerned with evidences of better school practices and with possible trends in revision of school curricula and with the various levels and fields of specialization for which they prepare teachers.
2. There is a dual task in teacher education—to provide for the professional education and to continue the individual culture of the prospective teacher.
3. The program of teacher preparation should aim to aid prospective teachers:
  - (a) Not only to interpret the social heritage in the form of the school subjects but also to make students critical of contemporary modes of living and their implied problems.
  - (b) To emphasize the life implications of the race experience.

- (c) To attempt to promote more effective participation in the major fields of activities such as health, home and family relationships, citizenship, and leisure.
4. Teacher education should be concerned with methods by which students on all levels can be led to become increasingly self-directive.
  5. It is the task of teachers colleges to give students insight into relative values so that proportionate attention both in content and method can be given to:
    - (a) The values of living-attitudes, appreciations, and ideals as well as knowledge and skill.
    - (b) Physical, social, and esthetic, as well as intellectual experience.
    - (c) Varying schools of opinion of the psychology of individual and social living.
    - (d) Principles of selection of what should be taught in terms of its frequency, extent, importance, and difficulty.
    - (e) Such concepts as growth, mastery, proficiency, behavior, how and where education takes place, and adaptations to communities and to individuals.
  6. It is the function of the teachers college to provide opportunities for continuous education on inservice levels, recognizing the long-time principle of the professional preparation.
  7. It is the function of the teachers college to provide in addition to broad culture, social and individual, and to professional equipment, personality development. This is a neglected field. Every agency, formal and informal, which can promote desirable personal and social traits in prospective teachers should be fostered, not alone for the sake of the prospective teacher but also for the possible subsequent effects on his pupils. There is as truly a curriculum problem in personality development as there is in provision for a sequence of formal courses in one's chosen field of specialization.

## CHAPTER II

# CURRICULUM POLICIES AND PRACTICES IN TEACHERS COLLEGES AND NORMAL SCHOOLS

### 1. EVOLUTION OF CURRICULUM POLICIES AND PRACTICES

Some of the principles enumerated in the preceding chapters were by no means evident in the earlier educational history of the United States. A brief summary of the evolution of curriculum policies and practices related to the program of educating teachers reveals numerous attempts to dignify teacher education as a profession.<sup>1</sup>

Normal training first developed in academies and in a few private teacher-training institutions.<sup>2</sup> The program was from 1 to 3 or 4 years in length but equivalent to secondary work throughout the 1800's, both in the academies and in the normal schools when the latter replaced the former as an agency of teacher education. The normal school was a distinct institution created as a result of demand for special preparation of teachers, and was not related to the early colleges.<sup>3</sup> The type of preparation needed by elementary teachers when elementary curricula were largely ungraded was met by a single course of study in the early normal schools.

While there is some slight evidence of increasing diversification of functions<sup>4</sup> in normal schools in the late 1800's, the idea of a general course for the preparation of elementary teachers still prevailed. The work was largely prescribed, though the modern concept of sequence was not much in evidence. Academic work was regarded as of relatively slight importance. Some of it was of elementary rank and the professional work was open to question. The student body was transient; individuals attended school for a term or two and then at least the more ambitious went out to teach in order to earn money to continue their formal studies.

*Development of teachers colleges.*—The expansion of all phases of life—economic, social, and cultural—after 1890 was reflected in a steady transformation of the normal school leading to its eventual replacement, in most cases, by the degree-granting teachers college.

<sup>1</sup> See vol. V, ch. 1 of this survey by Benjamin W. Fraser.

<sup>2</sup> Napier, T. H. *Trends in the Curricula for Training Teachers*. Nashville, Tenn., George Peabody College for Teachers, 1926. (Contributions to Education, no. 27.)

<sup>3</sup> Judd, C. H. *The Evolution of a Democratic School System*. Boston, Mass., Houghton Mifflin Co., 1918, p. 9.

<sup>4</sup> There was, for example, the pressure of communities where normal schools were located, usually in small towns, to utilize these institutions as agencies of preparation for high-school students.

The effects of increased high-school and college enrollments have been referred to. Naturally the former expansion enabled normal schools to attain collegiate status by insisting on the completion of high-school work as a condition of admission to their curricula.

Attaining collegiate status, with increased enrollments the new teachers college tended to diversify its efforts. There was a demand for prepared teachers for newly created types of organization and activity in public schools. The better salaries for teachers of such activities and the higher certification standards led to an enormous expansion of curricula and courses in the teachers colleges.<sup>4</sup> Down to 1929 there was an apparent undersupply of prepared teachers. Hence expansion was not only desirable but essential to a true performance of the distinct function for which these institutions were created, namely, to prepare educated teachers.

As a result of this expansion, increased differentiation of curricula was the dominant principle of organization between 1895 and 1926.<sup>5</sup> The Missouri survey of normal schools in 1914 proposed that: "Each curriculum should be designed to prepare for a *specific* teaching position."<sup>6</sup> Parallel tendencies in the organization of curricula of other professions and fields of occupational activity, such as medicine, engineering, and business, also reflect this principle of differentiation.

As the normal schools attained collegiate rank they changed their names to signify this attainment, increased their emphasis upon the preparation of teachers for high-school work, and for administrative and supervisory positions, and at the same time continued the preparation of elementary teachers.<sup>7</sup>

*Courses in education and psychology.*—Adaptations in the diversification and differentiation of their curricula by no means reveal the entire background of present institutional policies and practices. The normal schools as they developed came to emphasize what was first called pedagogy, later education and psychology. The result of this emphasis has been reflected in a policy which has been criticized as being too much concerned with *how* to teach, and not sufficiently with *what* to teach. On the other hand, the colleges have been charged with being too much concerned with *what* to teach and not enough with *how* to teach. In recent years both types of institutions have made concessions with the result that in both the teachers colleges and the colleges and universities there is provision for basic professional work in education, psychology, special methods, observa-

<sup>4</sup> Also in colleges, high schools, and even elementary schools.

<sup>5</sup> Ruediger, W. C. Recent Tendencies in Normal Schools. *Elementary School Journal*, 33: 279, March 1907; Walk, G. E. A Decade of Tendencies in Curricula of State Normal Schools. *Education*, 37: 213, December 1916; and Napier, T. H. *Op. cit.*, p. 122.

<sup>6</sup> Learned, W. S. and Bagley, W. O. *Curricula Designed for the Professional Preparation of Teachers for the American Public Schools, 1917*, unpagged, secs. 2 and 4.

<sup>7</sup> With this limitation, that short-length curricula to prepare elementary teachers still are the main task of most of these institutions.

tion, and teaching.<sup>9</sup> Comparison of academic work in five subjects, English, foreign language, mathematics, science, and social science show that the modern teachers college closely approximates the requirements of the universities and colleges.<sup>10</sup> Moreover, subcollegiate review work is no longer given college credit. In both subject matter and professional work there have been enormous extensions in the areas of knowledge and skill, which make it essential that students have prolonged preparation for both the *what* and *how* of teaching.

*Professional treatment of subject matter for teachers.*—There have also emerged at least two distinct points of view for the treatment of curricular materials in teacher-preparing institutions. The one calls for preservice mastery of subject matter apart from the professional aspects of the subject; the other holds that constant application of professionalizing elements can best be managed in close conjunction with many of the needed subject-matter courses in the fields of specialization.

A decided expansion in facilities for observation, demonstration, and student teaching has been evident.

Over and beyond these tendencies, certain other policies and practices relating to and necessary for the understanding of institutional organization should be mentioned. The need for articulation and coordination in teacher preparation is now clear. The modern teacher-preparing agency should be closely in touch with the types of rural, elementary, and secondary schools for which it is preparing teachers.

*Construction of curricula.*—Next should be mentioned an emerging science of curriculum construction, on which teacher-preparing units may increasingly rely for unbiased determination of policies and practices. On these agencies is clearly imposed the duty to assume leadership in the further improvement and refinements of these activities, to realize as quickly as possible not only all essential quantitative but also equally vital qualitative standards of a true profession.

The normal-school, teachers-college types of teacher-preparing institution have come a long way along the path of progress in teacher preparation. Yet certain liabilities are still evident; for example, the continuance of short-length curricula and low-certification standards. There are, on the other hand, certain assets: The spirit which results from a singleness of purpose, increased time

<sup>9</sup> In the comparative analysis of catalogs, the total (based on median in 57 institutions) for this professional work in universities and colleges was found to be about 18 semester-hours and in teachers colleges and normal schools, about 20. On account of variations in organization of professional work wherein the former group include special methods in education and the latter group in the major, generalizations on this point cannot be drawn with exactness.

<sup>10</sup> The teachers colleges were found to require in 4-year curricula about 47 semester-hours in English, science, social science, foreign language, and mathematics outside the major, and the university and college group 55 semester-hours.

to organize a collegiate program of formal preparation for teaching, a wealth of relatively objective evidence to utilize as source material, and a better-prepared teaching staff to carry out its objectives.

## 2. RELATED PROBLEMS OF CURRICULUM ORGANIZATION IN TEACHERS COLLEGES AND NORMAL SCHOOLS

While there are varieties of curricula provided in teachers colleges and normal schools, there is one limitation on the full utilization of these curricula. Because of low certification standards, the education of teachers in these institutions, as measured by the actual number of graduates, is still largely restricted to curricula of less than 4 years in length. The official statistics of the United States Office of Education,<sup>11</sup> teachers colleges and normal schools combined, show a total of 60,500 graduates in 1930, distributed as follows: About 19 percent from 1-year curricula, 47 percent from 2-year, 15 percent from 3-year, and 19 percent from 4-year curricula. Thus more than four-fifths of the graduates in both types of institutions were nondegree graduates.

Thus it is clear that however ambitious are the cataloged offerings, the teachers colleges must still provide for those students who do not continue much beyond 2 years in preservice preparation. Consequently, there is "pressure" to crowd into junior college work essential items of professional preparation.

*Certification standards.*—Another obstacle, closely related to amounts of preparation prospective teachers actually take, is implied in the status of certification practices. Bachman, in a report of a recent survey,<sup>12</sup> asserts that the present chaos in certification of high-school teachers is the complicating feature which holds back proper organization and length of curricula for adequate preparation.

Of limiting conditions of high-school certification, the following should be noted: (1) Variations from the quantitative amount include—normal school graduation, 2-year course, 27 States; examination only, 16 States; and partial college course, 15 States. (2) Only 5 States specify courses of majors and minors, and 16 others require majors and minors without specifying the courses; 27 States make no academic requirement other than college graduation. (3) All States require some professional work; 33 States require from 15 to 18 semester-hours, 17 States prescribe only the total number of hours, and only 4 States prescribe all subjects and specify the courses in each. (4) Where prescription of professional courses

<sup>11</sup> Foster, E. M. *Statistics of Teachers Colleges and Normal Schools, 1929-30*. Vol. II, Biennial Survey of Education in the United States, 1929-30. Washington, U.S. Government Printing Office, 1932. (Office of Education, Bulletin, 1931, no. 29.)

<sup>12</sup> Bachman, F. P. *Training and Certification of High-School Teachers*. Nashville, Tenn., Division of Surveys and Field Studies, George Peabody College for Teachers, 1930. (Field studies, no. 2.) This monograph should be studied carefully for the facts on certification and teaching conditions in the field.

exists, it is chiefly in directed teaching, 21 States; educational psychology, 18 States; and principles and techniques of high-school teaching, or materials and methods of high-school teaching, 4 and 9 States, respectively.

The colleges and universities and private accrediting organizations have been most active in determining actual preparation of high-school teachers. It was pointed out previously that teachers colleges have entered the field of preparing secondary teachers. In view of the actual teaching assignments in the small school and practically no State restriction on specific preparation, it behooves the teacher-preparing agencies to meet conditions in the field.

In a recent exhaustive study<sup>12</sup> of elementary certification, Bachman found a confusing variety of certification standards for elementary teachers in the several States. He concludes that "While present elementary teacher certification requirements fix rather definitely, as they should, both the lower and the upper level of the obligations and responsibilities of the respective State elementary teacher-training institutions—more definitely, however, on the lower level—their certification requirements, with minor exceptions, neither give the prospective teacher definite information, beyond possibly the length of the period of study, as to what must be done to prepare for a given certificate or type of elementary school work, nor do they give elementary teacher-training institutions material guidance in developing appropriate curricula to meet the requirements of each type or kind of certificate issued by the State."<sup>14</sup>

The effects of low certification standards on the elementary levels are evident in the data of Inquiry 1. Analysis of the returns of a total of 283,000 teachers revealed that 23 percent of this group still have less than 2 years of college preparation, 49 percent reported exactly 2 years of college study, and 28 percent more than 2 years. For the 40,000 junior high school teachers, only 6.4 percent had had less than 2 years of college work, 17.5 percent had had exactly 2 years, and 76.1 percent had had more than 2 years. For the 98,000 senior high school teachers reporting, the percents were respectively 2.4, 4.4, and 93.2.

It is essential to keep in mind that mere provision for 4-year curricula does not provide that minimum of preparation nor guarantee the qualitative needs of an educated corps of teachers.

*Initial teaching experience.*—A third complicating factor is the actual type of organization in which new, inexperienced teachers commence their teaching: Inexperienced elementary teachers tend to

<sup>12</sup> Ibid. Present Certification Requirements and Implications for Teachers Colleges. Educational Administration and Supervision, 19:97-118, February 1933. These findings are given in more detail in Education and certification of elementary teachers by the same author, published as Field Study No. 5 of the Division of Surveys and Field Studies, George Peabody College for Teachers, Nashville, Tenn.

<sup>14</sup> Bachman, op. cit., p. 117.

begin their teaching careers in small village schools and rural schools, particularly the latter, in the more sparsely settled States. Data from Inquiry I are here drawn upon again for illustration. Of all elementary in-service teachers with all lengths of preparations, experience, and types of elementary positions, approximately 24 percent reported teaching in 1- or 2-teacher schools in the open country.<sup>15</sup> Extreme State variations in this regard were found in North Dakota, where the group of rural teachers composed 69 percent of all elementary teachers, whereas in New Jersey and Massachusetts only 2 percent of all elementary teachers were in rural schools.

The situation on the high-school level is similar; most new high-school teachers must start in small consolidated and rural high schools. About three-fourths (74 percent) of 18,114 high schools in the United States enrolled in 1929 fewer than 200 pupils (9 or fewer teachers). One-half (57 percent) had fewer than 100 pupils (4-6 teachers); and nearly one-third (30 percent) had fewer than 50 pupils (3 teachers).<sup>16</sup>

It is obvious that teacher-preparing institutions must study the kinds of schools in which their students will begin their teaching careers. It is the State's function to collect the evidence of supply and demand and to set up certificating methods to guarantee properly prepared teachers. It is the duty of colleges to utilize such data and produce the prepared teachers. The most insistent need is for teacher-preparing agencies to adapt their curricula offerings to conditions in the particular localities that constitute their placement areas.

### 3. INSTITUTIONAL POLICIES AND PRACTICES RELATED TO CURRICULUM ORGANIZATION

Data were collected (Inquiry 12) on institutional policies and practices related to the curriculum.<sup>17</sup> Before discussion is presented on detailed curriculum practices involving general education, specialized preparation in major fields, technical professional requirements, and elections and prescriptions, the policies reflecting provision of organization, residence requirements, scholarship, prerequisites, sequence and rank, special features, and types of certificates issued should be reviewed briefly. Only a few significant points will be discussed from these data.<sup>18</sup>

(a). *Size of the institutions.*—The composite enrollment of the 145 institutions varies considerably from a sampling of 66 teachers colleges and 26 normal schools considered separately. In the composite

<sup>15</sup> If the new teachers without experience were isolated, the percentage would be much higher.

<sup>16</sup> Phillips, F. M. *Statistics of Public High Schools, 1927-28*. Washington, U.S. Government Printing Office, 1929. (Office of Education, Bulletin, 1929, no. 35); and Gaumnitz, W. H. *Smallness of Rural High Schools*. Washington, U.S. Government Printing Office, 1930. (Office of Education, Bulletin, 1930, no. 13.)

<sup>17</sup> See table A (appendix A) for summary of these data from 145 teachers colleges and normal schools.

<sup>18</sup> See for a systematic summary of this Inquiry, *School Life*. 18 : 95-97, January 1933.

the average enrollment is about 640; when the teachers colleges and normal schools are segregated in enrollment the former becomes nearly 800 and the latter only 300. The ratio of women to men changes significantly only in the segregation of the normal school; in these smaller institutions there are about 7 women to 1 man.

Graduate work, chiefly for the master's degree, is offered in 15 of the 145 institutions. With the upgrading process of teachers colleges, it is probable that more teachers colleges will enter this level of formal preparation.

(b) *How work is taken.*—Apparently students in teachers colleges and normal schools no longer constitute a transient group. Comparative evidence from transcripts in selected institutions shows much less extension work actually taken than permitted in the total group of teachers colleges and normal schools. The data from transcripts indicate that students take most of their college courses during the regular year, and about half of the students also utilized the summer session. In nearly half of the institutions replying to Inquiry 12 the students can obtain a full quarter of work during the summer term.

(c) *Scholarship regulations.*—Almost all institutions claim to have a scholarship rule; that is, a regulation requiring the grades of each student to average a certain specified attainment. For most institutions it is merely insistence on average scholarship. There is little evidence of insistence on high scholarship.

(d) *Restrictions on rank of courses.*—Conventionally, it is held that students should enroll in courses suitable to their maturity. Actually, in the institutions there is more regulation of students taking courses above their rank than of students taking courses below their rank. Yet the latter practice is perhaps less defensible than the former practice.

An analysis of selected courses in representative institutions (Inquiry 13) indicates that little attention is apparently paid to grading courses in the various curricula, though the data do not permit accurate generalization about the restrictions in rank, sequence, and prerequisites.

(e) *Special features of content and method.*—Considerable claim is made for provision for orientation—survey courses. When given (in 48.2 percent of 139 institutions reporting), these courses are representative in the main of science, history, literature, the fine arts, education, and hygiene. A considerable number of institutions (39.4 percent of 142 replying) claim provision for ability grouping but chiefly in a few classes. Innovations in method as shown in the claim of adoption of new devices such as honors work, the tutorial plan, and comprehensive examinations are in little evidence in teachers colleges. Apparently provisions aiming at increasing self-direction and synthesis are not uppermost as objectives in these institutions.

(f) *Diplomas, certificates, and degrees.*—The 145 institutions reporting listed scores of different titles for diplomas, certificates, and degrees. While undoubtedly a considerable portion of this variation is in terminology alone, yet the variety is nevertheless indefensible.

#### 4. HOW CURRICULA AND COURSES ARE MADE

Data were furnished by 122 teachers colleges on how curricula and courses are made. Space does not permit reproduction of detailed data which reveal nearly two score agencies involved in one or more institutions.

Curricula are made in the main by about 4 or 5 agencies—a curriculum committee, or department heads, or the president, or a faculty or a State department, or several of the agencies in combination. Curricula are stimulated largely within departments. This finding tends to confirm an earlier statement that curricula expand largely from specialized interests within departments. The tabulated data furnished little evidence of suggestions of curricula coming from alumni, students, school boards, teachers, or administrators in the field, or even from standardizing agencies.

In the matter of how courses are made a shift is evident, which still more emphasizes expansion trends within departments. Here proposals and stimulation of courses arise to an even greater extent within departments, though the final approval still rests with administrative agencies.

#### SUMMARY

The recognition of the transformation of normal schools with a limited program of teacher education into degree-granting teachers colleges is essential to interpretation of contemporary problems of teacher preparation. A steady expansion of education, particularly on the secondary and collegiate levels of instruction, brought to focus many present-day conditions of teacher education.

The particular tendency which a study of the evolution of teacher education reveals is the growing variety of curricula and courses to prepare teachers. Another tendency evident in expansion is recognition of both subject matter and professional materials in the teacher program.

In all teacher-preparing institutions the elements which should differentiate a professional institution should be kept preeminent. These include a spirit resulting from a single purpose (teacher education), increasing time to organize a collegiate program of formal preparation for teaching, a wealth of relatively objective evidence to be utilized as source material, a more permanent and mature student personnel, a faculty superior in both cultural background and professional preparation, and adequate plant and equipment, including

laboratory facilities essential to the preparation of professional workers.

Certification is the crux of the problem of increased professionalization in teaching. The old concept that anyone can teach is still reflected in low certification standards. It is almost useless to set up prolonged professional curricula to prepare teachers as long as States permit this condition to exist.

There is still another factor in the expansion program that must be considered. Teachers colleges and normal schools should adapt their program to conditions in their placement area. There is an apparent desertion of rural and elementary programs of teacher education. Yet in many States the most important service of these institutions is to be found in their possible contribution to the preparation, both quantitative and qualitative, of teachers for elementary and rural schools. Similarly, the teachers colleges should take cognizance of the actual assignments of new teachers in small high schools where graduates of secondary teacher-preparation curricula are likely to begin their teaching careers. The evidence shows strong probability of secondary teachers being assigned to teach 2, 3, or even more different subjects in their first years of experience.

Prospective teachers in preparation in teachers colleges today represent a fairly permanent personnel. Students of at least average scholarship are required. Insufficient attention appears to be given to prerequisites, sequences, and restriction of off-level registration. There is some attention to the more general survey types, of course, but insufficient attention to techniques for promoting the capacity for increased self-direction of students. Completion of preparation for teaching is represented by a variety of certificates, diplomas, and licenses.

Curricula and courses are still made chiefly through administrative agencies which reflect specialized interests—curriculum committees and department and faculty meetings.

#### PROPOSALS

##### 1. Certification:

- (a) Certificates should be restricted to levels and fields of specialization comparable to trends in types of teaching activity.
- (b) National organizations such as the accrediting agencies should investigate the possibility of establishing uniform titles of various certificates, licenses, diplomas, and degrees.
- (c) All certificates should be under the control of the State educational authorities.

##### 2. Criteria for organization of curriculum policies:

###### (a) Catalog nomenclature:

- (1) Presidents, deans, personnel officers, and departmental heads can do much to improve standardization of catalog

- announcements in respect to (a) a uniform system of numbering courses; (b) statements of prerequisites and position in a sequence of courses; (c) titles descriptive of content; and (d) descriptions based on actual enumeration of topics in detailed syllabi of courses.
- (2) Such standardization will facilitate better grading of courses. It is suggested that national accrediting organizations might well consider appointment of a committee to report on possible uniform nomenclature of catalogs.
- (b) Teachers colleges and normal schools should provide curricula that can command the respect accorded to true professional preparation.
- (c) Four years of preservice college preparation should be regarded as a minimum for teacher education.
- (d) Teachers colleges and normal schools should organize curricula to meet the fundamental objectives of elementary and secondary schools and should adapt their programs to the conditions peculiarly appropriate in their respective placement areas.
- (e) (1) It is the State's duty to insist upon adequately prepared teachers and to guarantee to them the rewards and safeguards accorded to expert public officials.
- (2) It is the duty of the teacher-preparing agencies to select the ablest prospective teachers and equip them for actual teaching conditions, both on preservice and inservice levels.
- (f) Proficiency requirements (a qualitative standard) should replace amounts of study (a quantitative standard) in fields of specialization (majors).
- (g) Provision should be made in a teacher-education program for:
- (1) General education.
  - (2) Development of individual aptitudes.
  - (3) Two or three teaching fields of specialization.
  - (4) Professional materials—courses in education and psychology, professionalization of what to teach, and observation and practice teaching.
- (h) Curricula for the education of teachers should be coordinated by cooperative efforts of teacher-preparing agencies within States and even in regions where education problems are common.
- (i) Curriculum making is much more than mere enumeration of courses provided for a given field of specialization. Objectives both general and specific, college and professional, should be formulated. An outline of the courses graded and ranked

is the first level of analysis. The second level demands for each of the courses enumeration of the aims, basic concepts, principles, skills, suggested methods of teaching, references, requirements, and ways and means of validating outcomes through testing.

**3. Administration and faculty guidance:**

- (a) Colleges should provide a freshman week sufficiently long to ascertain in a preliminary way the potential abilities of its new prospective teachers.
- (b) Systems of curriculum guidance should be promoted, by which each student is systematically checked for all types of growth.
- (c) All welfare activities—housing, health, social training, employment, and control—should be integrated in one personnel, thus making it easier to guide and direct each student in terms of available records.
- (d) Personnel officers should constantly appraise the professional, social, and individual growth of each student.

**4. Extension work:**

- (a) Old forms of extension work may now be minimized and new types of services should be developed. The latter include such problems as curriculum revision techniques, testing, personnel procedures, supervision, and the like for teachers in the field.
- (b) Summer sessions also should be adapted to teaching personnel. Special attention should be given to organization of courses appropriate to advanced senior college, and where graduate work is offered, to graduate students.

**5. Related considerations:**

- (a) Social organizations and functions, in that they ought to contribute to the social training of all prospective teachers, should be a direct responsibility of the administration of the college. It is also the duty of the administration to provide for physical and intellectual growth.
- (b) The administration should provide for personnel and guidance work so that each student may under direction be helped to develop his own aptitudes and interests. This provision should represent the elective program of the individual student.
- (c) The need for development of social and individual traits of teachers calls for direct attack on the knowledge, skills, attitudes, and ideals representative of an area of experience now unstandardized and too frequently regarded as a byproduct of college life.

## CHAPTER III

# CURRICULUM PATTERNS AND THEIR OPERATION

### 1. NUMBER, VARIETY, AND LENGTH OF CURRICULA OFFERED

Many and varied are the curricula for the preparation of teachers for different types of positions, as revealed in the analyses of the catalogs of 66 teachers colleges and normal schools<sup>1</sup> and the returns from 145 institutions on the check list which was included in the general curriculum inquiry (Inquiry 12). A total of 170 different titles of curricula<sup>2</sup> were found in the catalog announcements of the 66 teachers colleges and normal schools; but only 42 of these different curricula were offered in 5 percent or more of the institutions. The check list (Inquiry 12) listed 51 types of curricula. In all, 47 different 4-year curricula are common to the two lists (obtained from catalog analysis and Inquiry 12), each offered by 5 percent or more of the institutions under review.

It will be observed in table 5 that the rural curriculum is the only one offered by 5 percent or more of these institutions on the 1-year level. On the 2-year level, as pointed out earlier, the majority of offerings were for the preparation of elementary teachers. The 2-year rural curricula were twice as frequently offered as 1-year rural curricula, but 2-year curricula for special subjects were not so strongly emphasized.

The 3-year curricula were similar in emphasis to those of the 2-year level. These 3-year curricula may be indicative of an upgrading tendency by which 2-year normal schools move first to a 3-year program and subsequently become degree-granting teachers colleges.

The 4-year curricula, implying degree-granting status, were most prevalent.<sup>3</sup> They covered all types of curricula for teaching positions and for administrative and supervisory positions.

<sup>1</sup> This total of 66 institutions included 29 selected for intensive study and an additional 37 to give better representation by States. Space limitations prevent publication of the detailed analyses of the 2 separate groups. In general, though, the proportional emphasis to various curricula in the two subordinate groups is similar.

<sup>2</sup> Throughout this discussion this term refers to a group of courses organized to cover essential materials for a given type of teaching, supervisory, or administrative position.

<sup>3</sup> They constituted 80 percent of the total frequencies of the curricular offerings, whereas the 5-year curricula comprised 7.3 percent; the 3-year curricula 10.4 percent; the 2-year and 2½ year curricula 15.5 percent, and curricula of 1 year or less than 1 year 5.7 percent.

TABLE 5.—Percentage of teachers colleges and normal schools offering various curricula as revealed in analyses of 66 catalogs and 152 returns from Inquiry 12. (Only curricula offered by 5 percent or more of the institutions are listed.)

Curricula	Percent of institutions offering curricula of—								
	1 year		2 years		3 years		4 years		5 years
	Cat-alog	In-quiry 12	Cat-alog	In-quiry 12	Cat-alog	In-quiry 12	Cat-alog	In-quiry 12	In-quiry 12
1	2	3	4	5	6	7	8	9	10
<b>Academic:</b>									
English.....				5			58	50	8
Speech.....							14		
Foreign language.....									
General.....								31	
French.....								43	
German.....				5		6	26	11	24
Latin.....							27	26	
Modern.....							20		
Spanish.....							14	21	
Others.....								5	
Mathematics.....				64			50	55	5
Psychology.....				6				10	
<b>Science:</b>									
Biology.....						5	44	36	5
Botany.....								23	
Chemistry.....							24	39	5
Geology.....								8	
Physics.....							20	38	
Zoology.....								20	
Natural.....							17		
Geography.....				11		5	33	57	
<b>Social sciences:</b>									
Economics.....								21	
History.....								43	8
History and government.....								2	
Political science.....							33		
Sociology.....								20	
Sociology and economics.....								20	
<b>Special subjects:</b>									
Agriculture.....							21	14	
Art.....				7		10	48	33	
Commercial education.....							44	28	
Home economics.....				5			52	35	
Industrial arts.....				5		8	39	32	
Library science.....							8	11	
Music.....				8		10	52	39	
Physical education (men).....						7	45	34	
Physical education (women).....				6		8	48	28	
<b>Education:</b>									
Educational psychology.....								8	
Elementary.....				17	24	13	20	32	33
General.....								17	
Intermediate.....				23	40	12	17	27	23
Kindergarten-primary.....				32	46	20	20	45	35
Nursery.....								6	
Principal (elementary).....				8				33	8
Principal (secondary).....								31	7
Rural.....	8	14	29	34	8	11	17	27	
Supervisor (general).....								20	7
Superintendent.....								24	6
Upper grades.....			23	36	9	13	30	33	

In the original tabulation of the returns on Inquiry 12, the teachers colleges and normal schools were not recorded separately. Later this was done for 66 State teachers colleges and 26 State normal schools. In general, the order in which curricula are ranked when these types of institutions are segregated is similar to that when they

are combined in the total picture of all teachers colleges, normal schools, city training schools, and private technical preparatory institutions.

*Most frequently offered curricula.*—The percentage of teachers colleges and normal schools and of teachers colleges separately which offer certain curricula are shown in table 6. This table also shows that 10 ranking curricula in both groups are: English, mathematics, French, history, chemistry, music, social science, physical education (women), Latin, and biology.

The findings for the arts college and universities are largely similar; the 10 ranking curricula implying kinds of teachers prepared are English, mathematics, history, chemistry, French, biology, Latin, physics, German, and Spanish.

TABLE 6.—*Kinds of 4-year curricula (composite) of teachers colleges and normal schools and degree-granting teachers colleges*

Academic curricula—4-year			Special curricula—4-year		
Curricula	Percent of all teachers colleges and normal schools	Percent of degree-granting teachers colleges only	Curricula	Percent of all teachers colleges and normal schools	Percent of degree-granting teachers colleges only
1	2	3	1	2	3
English.....	59	84	Agriculture.....	14	16
French.....	43	58	Arts.....	32	34
German.....	24	33	Commercial education.....	28	36
Foreign language (general).....	31	42	Home economics.....	35	48
Latin.....	36	48	Industrial arts.....	32	45
Spanish.....	21	24	Music.....	49	48
Mathematics.....	55	75	Physical education (men).....	34	46
Science.....	31	43	Physical education (women).....	38	48
Biology.....	36	48	Education:		
Botany.....	23	28	Elementary.....	33	60
Chemistry.....	39	49	General.....	17	18
Physics.....	38	39	Intermediates.....	33	48
Zoology.....	20	25	Kindergarten—primary.....	35	46
Social science.....	38	55	Principal—elementary.....	38	45
Economics.....	21	28	Principal—secondary.....	31	48
History.....	43	60	Rural.....	27	30
Political science.....	20	26	Supervision.....	30	48
Sociology.....	20	30	Superintendent.....	24	49
Geography.....	37	46	Upper grades.....	38	48

The teachers-college pattern approaches that of a liberal-arts college, as is evident in variety in curricula and in the number of courses per curriculum. However, according to recent statistics,<sup>4</sup> the load in terms of actual graduates from curricula of various lengths in these institutions is still predominately in curricula of less than 4 years. About 19 percent of all graduates of teachers colleges and normal schools combined complete 4-year curricula.

<sup>4</sup> Foster, E. M. Biennial Survey of Education in the United States, 1928, vol. 2, ch. 5, in United States Office of Education Bulletin, 1931, no. 29, p. 11. Statistics of Teachers Colleges and Normal Schools, 1929-30.

## 2. NUMBER AND VARIETY OF COURSES OFFERED

*Rapid increase in number of courses.*—The expansion of curricula is seemingly paralleled by expansion of courses. Differentiation is a basic theory in organization of curricula and courses in teacher-preparatory units, largely on the assumption that the variety of teaching positions in public schools demands specific preparation for each kind of position.

Numerous studies have been made of the number of courses offered in various departments. All studies based on comparative data for different periods reflect a steady expansion of courses. Space permits mention of only two studies—one dealing with education courses,<sup>8</sup> and the other with the social sciences.<sup>9</sup> The first study by Crabb shows how education has evolved from one course, "the science and art of teaching", in the early normal schools to nearly 1,400 distinct titles in the 1920's. The findings of an investigation of the social sciences about 10 years ago reveal similar variety—more than 1,500 different titles in geography, history, government, economics, and sociology. While titles vary more than content, nevertheless there is great specialization.<sup>7</sup> The evidence cited earlier concerning how courses are proposed possibly explains this tendency, for it was shown that courses are proposed largely within a department and most often by instructors.

A study<sup>8</sup> of the number of courses given in 59 teachers colleges and normal schools in 27 States and 34 colleges and universities in 17 States shows the former type of institution giving in 1923-24 an average of 271 courses per department (range 61-713) and the latter type giving in comparable departments 474 courses (range 115-1,230).

A recent comparative study<sup>10</sup> of expansion of all courses without reference to departments shows the expansion in three types of institutions—10 undergraduate colleges, 10 universities, and 14 State teachers colleges and normal schools. The most striking fact in this picture of the increase in the number of courses in the period of 1900-30 is the much greater expansion in the teachers colleges. The number of course titles in this group of institutions has expanded

<sup>8</sup> Crabb, A. L. A Study in the Nomenclature and Mechanics Employed in Catalog Presentations of Courses in Education. Nashville, Tenn. George Peabody College for Teachers, 1926, 98 p. (Contributions to Education, no. 21).

<sup>9</sup> Rugg, E. U., and Dearborn, N. H. The Social Sciences in Teachers Colleges and Normal Schools. Greeley, Colo., Colorado State Teachers College, 1926, pp. 19-24.

<sup>7</sup> In an attempt to determine 10 representative courses in each of 17 subject curricula offered in 29 teachers colleges, it was found necessary to take titles offered in less than half of the 29 institutions for all subjects and in less than a third for some curricula. In other words, in this selected list of teachers colleges there is slight unanimity of course work for a given curriculum in institutions of similar type.

<sup>8</sup> Hall-Quest, A. L. Professional Secondary Education in Teachers Colleges, New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1925. (Contributions to Education, no. 169.)

<sup>9</sup> Courses such as engineering, law, etc., were not included.

<sup>10</sup> Judd, C. H. Education, ch. VII. Report of the President's Research Committee on Social Trends. Recent Social Trends, New York, N.Y. McGraw-Hill Book Co., Inc., 1933. (For tables on number of courses by types of institution, see p. 338-350.)

about twice as rapidly as has the number of courses in either of the other two groups of institutions (387 percent as compared with 198 and 182 percent). It should be pointed out, however, that this period of acceleration parallels the period of the rapid expansion of State normal schools into degree-granting teachers colleges.<sup>11</sup>

A final comparison of current courses per curriculum is revealed by data from the college staff inquiry of the National Survey of the Education of Teachers.<sup>12</sup>

Table 7 shows an average of about 15 courses per department or the equivalent of about 42 semester hours of college credit per department,<sup>13</sup> or for 17 subject fields a total college offering of 714 semester hours.

TABLE 7.—Number of separate courses reported by department heads of teachers colleges and normal schools<sup>1</sup>

Course	Number of cases	Q <sub>1</sub>	Median	Q <sub>3</sub>	Range
1	2	3	4	5	6
Art.....	52	6.7	12.0	20.3	2-29
Biology.....	57	6.5	9.8	15.3	2-77
Chemistry.....	20	5.1	8.5	16.0	2-30
Commercial education.....	23	12.9	22.5	29.1	2-73
Education.....	61	6.4	14.4	27.8	1-61
English.....	74	13.4	20.4	30.6	2-69
Foreign language—classical.....	14	5.3	14.5	19.8	5-26
Foreign language—modern.....	26	9.0	14.0	22.3	2-55
Geography.....	28	6.8	10.0	14.3	2-61
History and government.....	51	12.3	15.1	23.4	4-34
Home economics.....	42	14.3	20.0	28.0	2-54
Industrial arts.....	48	14.1	18.8	26.3	6-53
Mathematics.....	55	9.2	13.8	19.1	4-45
Music.....	60	8.0	17.5	24.0	1-79
Physical education.....	45	15.6	25.4	31.8	2-65
Physics.....	27	6.8	10.0	16.4	2-47
Psychology.....	15	5.6	8.0	15.4	2-25

<sup>1</sup> Based on data gathered from the college staff inquiry, National Survey of the Education of Teachers.

*Size of majors.*—Analyses of catalogs and transcripts of students' records will show (ch. IV) that the average size of a major having the greatest single amount of specialization seldom exceeds 30-32 semester hours or the equivalent 10 or 11 courses of an average of 3 semester hours each. In other words, assuming high prescription and some agreement as to the necessary materials to be taught in a field, about a dozen courses per major would be sufficient. It is of course recognized that there are justifications for some additional course work to take care of such needs as service work for other departments, and

<sup>11</sup> In the 14 institutions the date of legal establishment as teachers colleges averages 1910; the median for all teachers colleges is 1921.

<sup>12</sup> In this particular inquiry, in addition to personal facts as to rank, title, department, preparation, teaching experience, and the like, each department head was asked to give the number of separate courses in his department for the college years, 1930-31.

<sup>13</sup> A study of about 2,000 representative courses in 18 subject fields shows an average of 2.78 semester hours per course.

general survey courses for all students. Thus, the median amount of course work for most departments is perhaps not excessive.

Yet in the interest of efficiency the tendency to differentiate and specialize materials of a given subject field should be scrutinized, particularly with reference to class size.<sup>14</sup>

### 3. RELATION OF LOCAL DEMANDS TO CURRICULA

The kinds and lengths of curricula in teachers colleges should be governed by the nature of teaching practices in the area served. Data collected from teachers in the field (Inquiry I) show in general the following distribution (table 8):

TABLE 8.—*Distribution of a sampling of teachers of public schools of the United States, 1950-51*<sup>1</sup>

Rural and elementary teachers:		Senior high school majors—Continued.	
Rural teachers	61,407	Modern language	3,419
Kindergarten-primary	66,474	Home economics	3,117
Intermediate	73,687	Physical education	2,012
Upper-elementary	40,188	Trades and industries and industrial arts	1,769
Senior high school majors:		Agriculture	1,299
English	11,199	Art	754
Mathematics	6,841	Music	749
History and social science	6,424	Education and teacher training	261
Commercial education	4,159		
Physical science	3,852		
Classical language	3,470		
Biological science	3,448		
		Total senior high school	52,268

It is apparent that the predominant load in teacher education is in rural and elementary education. In the high-school field the academic subjects constitute two thirds of all majors.

The preparation reported in Inquiry 1 by these teachers in the fields also reflects the organization of curricula patterns. (See table 9.) These data reveal the need for prolonged collegiate curricula for the elementary and rural teachers. Upgrading is the basic problem for such teachers. There is apparently not an oversupply of adequately *prepared* teachers on the elementary level. From the data on lengths of curricula offered, it is apparent that teachers colleges and normal schools are attempting to promote expanded curricula

<sup>1</sup> Based on returns from Inquiry I, National Survey of the Education of Teachers.

<sup>14</sup> The data from the college staff inquiry reveal a median of 17 (11 and 25, Q<sub>1</sub> and Q<sub>3</sub>) for senior college classes and a median of 27 (21 and 35, Q<sub>1</sub> and Q<sub>3</sub>) for junior college classes. As these figures indicate fairly large classes, it should be borne in mind that one-fourth of the junior college classes have fewer than 21 and one-fourth of the senior college classes have fewer than 11 students. It is also interesting that class size for various types of institutions is rather similar. Other data from analyses of 10 representative courses in each school show variations by subjects from a median of 9 in physics, 13 in industrial arts and chemistry, and 14 in home economics, to 21 in education, 30 in history, and 28 in English. In other words, while the average is 21 students per course, there are extreme variations between different curricula. Similar evidence was found for 10 universities and colleges. The latter show class sizes by subjects markedly lower than the former.

but chiefly in the academic fields and possibly at the expense of needs in rural and elementary teaching.

TABLE 9.—Percentage distribution of the preparation of teachers in various types of positions<sup>1</sup>

Type of position	Number of cases	Preparation					
		High-school or less	6 weeks to 1 year	2 years of college	3 years of college	4 years of college	More than 4 years of college
	1	2	3	4	5	6	7
1- or 2-teacher school	61,200	12.2	69.6	28.7	6.0	2.0	0.7
3- or more-teacher school	13,550	4.8	23.9	47.0	13.4	10.2	1.3
In village of fewer than 2,500	31,126	4.1	16.9	54.0	13.7	6.6	1.1
In cities of 2,500-49,999	25,945	3.4	9.3	55.1	18.6	12.2	1.6
In cities of 50,000-99,999	45,273	3.8	7.0	55.1	19.7	13.0	1.8
In cities of more than 100,000	50,304	2.1	6.2	47.0	21.8	16.9	2.1
Total elementary	348,263	5.8	20.5	46.2	15.5	10.2	1.9
Junior high school	36,186	2.0	4.2	17.5	16.0	43.7	16.7
Senior high school	64,787	1.0	1.5	4.4	6.1	52.1	29.6

<sup>1</sup> Based on data of Inquiry I, National Survey of the Education of Teachers.

#### 4. CURRICULUM PATTERNS

Thus far evidence has been presented concerning the number, variety, and length of curricula and the number and variety of courses. The nature of the curriculum patterns is the next main problem in the education of teachers.

A pattern of a curriculum conventionally reflects several principles of organization. First, fields of specialization—majors and minors—are usually required. Second, professional materials in the sense of courses in education, psychology, special methods, observation, and student teaching are included. Third, required contacts in the major fields of knowledge are provided. Fourth, there is usually provision in a curriculum for electives.

The appendix reveals comparatively the pattern of 4-year curricula both as indicated in analysis of catalogs and in analysis of transcripts. Space does not permit much interpretation here, but subsequent chapters will deal in detail with various phases of the pattern.

Variation is the predominant characteristic of the patterns. This is revealed by catalog analysis, by transcripts, and in the range of the percentage requiring a given aspect of a curriculum.

In general, a pattern on the 4-year level as revealed by the catalog analysis (see table 10) demands about one third of a total curriculum in two fields of specialization—a major and minor—about one eighth education, psychology, observation, and teaching, or nearly half of a curriculum in specialized and professional study. The remaining work is presumably elective of two types—free and restricted. The

former permits the student to select any course he may choose. The latter restricts his choice of course work either by requiring him to select a certain number of courses or hours in a field or to choose between several specified courses.

Over and beyond specialization and professional study, there is usually in the pattern required, contact with certain fields of knowledge. Apparently the greatest amount of this broadening course work is in the five fields of English, foreign language, mathematics, science, and social science. This was particularly evident in the analyses of transcripts.

TABLE 10.—A summary of the prescriptions for all 4-year major curricula in 31 teachers colleges, according to catalog analyses

Prescription	Summary of all curricula (636)		
	Percent prescribing	Range of credits	Median of credits
1	2	3	4
<b>Requirement:</b>			
Hours for graduation.....	100	120-163	129
Major.....	100	2- 89	26
First minor.....	77	6- 36	17
Second minor.....	28	6- 13	12
Restricted electives.....	89	2-101	31
Free electives.....	91	1- 79	39
Education and psychology.....	100	4- 29	16
Special methods and professional courses in major <sup>1</sup> .....	62	1- 40	4
Student teaching and observation <sup>2</sup> .....	100	2- 32	7
<b>Required contacts outside major field:</b>			
Agriculture.....	7	2- 5	3
Art.....	38	1- 12	3
Commercial education.....	1	2- 3	2
English.....	97	3- 33	11
Foreign language.....	24	3- 24	12
Home economics.....	4	1- 6	3
Industrial arts.....	5	1- 8	3
Library science.....	29	0- 3	1
Mathematics.....	50	1- 19	6
Music.....	35	1- 14	3
Physical education.....	94	0- 16	5
Psychology (general).....	43	1- 11	3
Science.....	89	1- 47	9
Social science.....	93	2- 35	10

<sup>1</sup> Special methods included in major.

<sup>2</sup> Student teaching and observation included in education and psychology.

The transcript data revealed that students in general take about one-fifth to one-fourth of their work in a major field of specialization and about one-fourth of them also take course work in education, special method, and observation and teaching. The remainder of the 128-133 semester-hours of a 4-year program was distributed over a number of subjects. The pronounced tendency was to concentrate, both in high school and college, in English, science, and social science, the last being largely history. English is the only subject on the college level that was taken in sufficient amount to constitute for practically all students the equivalent of a quantitative minor for which

the conventional requirement of accrediting associations is 15 semester credits.

Another tendency noted is the prevalence of the general or broad areas in general science and social science curricula. That is, in a very considerable number of institutions curricula for the preparation of science and social science teachers are offered in contradistinction to the more specialized curricula in biology, physics, chemistry, or history.

Table 11 would indicate that for programs less than 4 years in length only five types of curricula, all for elementary education majors, were offered. The chief distinctions between such limited curricula (typical also of a few 3-year education curricula) are: (1) The insignificance of majors and minors, due to the fact that education is virtually the major; (2) the large proportion of professional studies—virtually half of a total program when the major, education, and observation and teaching are counted; (3) the further prescription of work in related subject-matter fields; and (4) the small amount of electives.

TABLE 11.—Summary of prescriptions in 2-year curricula offered in 66 representative teachers colleges and normal schools.<sup>1</sup> No curricula offered in fewer than 5 schools are reported

Item	Range of median (semester-hours)	Median (semester-hours)
1	2	3
Hours required for graduation.....		
Major.....	64.00-66.00	66.00
First minor.....	6.00- 9.75	7.00
Second minor.....		
Restricted electives.....		
Education and psychology (outside major).....	8.40- 8.50	4.75
Special method and professional courses in major.....	7.00- 9.25	7.20
Observation of teaching.....	( <sup>2</sup> )	
Student teaching.....	2.00- 4.00	2.17
Combined courses in observation and student teaching.....	5.00- 6.00	5.83
Student teaching and observation (total).....	6.00- 8.50	8.00
Hours offered in free electives.....	6.00- 7.33	6.83
Required contacts outside major field: Agriculture.....	4.00-11.50	8.00
Art.....	2.00- 3.00	2.67
Commerce.....	2.36- 3.33	2.80
English.....	2.67- 2.67	2.67
Home economics.....	8.50-12.00	9.00
Industrial arts.....	1.00- 3.34	2.25
Library science.....	1.50- 2.00	1.84
Mathematics.....	0.67- 0.87	0.84
Music.....	2.67- 3.50	2.88
Physical education.....	2.45- 3.75	2.80
Psychology (general).....	2.83- 5.00	4.86
Science.....	2.00- 3.00	3.00
Social science.....	4.50- 6.00	5.00
Miscellaneous.....	9.00-12.00	9.83
	0.75- 3.00	1.00

<sup>1</sup> Five 2-year curricula (or majors) are offered in the 66 schools.

<sup>2</sup> All 2-year curricula represent a major in education. Therefore, special methods and professional courses are included in the major.

A final phase of the patterns of work concerns case studies based on analysis of transcripts alone of four students <sup>15</sup> selected from each of eight curricula. Table 12 shows the situation in semester hours of work taken for 27 fields, total number of hours,<sup>16</sup> and number of fields. The major is italicized for each field except in the case of education curricula, where the major is virtually professional work.

First may be noted the variation in number of students taking each subject. Education and educational psychology are the only subjects that all 32 of these selected students have taken. One student took no work in English; English thus ranks second, with 31 of the 32 students taking it. Three-fourths or more of this group of students took observation and teaching and special methods,<sup>17</sup> art, and history; half or three-fourths took biology, physical education, geography, music, political science, and mathematics.

Second may be noted the variation in amounts taken, as, for example, in the amount of work taken in a major. Here are four biology majors (cols. 3 to 6, item no. 16), taking 30, 26, 24, 36 semester-hours, respectively; the average catalog prescription in biology is 25. Four music majors (cols. 23-26, item 11) took, respectively, 29, 48, 47, and 36 semester-hours; the average catalog prescription in the major is 34. In most cases a considerable increase is noted in the amount of work taken in the major over the amount prescribed in the catalog statements.

<sup>15</sup> In each of the 8 selected curricula, cards 1, 11, 21, and 31 were used.

<sup>16</sup> The total amount taken varies for each student; and interpretations of proportions of work taken in any subject field must be calculated on the total work taken by a student.

<sup>17</sup> It is possible that all students not taking these subjects show equivalence in other ways.

TABLE 12.—Case studies of amounts of work taken by 4 students selected from each of 8 curricula, based on analyses of transcripts

Item number and subject taken	Number of students taking	Academic subjects—semester-hours																Special subjects—semester-hours		
		Biology				Geography				Mathematics				Art						
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1. Agriculture.....	7																			
2. Art.....	23		2	2	6	6	4	21				6			3					
3. Commercial education.....	9	4	4	2	2	2	4	4	6	2	1	2	2	26	23	24				
4. English.....	31	23	4	12	16	22	34	18	34	12	6	8	11	16	3	4				
5. Foreign language (classical).....	6						10	10	2	2	2	2	2	8	11	16	4			
6. Foreign language (modern).....	15	16		12	16	12	10	2		8		6								
7. Home economics.....	9		6	6	10	2									11	18				
8. Industrial arts.....	7		8																	
9. Library science.....	0																			
10. Mathematics.....	18	10		3	3	4	6	3	35	24	27	25								
11. Music.....	20			14	4	4	1			2	1	8	46							
12. Philosophy.....	8	12	3	3	3	2	4	4	8	4										
13. Physical education.....	18	3	2	7	6	4	3	3												
14. Psychology (general).....	12	3																		
15. Religion.....	1																			
16. Science (biological).....	25	29	24	26	6	7	1	8	6	12	8	18	3							
17. Science (general).....	3	3																		
18. Science (physical).....	3	2	2	3	3															
19. Geography.....	23	24	6	10	6	29	23	19	20	24	3	21	18	8	3	2				
20. History.....	26	24	6	10	6	8	8	8	26	26	8	6	6	6	3	2				
21. Economics.....	6	5	5																	
22. Political science.....	18	22	2	3	3															
23. Sociology.....	12																			
24. Education and educational psychology.....	32	19	18	18	10	26	20	24	19	13	23	31	20	10	10	31	20			
25. Special methods.....	27	2	4	5	2	2	4	3	10	9	12	6	5	11	6	6	6			
26. Student teaching.....	28	5	4	10	6	4	4	13	5	5				3	8	13	5			
27. Miscellaneous.....	2																			
Total work.....	128	126	132	127	123	126	130	131	149	128	136	132	129	121	128	137				
Average number of fields outside of major.....	7	14	12	13	10	12	11	11	7	11	12	11	9	10	12	7				

TABLE 12.—Case studies of amounts of work taken by 4 students selected from each of 8 curricula, based on analyses of transcripts—Con.

Item number and subject taken	Number of students taking	Special subjects—semester-hours—Continued								Education subjects—semester-hours							
		Industrial arts				Music				Kindergarten-primary, 4 year. <sup>1</sup>				Intermediate, 2 year. <sup>1</sup>			
		19	20	31	32	33	34	35	36	37	38	39	40	31	32	33	34
1. Agriculture	3																
2. Art	7	15	4	1	4								4				
3. Commercial education	23	10	4	3	3	24								5	6	7	3
4. English	9	17	3	3	3												
5. Foreign language (classical)	31	2	14	16	14	18	20	11	14	20	18	17	13	17	8	8	
6. Foreign language (modern)	5					6											
7. Home economics	15	3	3	3	3	5	8	10	10	12							
8. Industrial arts	9					6											
9. Home economics	7	47	29	21	27												
10. Mathematics	0																
11. Music	18	3	8	8	27												
12. Philosophy	20			1	1	26	47	36									
13. Physical education	8	3	3	3	4												
14. Psychology (general)	18	5	1	3	3	7											
15. Religion	13	7	7			10											
16. Science (biological)	1																
17. Science (general)	25	5	2	6	3	8											
18. Science (physical)	3	3	3														
19. Science (general)	12	2	3														
20. Science (physical)	23	3	3	6	8	3	6	7	7	7	4	11	20	3	3	6	4
21. Geography	26	3	3	3	3	3	7	7	7	2	2	2	2	2	2	2	2
22. History	6	12															
23. Economics	18	3	1	1	3	2	1	3	4								
24. Political science	12	3	2														
25. Sociology	32	3	2			16											
26. Education and educational psychology	27	18	34	24	24	21	9	13	14	14	22	28	7	13	8	5	8
27. Special methods	27	10	14	11	11	8	3	4	4	4	16	7	5	4	4	18	10
28. Student teaching	25	7	10	3	3	3	8	7	8	5	5	10	22	5	8	12	6
29. Miscellaneous	3																
Total work		129	127	140	128	130	131	131	121	129	129	131	121	80	72	68	64
Average number of fields outside of major		12	14	13	11	11	9	12	12	13	10	12	15	9	11	9	6

<sup>1</sup> The major in education involves items 14, and 24 to 26.

Note.—This table should be read as follows (horizontally): 7 students of the 23 sampled took work in agriculture, student 10 (a major in geography) taking 21 semester hours; student 13 (a major in mathematics) taking 5 semester hours, etc.; (vertically): Student 1 (column 3) a major in biology, took 28 semester hours in English, 16 in foreign language (general), etc., and had 128 semester hours in seven subjects outside his major, biology.

Variation is also shown in the amount of work taken in fields related to a major. In mathematics, for example, one student (col. 11) had besides his major of 35 hours, 24 hours of physical science, but not more than 8 hours in any other subject except professional work, where as another student (col. 3) had 30 hours in biology, 16 hours in modern language, 28 hours in English, and 24 hours in history.

#### SUMMARY

Variety characterizes the number of curricula and the courses offered, particularly in specialized subjects in 4-year sequences. Specialization is common. There is a seeming neglect of the more general program related to rural and elementary teaching, perhaps as a result of the tendency to develop patterns typical of 4-year curricula in colleges (majors, minors, the group system, required contact with traditional academic fields, and electives). All these factors are evident in analysis of requirements in curricula for the education of teachers.

The effect of catalog prescriptions emphasizing the major professional requirements and required work principally in English, science, social science, and physical education is evident. The amount of the major is considerably increased for most students. The professional work is seemingly very much increased and the tendency to establish a strong quantitative minor in English is pronounced.

#### PROPOSALS

##### 1. Curricula:

- (a) The number of curricula should be reduced and those that are offered should be integrated in terms of relationships between various fields of specialization.
- (b) There should be at least three major differentiated curricula—the rural, the elementary, and the secondary. These represent the three prevalent school divisions.
  - (1) The elementary curriculum might provide, in addition to common material, for a varied sequence of courses appropriate to either the kindergarten-primary grades or the intermediate grades or a unified program.
  - (2) It is desirable, insofar as possible, that a separate staff be set up for the preparation of elementary and rural teachers. It is particularly desirable where size of staff in subject departments permits that one instructor in each department concerned—art, music, English, geography, history, science—be delegated to give “service” courses and direct the professional preparation in the training school.

(c) It is desirable that one instructor in the education department be delegated to direct the rural program. Because the service courses in the above elementary organization are similar to a large degree, it is also desirable that the instructors of subject matter delegated to teach courses contributory to the elementary program serve also the rural majors.

(d) The secondary curriculum over and beyond an essential sequence of secondary education should provide for a few main fields of specialization. Extreme departmentalization might well be minimized; for example, there might be a science curriculum instead of separate curricula in biology, chemistry, and physics and a social science curriculum instead of separate curricula in history, sociology, and economics.

2. Courses:

(a) The number of courses within any major field of specialization should be reduced, and related course material should be combined into fewer fundamental courses.

(b) The maximum amount of professional study on the preservice level should be restricted.

3. Curricula for administrative, supervisory, and special service positions should probably be organized in only a few centers where enough students can be secured to justify such special courses. These curricula should extend to the graduate level.

4. Departmental and divisional organization:

(a) In the interest of economy and efficiency the marked tendency to make various subdivisions of certain areas of subject-matter fields into independent curricula should be discouraged.

(b) As much as possible and beyond any administrative or "paper" organization, related subjects should be unified into departments or divisions. This is already evident in some institutions in departments or divisions of science, social science, and foreign language.

(c) It is possible that some departments should designate courses as "service" subjects, either because their content is of value to majors in other departments (geography for elementary teachers) or because the materials afford opportunities for needed minors (a foreign language for English majors) or because the subject has important contributions to make to the general education of all students (sociology).

(d) In States where duplication of effort is evident, the opportunities to secure majors in such duplicated departments should be studied with a view of desirable allocation of the respective curricula to different State institutions.

## CHAPTER IV

### FIELDS OF SPECIALIZATION

Education in America has long been concerned with the question of general and specialized education. It is the issue of broad preparation in several fields versus depth in one field. On the elementary level the materials of instruction are in the main common for all pupils. On the secondary level specialization is increasingly provided, principally through organization of differentiated curricula. On the college level a student is expected to specialize even more—to choose a major or a field of concentration. In slightly less degree he is also expected to choose one or two minor fields for more intensive study than is implied in the common requirements of general education.

The purpose of this chapter is to show both practice and theory relative to the implied hypothesis that prospective teachers should obtain training in one or more fields of specialization.

#### 1. EXTENT OF MAJORS AND MINORS—4-YEAR CURRICULA<sup>1</sup>

The extent of the major is revealed in two sources: (1) the amount of work required of students as revealed by analysis of catalog statements of 66 teachers colleges and normal schools and (2) the amount of college work taken as shown by the students' transcripts in 20 teachers colleges.

Table 13 is inserted as a summary of the data from the more detailed sources in the analysis of catalogs and transcripts of the amounts both in semester-hours and in percentages taken in college and high school in the various fields of specialization. See tables B1 and B (appendix).

Majors in general (tables B1 and B, appendix) involve from one fifth to one third of the total amount of a 4-year curriculum.<sup>2</sup> In the comparison of the cataloged requirements and the amount of work actually taken as shown by the transcripts, few fields showed a sharp

<sup>1</sup> Specialization is principally a 4-year problem. Majors and minors are found in but slight degree in short-length curricula. Hence no discussion of specialization is presented with respect to curricula of less than 4 years.

<sup>2</sup> In the catalog analysis most of the special methods courses such as the teaching of history or literature were included in the major. Thus in English the amount of the major is 30 semester hours based on analysis of English majors in 23 institutions, but this 30 semester hours includes 5 semester hours of special method for 61 percent of the institutions under review.

increase of the amount of work taken in the major over the amount prescribed in the catalog.

Nearly 800 respondents in various subject fields were asked to indicate their judgment concerning the extent of a major field of specialization (Inquiry 14). On an average they expressed a desire for about one third of the work in a major, but the range of the medians was from 31 percent in the case of history instructors to 52 percent in the case of music instructors. As evident from table 13, this proportion is considerably more than either the amount specified in catalog requirements or the work actually taken by the students.

TABLE 13.—Amount of work required and taken for major and percentage of work taken in high school and college in major field

Major field	Amount in semester hours		Percent of work taken in major in high school	Percent of work taken in major in college	Percent of students taking in high school
	Catalog analysis	Transcript analysis			
1	2	3	4	5	6
<b>Academic curricula:</b>					
1. Biology.....	25	28	6	21	66
2. Chemistry.....	25	50	8	28	63
3. English.....	30	33	28	36	100
4. Foreign language (classical).....	26	26	20	20	98
5. Foreign language (modern).....	26	34	14	26	53
6. Geography.....	26	24	2	18	30
7. History.....	26	27	18	28	90
8. Mathematics.....	26	26	19	20	100
<b>Special subjects:</b>					
1. Art.....	26	33	5	29	53
2. Commercial education.....	31	34	13	29	73
3. Home economics.....	34	37	8	28	68
4. Industrial arts.....	22	35	10	28	79
5. Music.....	34	48	5	37	60
6. Physical education (men).....	28	27	3	28	17
7. Physical education (women).....	30	27	1	22	15
<b>Education:</b>					
1. Intermediate.....	12	42	1	33	9
2. Kindergarten-primary.....	16	63	1	38	14

\* Percentage taking given only for high-school level; 100 percent took work as major in college.  
 † Includes work in related fields.

The extent of the major is greater for the special subjects. There is possible justification for this in the data of columns 4 and 6 of table 13. Students electing to specialize in such fields as art, commercial education, home economics, and the like have had less previous contact (in high school) with such fields of knowledge. Almost all the students with academic majors had had considerable work in their chosen field of specialization, but only a fourth to a third of the students who majored in one of the special subjects had studied their field on the high-school level. In other words, extent of major apparently should be governed partly by previous secondary study of the field. In the case of the special subjects a student seemingly

needs much more study on the college level to obtain the knowledge and skills of a field of specialization.

*Relationship to high-school work.*—Figures 1, 2, 3, 4, and 5 are inserted to illustrate graphically the similarities of the patterns of specialization in subjects illustrative of 20 types of teachers whose transcripts were analyzed. Several conclusions may be drawn. First, there was great similarity in the pattern of high-school work of various types. Second, the academic work was extensive on both secondary and college levels. Third, there is a much higher percentage of students who take work, aside from their major field of interest, in the academic subjects than in the special subjects. Fourth, the amount of contact with education, psychology, and student teaching was similar in the various majors except for those specializing in education.

The extent of 4-year education majors calls for special comment. It will be noted (items 28 and 29, of table B1 in appendix) that the education majors for intermediate and kindergarten-primary teachers require 12 and 15 semester-hours, respectively, according to the catalog analysis. These figures represent only the course work prescribed in addition to courses in education required for professional reasons of all prospective teachers.

*Range of majors.*—The range (table B1 in appendix) suggests another problem, namely, how small or how large should a field of specialization be? With few exceptions teachers colleges have not been much concerned with limitations on the extent of the major. Hence may be found (table B1 in appendix) such extreme ranges as 20 to 41 semester-hours in chemistry, 22 to 43 semester-hours in history, 10 to 78 hours in art, 21 to 60 in industrial arts, and 3 to 31 in kindergarten-primary education.

*Range in minors.*—Evidence concerning minors was gathered directly from statements of catalog requirements, from responses of thousands of high-school teachers to Inquiry 1 and from analysis of transcripts. In general it is evident from table 14 that first minors are more universally required than second minors. In both types of minors the amounts are about half of the required amount for a major field of specialization. The preponderance of the academic subjects is evident from the data of column 7. The five academic subjects of social science, English, mathematics, physical science, and modern language involve five-sixths of all minor subject combinations.

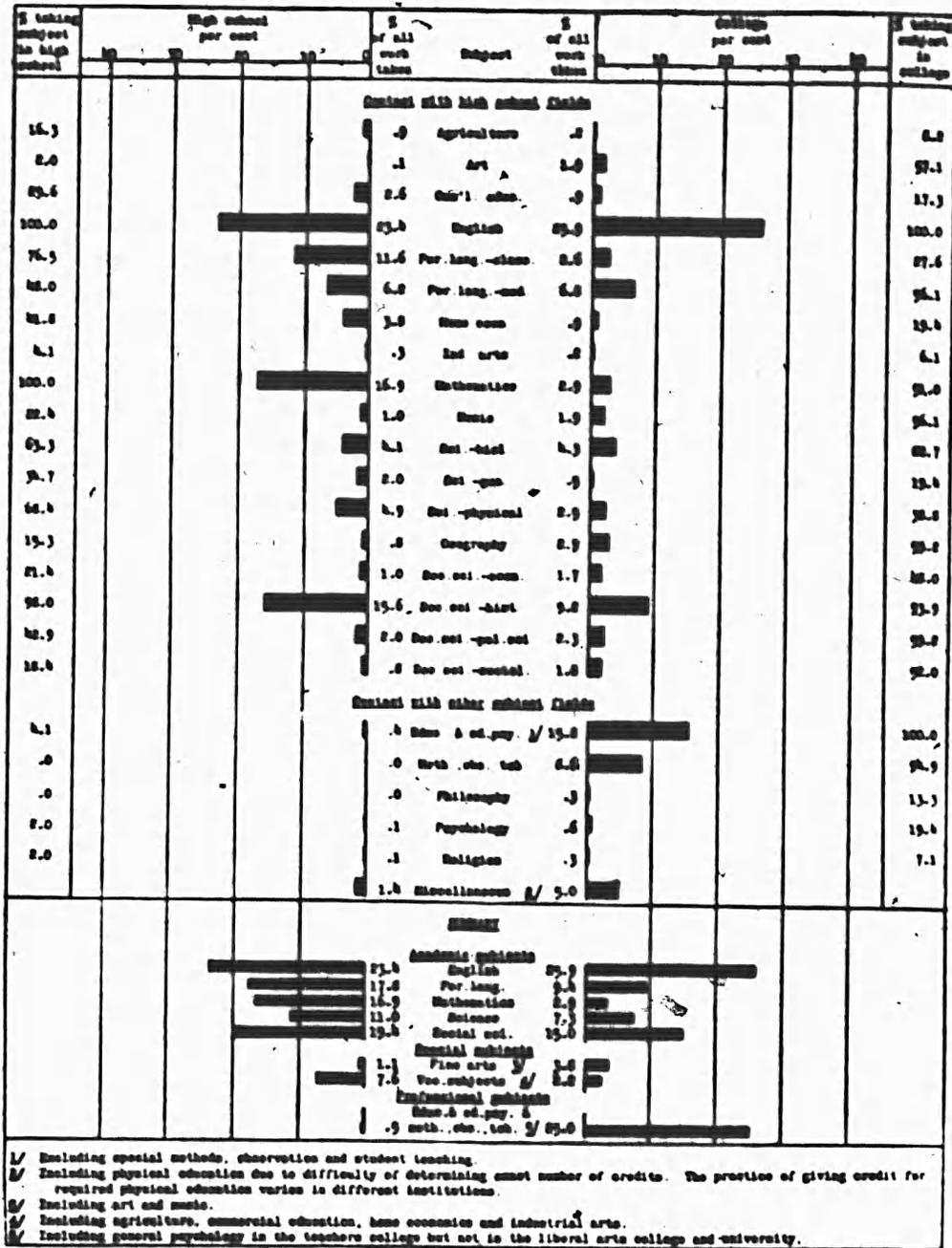


FIGURE 1.—The pattern of work taken in high school and college, by 98 prospective teachers of English graduating from teachers colleges in 1931.

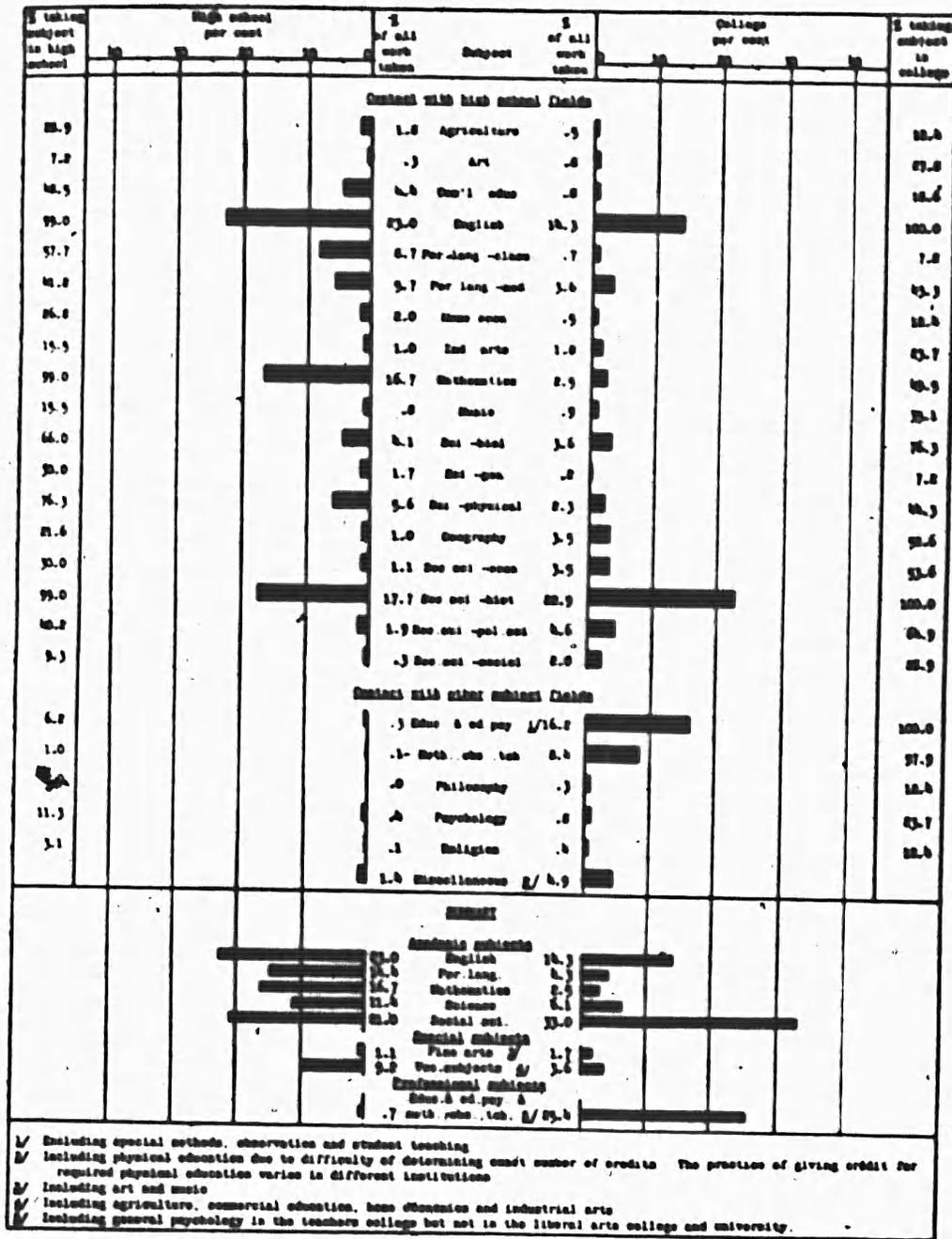


FIGURE 2.—The pattern of work taken in high school and college by 97 prospective teachers of history graduating from teachers colleges in 1931.

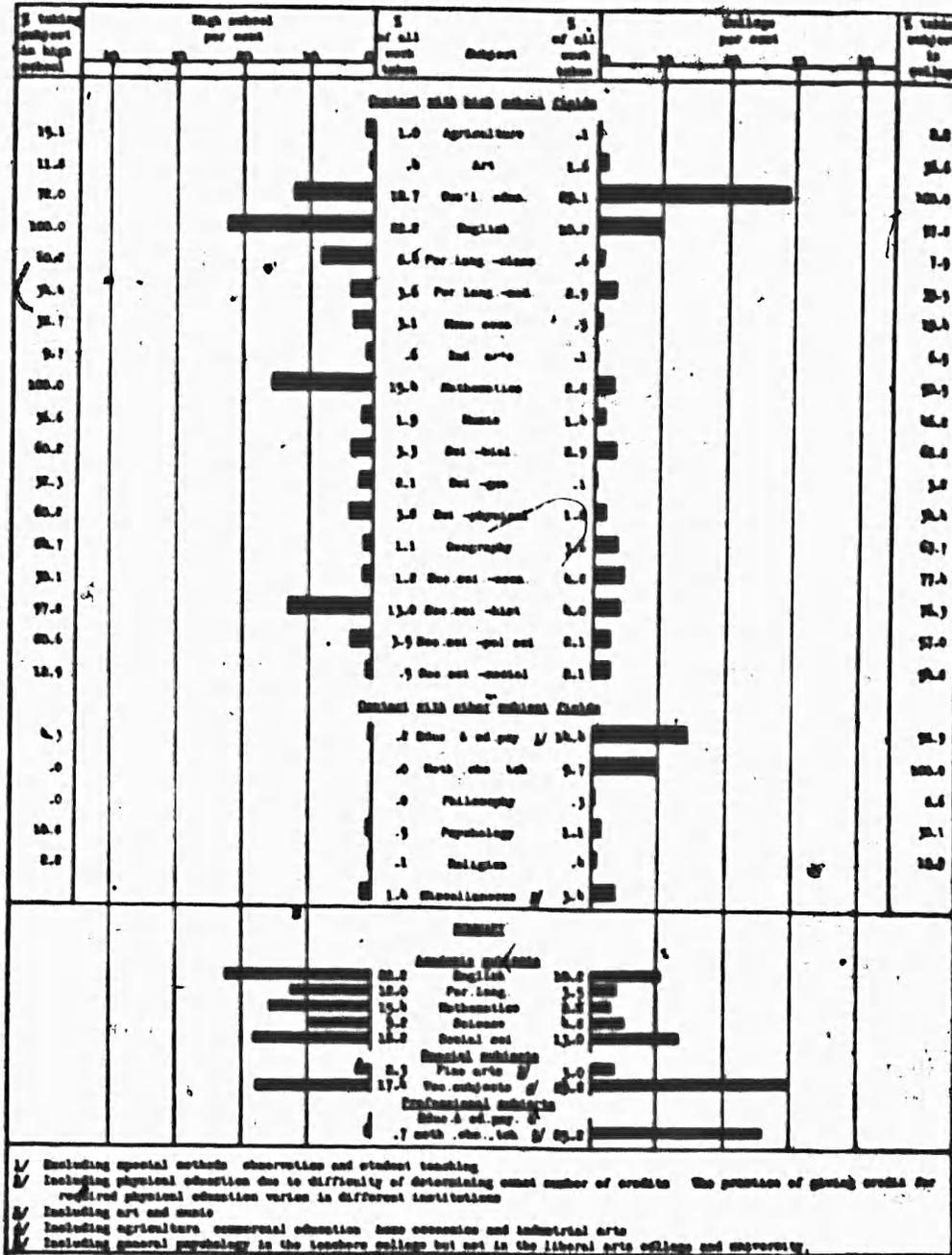


FIGURE 2.—The pattern of work taken in high school and college by 68 prospective teachers of commercial education graduating from teachers colleges in 1931.

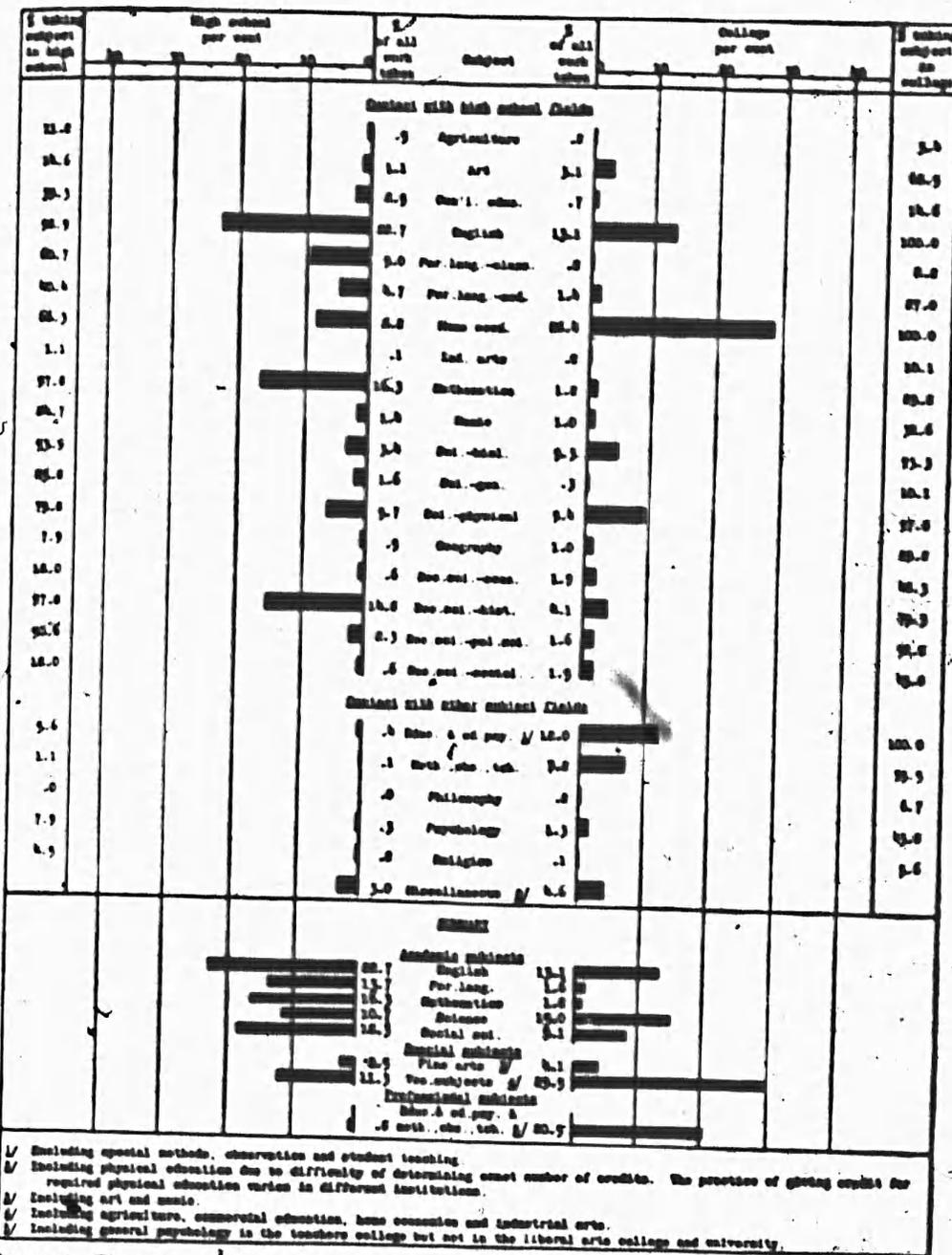


FIGURE 4.—The pattern of work taken in high school and college by 80 prospective teachers of home economics graduating from teachers colleges in 1931.

*Relation of work taken to requirements.*—Secondary teachers in the field reported (Inquiry 1) the amount of work taken in major and minor teaching fields. Space does not permit the inclusion of the tabulated data here, but in summary it may be said that the teachers claimed to have had considerably more work in the major and in the first minor than was found in analyses of catalog requirements and transcripts. The illustrations for table 15 show the contrast.

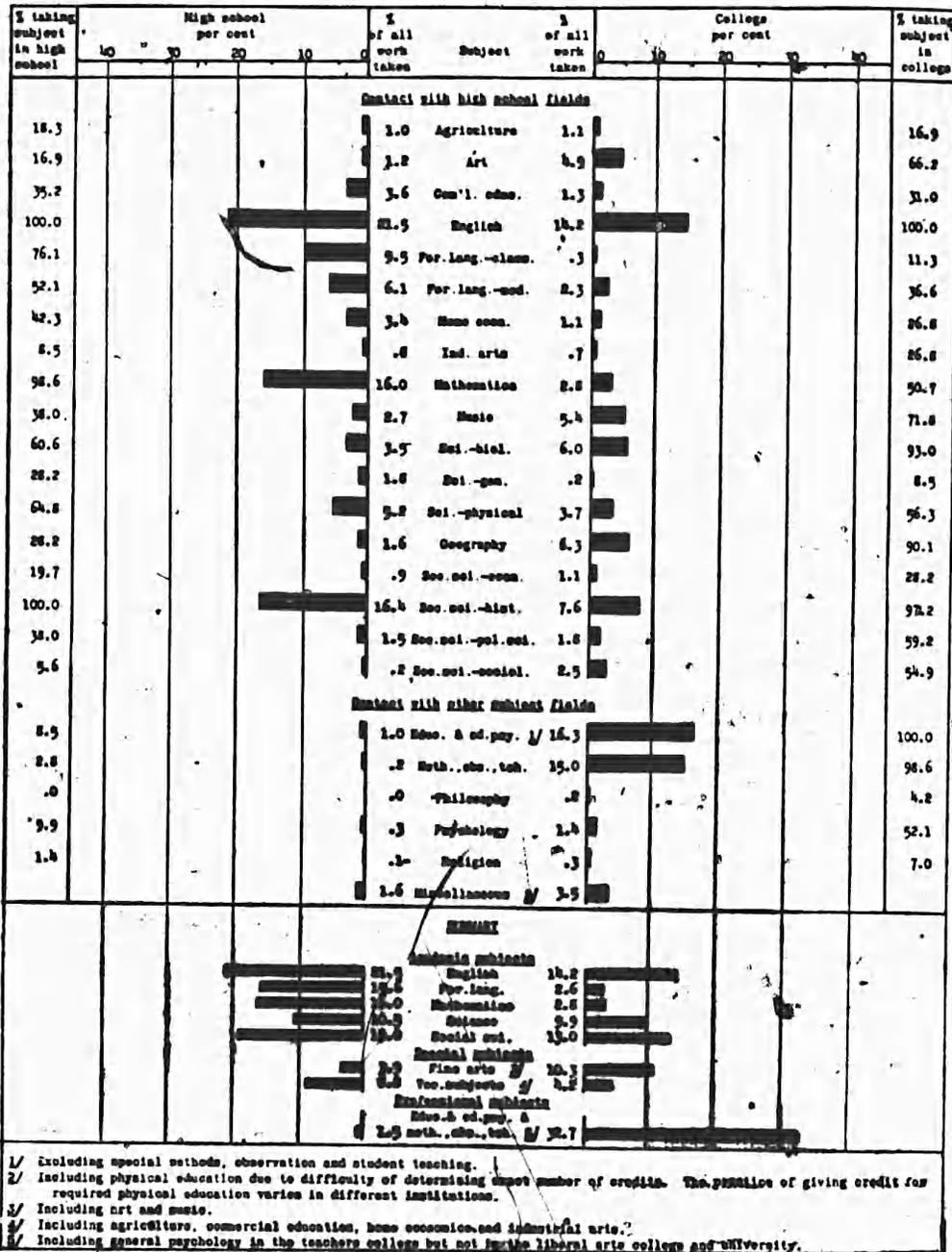


FIGURE 5.—The pattern of work taken in high school and college by 71 prospective teachers of intermediate grades graduating from teachers colleges in 1931.

TABLE 14.—Comparison of catalog requirements for first and second minors with major and minor teaching combinations of teachers instructing in 2 or more fields, 1930-31

Major	Catalog data				Inquiry 1 data	
	Percent pre- scribing minors		Amount in semester hours prescribed in minors		Number of cases	Chief minors (first 3 in rank order of percent)
	First	Second	First	Second		
1	2	3	4	5	6	7
Special subjects:						
Art.....	78	28	15	12	754	(1) Industrial arts, 31. (2) English, 15.
Commerce.....	76	31	15	12	4,159	(3) Mathematics, 11. (1) Social science, 23. (2) English, 23. (3) Mathematics, 15.
Home economics.....	66	24	15	12	3,117	(1) Biology, 24. (2) English, 20. (3) Physical science, 17.
Industrial arts, trades, and industries.....	73	38	17	13	1,769	(1) Mathematics, 24. (2) Art, 18. (3) Physical science, 14.
Music.....	71	29	13	12	749	(1) English, 33. (2) Social science, 20. (3) Art, 9.
Physical education and health.....	74	27	16	12	2,012	(1) Social science, 27. (2) Biology, 16. (3) English, 12.
Academic subjects:						
Biology.....	90	34	19	12	3,443	(1) Physical science, 36. (2) Social science, 15. (3) Mathematics, 14.
English.....	89	32	15	12	11,199	(1) Social science, 37. (2) Modern language, 29. (3) Classical language, 18.
Language:						
Classical.....	94	33	18	12	3,479	(1) English, 34. (2) Modern language, 27. (3) Social science, 13.
Modern.....	92	23	13	11	3,419	(1) English, 39. (2) Classical language, 24. (3) Social science, 19.
Mathematics.....	94	27	18	12	6,841	(1) Physical science, 23. (2) Social science, 19. (3) English, 14.
Physical science.....	91	27	18	12	3,852	(1) Mathematics, 41. (2) Biology, 30. (3) Social science, 9.
Social sciences.....	78	39	15	12	6,424	(1) English, 46. (2) Mathematics, 10. (3) Modern language, 9.
Social science (history).....	95	23	17	13		

*Summary.*—The amount of the major varies considerably for the various teaching curricula under review. This is particularly true of the special subjects compared to the academic subjects. In the next place, it is evident that recent graduates on an average have actually taken in most fields about the amount required, though the extreme range shows that individual students vary from the average practice. In the third place, minors are not commonly required and in general students do not attain quantitatively more than one teaching minor. It is probable that about two-fifths of the total college work of individual students is concentrated in a major and a minor. Variation in practice among institutions is apparently great.

TABLE 15.—Comparison of median amounts (in semester hours) of majors and minors in catalogs, transcripts, and statements of teachers in the field (Inquiry 1)

Subject	Catalog requirement	Transcript	Inquiry 1			
			1 field <sup>1</sup>		2 fields	
			Senior high school	Junior high school	Senior high school	Junior high school
1	2	3	4	5	6	7
<b>English:</b>						
Major.....	30	33	38	30	33	27
Minor.....	15				24	21
<b>Modern language:</b>						
Major.....	26	34	49	46	37	28
Minor.....	13				25	25
<b>Art:</b>						
Major.....	23	33	74	40	42	35
Minor.....	15				18	15
<b>Music:</b>						
Major.....	34	48	61	52	50	46
Minor.....	13				23	19

<sup>1</sup> Those teaching in only one field.

For example, English majors are required to take 30 semester hours; they actually take 33 semester hours but senior high school teachers teaching only English reported that they had had 38 semester hours and junior high school teachers—30 semester hours.

Comparison with the evidence concerning fields of specialization in colleges and universities (pt. III) shows greater similarity between the two types of teacher-preparing institutions; teachers colleges and colleges than among institutions of the same type.

## 2. THE NATURE OF THE MAJOR FIELD OF SPECIALIZATION

Thus far the quantitative aspects of specialization in the patterns of curricula have been presented. Certain qualitative aspects of the major are revealed in the data obtained from the transcripts.

Table 16 shows the subordinate fields in which work was taken by 25 percent of the students majoring in 15 academic and special subject curricula. First, it is evident that there were few subordinate fields in which all the students in any major took work. Second, variations in amounts of work in a given subordinate field are revealed in the table. In the ranges for each subordinate field even greater variations were found. For example, some students showed a dozen times as much work in a given subordinate field as did other students.

## 3. OTHER CONSIDERATIONS AFFECTING MAJORS

*Previous secondary work.*—No teacher-education agency can or should assume that all preparation must take place on the college level. The implications of a long-time period of teacher education must be kept in mind. Of much importance is the lack of clear-cut evidence as to the proper grade placement of materials. The result has been apparent in duplication of content, particularly in the materials taught on the senior high school and the junior college levels of instruction.<sup>3</sup>

The transcript data (see table B, appendix) show clearly the variation both in amount of work taken in high schools and college and in the percentage of students taking work in each subject.

It would appear that variations in amounts of the major should take into account the amount of work in that subject which a student has had in high school. For example, all students have had on an average the equivalent of 32 semester hours in high-school English whereas only 27 and 11 percent of the students have had music and art respectively in high school and to the extent of 1 and 2 semester hours in the two latter subjects.

<sup>3</sup> Koos, L. V. *The Junior College*. Minneapolis, Minn., University of Minnesota, 1924. 2 vols. (Education series, vols. 1 and 2, no. 5). Rugg, E. U. and Dearborn, N. H. *The Social Studies in Teachers Colleges and Normal Schools*. Greeley, Colo., Colorado State Teachers College, 1923. (Colorado Teachers College education series, no. 4), p. 69-71.

TABLE 16.—Qualitative nature of the major (transcript data), showing subordinate fields in which 25 percent or more of the students sampled have had work<sup>1</sup>

Field of study	Per- cent	Me- dian	Field of study	Per- cent	Me- dian
1	2	3	1	2	3
<b>1. Biology:</b>			<b>6. Geography—Continued.</b>		
Botany.....	92	9.5	Economics.....	28	2.9
General biology and elementary science.....	82	5.6	6 other fields.....		
Zoology—general.....	80	6.0	<b>7. History:</b>		
Special methods.....	64	2.7	American history.....	100	10.3
Hygiene and physiology.....	58	5.2	European history.....	89	8.1
Chemistry.....	56	8.0	Special methods, history.....	88	2.7
Heredity, eugenics, etc.....	54	2.7	State and national government.....	74	4.8
Geology and physiography.....	42	4.3	Sociology and social problems.....	64	6.2
Zoology—vertebrate.....	38	2.9	Economics.....	58	5.6
Physics.....	28	6.0	Geography.....	54	6.1
General survey courses.....	26	2.7	English history.....	47	3.4
6 other fields.....			Industrial history.....	45	2.7
<b>2. Chemistry:</b>			History of diplomacy.....	37	2.7
Organic chemistry.....	90	8.1	World history.....	36	2.7
General chemistry.....	82	7.5	Social government.....	35	2.7
Qualitative chemistry.....	70	5.2	Ancient history.....	32	2.7
Quantitative chemistry.....	70	5.4	Government other than local, State, and national.....	31	4.3
Special methods.....	68	2.6	International relations.....	26	2.7
Physics.....	68	10.4	Survey courses.....	25	4.0
Biology, botany, and agriculture.....	64	12.0	3 other fields.....		
Inorganic chemistry.....	58	8.4	<b>8. Mathematics:</b>		
History of chemistry.....	26	2.1	Geometry.....	100	7.5
8 other fields.....			Calculus.....	96	6.2
<b>3. English:</b>			Special methods.....	91	4.0
Literature—English.....	94	6.5	Algebra.....	88	4.1
Composition.....	91	8.1	Trigonometry.....	86	2.0
Special methods.....	88	4.0	History of mathematics.....	53	2.5
General literature, etc.....	85	5.3	7 other fields.....		
Literature—American.....	77	2.6	<b>9. Art:</b>		
Speech, public speaking, oral English.....	74	2.8	Painting and drawing.....	100	11.3
Contemporary literature—poetry.....	40	2.9	History and appreciation.....	94	4.1
Shakespeare.....	39	4.1	Special methods.....	94	5.6
Language—general philology.....	37	2.9	Drawing and lettering.....	90	8.1
Contemporary literature—prose.....	28	2.9	Applied arts.....	74	5.2
Dramatics.....	28	3.4	Painting.....	60	3.5
4 other fields.....			Industrial arts.....	38	2.6
<b>4. Foreign language—classical:</b>			Handicrafts.....	38	2.7
Latin—literature.....	100	20.3	Pottery.....	34	2.7
Latin composition and grammar, advanced.....	90	2.7	General survey courses.....	30	4.0
Latin special methods.....	88	2.8	2 other fields.....		
Roman life and culture.....	61	2.6	<b>10. Commerce:</b>		
Latin language.....	31	2.7	Accounting and auditing.....	94	8.6
French—elementary.....	29	6.5	Commercial law.....	82	4.9
French—intermediate.....	25	5.5	Economics.....	81	7.2
14 other fields.....			Business training and organization.....	70	5.6
<b>5. Foreign language—modern:</b>			Stenography.....	78	8.3
French—intermediate.....	71	4.8	Special methods.....	74	4.3
French—literature.....	64	12.3	Typewriting.....	65	5.7
French—advanced composition.....	61	4.1	Business English.....	48	2.7
Special methods.....	57	2.7	Secretarial practice.....	44	2.6
French elementary.....	43	4.6	Salesmanship and advertising.....	37	2.9
French language and philology.....	34	2.5	Commercial arithmetic.....	32	2.9
Spanish—intermediate.....	32	6.3	Bookkeeping.....	30	6.0
Spanish—advanced.....	30	6.0	4 other fields.....		
Spanish—literature.....	30	14.5	<b>11. Home economics:</b>		
French methods.....	27	2.2	Foods, cooking, and nutrition.....	100	11.7
Spanish—elementary.....	27	6.1	Clothing and textiles.....	99	9.9
15 other fields.....			Family—parental education, homemaking, and child care.....	99	4.1
<b>6. Geography:</b>			Household management.....	98	5.5
Economic and social geography.....	92	5.9	Special methods.....	96	3.3
History.....	90	8.6	Design.....	73	4.7
Soil geography.....	80	4.0	Special course, etc.....	50	2.7
Special methods.....	76	2.7	Chemistry.....	28	9.0
Political science.....	70	3.9	Related art.....	28	2.0
General survey.....	64	3.7	Survey courses.....	26	8.0
Climatology.....	64	2.8	3 other fields.....		
Regional geography—United States and North America.....	64	3.0	<b>12. Industrial arts:</b>		
Regional geography—special areas.....	64	4.4	Mechanical drawing.....	100	8.5
Sociology.....	64	4.5	Woodworking.....	100	12.8
Regional geography—Europe.....	56	2.8	Metal work and machine shop.....	90	3.9
Regional geography—South America.....	46	8.1	Special methods.....	86	5.3
Historical geography.....	43	2.4	Vocational activities—household mechanics.....	26	2.7
			Printing.....	26	5.2
			13 other fields.....		

<sup>1</sup> This table should be read as follows: For biology majors, 92 percent took a median of 9.5 semester hours of botany, 82 percent took general biology to the extent of a median of 5.6 semester hours, etc.

TABLE 16.—Qualitative nature of the major (transcript data), showing subordinate fields in which 25 percent or more of the students sampled have had work—Con.

Field of study	Per- cent	Me- dian	Field of study	Per- cent	Me- dian
1	2	3	1	2	3
13. Theory of music <sup>1</sup> .....	100	21.4	14. Physical education—men—Con.		
Appreciation and history.....	99	6.3	Seminar courses.....	23	2.7
Special methods.....	99	7.8	1 other field.....		
Technique of performance <sup>2</sup> .....	97	14.1	15. Physical education—women:		
3 other fields.....			Hygiene, anatomy, and physiol- ogy.....	100	14.5
14. Physical education—men:			Special methods.....	100	10.5
Hygiene and physiology.....	98	4.5	Theory courses.....	98	4.7
Special methods.....	92	6.8	Activity courses.....	95	5.3
Theory courses.....	90	16.1	Related courses in science.....	71	5.3
Related courses in science.....	82	16.1	Gymnastics.....	68	2.7
Activity courses.....	78	14.0	General survey.....	39	2.0
Gymnastics.....	58	2.7	Dancing.....	20	3.3
General survey.....	50	3.5	3 other fields.....		

<sup>1</sup> Ear training, harmony, analysis, composition, instrumentation, orchestration, etc.  
<sup>2</sup> Band, orchestra, chorus, piano, voice, etc.

*The concept of proficiency.*—The presumed objective of a teachers college should be efficiency or competency. That is, for each kind of teacher that a college undertakes to prepare, it should endeavor to produce individuals equipped with the knowledge, skills, techniques, appreciations, and ideals involved in the field and level of specialization chosen. Catalog statements of amounts required seemingly represent, at most, judgments of the amount needed to insure adequately prepared teachers. On the other hand, these judgments ignore the facts of individual differences in aptitudes and in rates of learning. It is known that because of individual differences some students even at entrance can show proficiency much in excess of other entering students.

In reality careful specifications of the work of a teacher for a given position should be set up and tests of competency given at intervals—at entrance to college for purposes of outlining a sequence of preparatory materials needed to complete the preparation of a prospective teacher, at candidacy for student teaching, and at graduation. Under such a procedure previous mastery would be credited at proper times and clearer objectives of further requirements could be set up.

Several teacher-preparing institutions have undertaken experimentation on the basis of proficiency. Qualifying examinations are set up and the institutions attempt to evaluate regularly the competency of the students.

*Teaching demands.*—The chief consideration in organizing any program of teacher preparation should be existing school practices—the needs and demands of teachers in the field. Instructors of representative courses agreed with reservations that curricula for the education of teachers should be based largely upon what is taught in the various school subjects in the better public schools.

On the elementary level a teacher must teach a number of subjects, such as reading, writing, spelling, grammar, geography, history, civics, nature study, and others. On the secondary level in most

States the beginning teacher may have to teach 2, 3, 4, or even 5 different subjects in the first few years of his teaching experience.<sup>4</sup> Data obtained through Inquiry 1 from 130,000 junior and senior high school teachers yielded the following findings concerning the number of fields in which the teachers gave instruction in 1930-31:

*Percentage of junior and senior high school teachers teaching 1 to 5 fields (data from Inquiry 1)*

Grade	1 field	2 fields	3 fields	4 fields	5 fields
Junior high school .....	27.0	51.0	8.1	2.8	1.1
Senior high school .....	34.3	52.6	9.4	2.8	.9

The respondents in the inquiries concerning representative course practices recognized in theory the need for preparation of high-school teachers in more than one field as follows:

	Percent		Percent
1 field .....	1.0	4 fields .....	3.5
2 fields .....	44.5	5 fields .....	1.4
3 fields .....	49.6		

They also indicated their judgment on the following proposals relating to specialization: (1) Any curriculum should be largely the subject matter of the student's field of specialization and (2) The program for the education of secondary teachers should equip prospective teachers to teach several subjects. With respect to the former statement the respondents disagreed among themselves. Some of the group agreed with reservations, others disagreed with reservations. In other words, the respondents seemingly recognized the limitations of specialization, though they all agreed without reservation to the second proposal that students should be equipped to teach several subjects.

*Quantitative standards for majors.*—Accrediting organizations have attempted to set up quantitative standards of preparation needed to teach in secondary schools. Fifteen semester-hours is the usual minimum. Data from analysis of transcripts revealed that in general students in teachers colleges attain this minimum, apart from their major subject, most frequently in English. The fulfillment of it in English is probably due to a relatively high prescription of this subject for all students—9 to 15 semester-hours according to the findings in the catalog analysis.

The actual operation of this quantitative requirement is illustrated in table 17, based upon careful analysis of the transcripts of 100 students majoring in English. Thirty-two of these students had had more than 15 semester-hours in history and 27 had had more than 15 semester-hours in modern language. Very few could qualify quantitatively to teach other subjects. Column 2 shows nine subjects in which 50 percent or more of this group had no work at all on the college level.

<sup>4</sup> See for evidence on teaching combinations references nos. 676-692 in Betts, G. L., Frazier, B. W., and Gamble, G. C. *Selected bibliography on the Education of Teachers*, p. 53-54. Washington, D.C.

TABLE 17.—Number of 100 students English majors with 0 semester hours, 1-6, 7-12, 13-15, 16-18, 19-24, and 24+ semester hours of college work in 18 other high-school teaching fields

Field of study	Semester hours						
	0	1-6	7-12	13-15	16-18	19-24	24+
1	2	3	4	5	6	7	8
Agriculture.....	92	7	1				
Art.....	43	51	2				
Commercial education.....	53	14				3	1
Foreign language:				1			
Classical.....						1	1
Modern.....	73	12	6				
Home economics.....	43	5	23	2	2	3	4
Industrial arts.....	81	14	3	1		7	8
Mathematics.....	94	5	1				1
Music.....	80	31	14	1			
Physical education.....	46	46	3		1	3	
Science:	34	34	23	4	2	1	3
Biology.....	17	56	20	4	2	1	
General.....	82	18					
Physical.....	61	18	17	2	1		1
Geography.....	39	40	17		2		
History.....	6	33	17	12	14	2	
Economics.....	52	43	2	2		10	8
Political science.....	42	50	4	2		1	
Sociology.....	49	42	8		2		

As a step toward meeting actual teaching demands institutions educating teachers should study trends in time allotments on elementary and secondary levels. Numerous studies<sup>1</sup> are available, the most recent being the investigation of curricular practices in the National Survey of Secondary Education.<sup>2</sup> In general it may be said that the task on the elementary level is to provide for materials and techniques relating to (1) tool subjects such as reading, language, spelling, handwriting, and arithmetic; (2) content subjects such as history, geography, civics, and science; and (3) expressional subjects such as physical education, art, industrial arts, and music. On the secondary level, as revealed in data presented earlier, the student takes most of his work in the academic subjects, principally English, classical and foreign language, mathematics, biology, physical science, and history.

Analysis of the high-school courses in these subjects shows that English is largely written composition and literature with provision in some schools for more specialized work in debate, dramatics,

<sup>1</sup> *Elementary level.*—Mann, H. C. *How Schools Use Their Time.* New York, Bureau of Publications, Teachers College, Columbia University, 1923. (Contributions to Education, no. 333); Flanders, J. K. *Legislative Control of the Elementary Curriculum.* New York, N. Y. Bureau of Publications, Teachers College, Columbia University, 1923. (Contributions to Education, no. 195); Dobson, W. B. *A Study of Time Allotments in the Elementary School Subjects.* Greeley, Colo., Colorado State Teachers College, 1929. (Unpublished master of arts thesis.)

*Secondary level.*—Glass, J. M. *Curriculum Practices in the Junior High School.* Chicago, Ill. University of Chicago Press, 1924. (Supplementary Educational Monographs, no. 25); Buster, N. E. *Time Allotments in the Junior High School.* Greeley, Colo., Colorado State Teachers College, 1929. (Unpublished master of arts thesis.) Counts, G. S. *The Senior High School Curriculum.* Chicago, Ill., University of Chicago Press, 1926. (Supplementary Educational Monographs, no. 29) and Department of Superintendence, National Education Association. *The Development of the High-School Curriculum.* Sixth yearbook.

<sup>2</sup> Loomis, A. K., Lide, E. S., and Johnson, B. L. *The Program of Studies.* Monograph No. 15. Office of Education, Bulletin, 1933, no. 17. *National Survey of Secondary Education.*

journalism, and speech. Social science is primarily history—American and world, the latter now apparently a combination of ancient, medieval, and modern European history. Several foreign languages are offered, and many students usually take a year or two of two different languages. In science the general science movement seems to be gaining, as is true also of general biology, whereas physical science appears to be declining. There is considerable evidence of an increase in interest in the nonacademic subjects in recent years and also in the social studies.

The interested reader should study the tabulated data of the Program of Studies, National Survey of Secondary Education.

#### SUMMARY

In amount a major averages about a fourth to a fifth of a total 4-year program. Students majoring in the special subjects report more work in their field of specialization. Most students take one minor but few students take a second minor. About two fifths of the average 4-year curriculum is devoted to two fields of specialization, though analysis of transcripts reveals that over and beyond a major the typical quantitative minor is in English. Individual students vary widely from the median practices. This finding indicates a possible need for restriction on the maximum amount of work to be taken in any subject.

The qualitative analysis of majors reveals lack of balance both in amounts taken and in percentage of the students taking each course. Again the range reveals extreme variation.

The great similarity of a typical college program and a typical high-school program suggests the need for careful evaluation of the previous secondary work of prospective teachers. Students in such fields as English, history, and mathematics have had on the high-school level the equivalent, quantitatively, of a major, whereas in many special subjects and in elementary education the students are virtually beginning at the college level to acquire the knowledge and skill in their chosen field of specialization.

It is probable that many students at entrance to college actually have already acquired much of the knowledge and skill required in a college major. Competency and not the amount of work should be the principle in determining the extent of a college major.

The sequence of fields of specialization should be set up largely in terms of the nature of work of teachers in the field. It is probable that a beginning teacher will be required to teach 2 or 3 different subjects.

The amounts and nature of fields of specialization should be controlled by the facts of individual differences, demands in the placement area served by the teacher-preparing institution, and the requirements of a liberal education. It is probable that extreme specialization should be minimized, at least on preservice levels.

## PROPOSALS

1. For elementary and rural teachers the field of specialization should be determined by the nature of elementary or rural teaching.
  - (a) These elementary and rural curricula demand broad general courses in essential sequences of the subject matter to be taught.
  - (b) To prepare such teachers adequately for the several main subjects of instruction on the elementary level these sequences in art, music, English, science, and history should be thoroughly professionalized.
2. For secondary teachers two or preferably three fields of specialization should be required, particularly since most beginning teachers will obtain their first experience in small high schools where they will be required to teach several fields of knowledge.
  - (a) Each field of specialization should be restricted in scope on the preservice level.
  - (b) The amount of course work in each major field for each student should be governed by such fundamental considerations as amount of previous study in the field, the nature of teaching problems in that field, and particularly proficiency or mastery. Professional equipment should include acquaintance with both junior and senior high school levels.
  - (c) The traditional major and minor plan of specialization should be replaced by a plan which will secure balance or proportion in several fields of specialization, each organized for the prospective teacher in terms of proficiency.
3. Rural education.
  - (a) Each State should adapt its teacher-education program to the composition of its population. In sparsely settled regions teachers colleges have a peculiar responsibility for direction of rural education.
  - (b) Each child in a rural area is as fully entitled to instruction at the hands of an educated, professionally prepared teacher as is a child in a city. Hence, rural curricula should be comparable in length and depth of content to curricula organized with the city child in mind.
  - (c) Due to difficulties of determining where teachers will locate, but knowing that first placements are most likely to be made in rural schools, each teacher should be informed concerning rural problems and equipped to make the necessary adaptations in techniques and in materials of instruction.
  - (d) Adaptation in limited certificate curricula where initial placement is usually in rural areas should be made to include preparation in agriculture, nature study, rural sociology and economics, and in further adaptations of the course sequences in health, civics, and the appreciational subjects.

## CHAPTER V

### PROFESSIONAL STUDIES AND TREATMENT OF SUBJECT-MATTER MATERIALS

Over and beyond equipping students in fields of specialized subject matter, an essential aspect of preparation for teaching involves those materials included in courses in education, educational psychology, methods of teaching, observation, and student teaching. They have been commonly referred to as professional studies, though in the broad sense all of a student's preparation in majors and minors and background courses should also be regarded as professional.

The data for this discussion are drawn in the main from the two sources of curriculum material described in the preceding chapters. Tables B1 and B (appendix) give summarized data from (1) catalog statements of required professional courses, and (2) students' transcripts showing the professional courses actually taken.

#### 1. AMOUNTS OF PROFESSIONAL STUDIES

Table 18 summarizes the essential evidence concerning professional courses in education, psychology, special methods, observation, and teaching. It is difficult to generalize concerning how much professional study is required or obtained because of variations in organization of the various phases of courses in education, psychology, special methods, observation, and teaching. Moreover, not all students take every type of professional work.

In general, the catalog analysis showed that students are required to take about 18 semester-hours of education and educational psychology, which includes 6 semester-hours of some organization of observation and practice teaching either in separate courses or in a combination course in observation and student teaching.

It is much more difficult to interpret the education work for limited education curricula because of the fact that the work in education for such curricula usually includes, under courses in elementary education, content materials given in education courses.

The ranges (see table B1, appendix) show wide variations. In the catalog prescription some institutions specified five times as much education, special methods, and teaching as did other institutions; and in work actually taken some students in a given curriculum took several times as much work in these studies as did other students.

It is evident that in all curricula patterns the variations within a pattern are much greater than the variations between curricula.

TABLE 18.—Percentage of curricula and amount (semester-hours) of courses in education, educational psychology, special method, observation, and student teaching, according to analyses of catalog requirements and transcripts

[C—catalog requirements; T—transcripts]

Field of study	Education and educational psychology				Special method				Observation and teaching				General psychology			
	Percent		Amount semester-hours		Percent		Amount semester-hours		Percent		Amount semester-hours		Percent		Amount semester-hours	
	C	T	C	T	C	T	C	T	C	T	C	T	C	T	C	T
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Academic 4-year:</b>																
Biology.....	100	100	16	18	41	80	3	6	100	86	6	6	37	30	3	4
Chemistry.....	100	100	18	17	80	78	3	3	100	94	6	5	44	28	3	3
English.....	100	100	16	20	61	81	5	6	100	84	6	6	30	19	3	6
<b>Foreign language:</b>																
Classical.....	100	100	17	19	72	84	3	6	100	98	6	6	23	25	3	3
Modern.....	100	100	15	16	31	77	4	3	100	90	6	6	69	30	3	3
Geography.....	100	100	18	24	50	85	3	4	100	78	6	6	41	30	3	5
History.....	100	100	16	21	80	77	4	5	100	85	6	6	45	24	3	4
Mathematics.....	100	100	16	18	52	61	4	7	100	68	6	7	48	31	3	6
<b>Special 4-year:</b>																
Art.....	100	100	18	19	81	88	7	10	100	98	7	8	69	30	3	4
Commercial education.....	100	97	15	19	88	89	5	5	100	98	6	5	34	30	3	3
Home economics.....	100	100	15	16	79	79	4	5	100	80	6	6	41	42	3	4
Industrial arts.....	100	100	14	19	88	78	7	8	100	88	6	7	39	30	3	3
Music.....	100	100	15	14	88	91	8	8	100	14	6	7	41	48	3	4
<b>Physical education:</b>																
Men.....	100	100	16	13	80	78	10	4	100	94	6	6	47	72	3	3
Women.....	100	100	16	19	84	78	6	7	100	98	6	7	44	61	3	4
<b>Education 4-year:</b>																
Intermediate.....	100	100	14	23	—	88	—	13	100	89	7	9	22	69	3	3
Kindergarten-primary.....	100	100	14	28	—	72	—	7	100	80	9	10	37	61	4	6
<b>Education 3-year:<sup>1</sup></b>																
Intermediate.....	100	100	14	9	—	85	—	11	100	94	7	7	—	25	3	4
Kindergarten-primary.....	100	100	17	12	—	94	—	11	100	91	7	9	—	24	3	4
Rural.....	100	100	15	11	—	95	—	13	100	97	7	7	—	21	3	3

This table should be read as follows: For biology majors 100 percent of curricula, both catalogs and transcripts, require education and educational psychology; in catalog biology majors are required to take 16 semester-hours and they actually take (transcripts) 18 semester-hours, etc.

<sup>1</sup> Includes observation and teaching but not special method or general psychology.

<sup>2</sup> Comparison on limited curricula of catalog and transcript analyses possible only for intermediate and kindergarten-primary 3-year curricula.

<sup>3</sup> Includes amount tabulated as major.

Comparisons on these matters with similar studies in universities and colleges show startling similarity, quantitatively at least.

As stated, it is difficult to say how much work is done in courses in education and related subjects. Data from various curricula (transcripts) show that students actually took from one fifth to one fourth of their total work in professional studies (see table 19). Transmuting percentages into semester-hours, roughly 25 to 32 hours of work is in these subjects.

In some fields method and observation and teaching are stressed considerably more than in other fields.

TABLE 19.—Percentage of work taken (transcripts) in college in education and educational psychology, methods and observation and teaching and in psychology

Major	Education and educational psychology	Method and observation and teaching	Psychology	Major	Education and educational psychology	Method and observation and teaching	Psychology
1	2	3	4	1	2	3	4
Biology.....	15.0	8.0	1.1	Art.....	13.6	11.6	1.1
Chemistry.....	12.0	7.0	.6	Commercial education.....	14.4	9.7	1.1
English.....	13.8	8.6	.6	Home economics.....	12.0	7.2	1.3
Foreign language.....				Industrial arts.....	14.7	8.2	2.1
Classical.....	12.1	8.1	.8	Music.....	10.7	11.2	1.6
Modern.....	12.8	8.2	.9	Physical education.....			
Geography.....	16.9	10.3	.8	Men.....	11.0	8.4	2.3
History.....	16.2	8.4	.8	Women.....	13.6	10.4	2.3
Latin.....	13.7	10.0	1.2				

*Amount of work in student teaching.*—Still another point concerning the amount of work is involved in the comparisons of education and educational psychology with special method and observation and teaching. In table B1 (appendix) observation and teaching are included in the total of education. When the requirements of observation and teaching (about 6 semester-hours) are deducted, the general courses in principles of education, history of education, educational psychology, etc. embrace about 10 semester-hours.

The matter of student teaching in the teachers colleges is also influenced by a standard of the American Association of Teachers Colleges which requires 90 clock-hours of actual teaching. The data here summarized include combinations of observation and teaching. Hence it is difficult to say whether such a standard has been met. If it is assumed that the average amount of observation and teaching (6 semester-hours) consists of actual supervised teaching it would appear that these institutions approximate the equivalent of 90 hours of teaching.<sup>1</sup>

*Opinions on desired amounts of education.*—Fundamental to the quantitative aspect of professional study is such a question as: How much professional work in education is enough, especially on pre-service levels? Opinion of 600 instructors of representative courses in 18 subject fields may be cited. In general these respondents voted for about 13 percent (range of medians for various subjects 12–17) of education and psychology and for 10 percent (range of medians 5–15) of observation and teaching. In theory, these respondents would agree to the actual amounts taken—about one fourth to education, psychology, and practice teaching. Yet this proportion on preservice level might be open to question, as being too heavy prior to teaching experience.

<sup>1</sup> A 6 semester-hour course meeting 36 weeks 3 times a week would include 108 periods usually 80 minutes in length which would more than satisfy the standard of 90 hours.

This issue obviously turns again on proficiency. It should be borne in mind that few students have had any courses in education prior to entrance into a teacher-preparing institution. Yet it is probable that some students can reveal proficiency with much less actual course work and time spent than can other students.

There is another limitation, namely, that applications of the principles of education and psychology are difficult for preservice students to make. Possibly some of the total amount of time now given to courses in education and psychology in preservice preparation should be reserved for inservice education.

Professional studies in curricula of less than 4 years are restricted to the elementary and junior high school grades, and are commonly controlled by the education department. The catalog analysis revealed a variety of combinations, as shown in table 20. It would appear that few institutions are now offering for elementary teachers curricula of less than 2 years; and the number of 3-year curricula indicates that there is some upgrading tendency.

TABLE 20.—The professional materials for limited curricula in education (catalog analysis only)

Length of curricula	Amount for graduation—semester-hours	Number of institutions providing curricula	Major <sup>1</sup>		Education		Observation and student teaching <sup>2</sup>		Total <sup>3</sup>
			Range	Median	Range	Median	Range	Median	
1	2	3	4	5	6	7	8	9	10
1-year—rural.....	22	5	2-9	5	2-6	3	2-8	3	8
2-year—elementary.....	66	11	1-11	6	4-13	8	1-10	6	14
2-year—intermediate.....	66	15	1-19	7	3-12	7	3-10	7	14
2-year—kindergarten-primary.....	66	21	2-20	10					
2-year—rural.....	66	19	2-21	8	3-11	7	3-16	7	17
2-year—upper grade.....	65	16	2-8	5	3-13	7	2-10	7	15
2-year—elementary.....	97	8	2-22	11	4-18	9	2-10	7	14
2-year—intermediate.....	96	8	1-32	3	6-14	10	5-15	9	21
2-year—kindergarten-primary.....	99	13	3-32	11	6-14	12	5-15	12	15
2-year—rural.....	99	5	1-13	10	6-20	12	5-15	10	21
2-year—upper grade.....	98	6	2-12	8	6-11	8	5-15	10	20
					9-19	12	5-16	10	18

<sup>1</sup> Major for these curricula largely education.

<sup>2</sup> To be included in total of cols. 4 and 6.

<sup>3</sup> Total of cols. 3 and 7.

## 2. THE NATURE OF THE PROFESSIONAL STUDIES

The nature of the major is revealed in the data obtained from the transcripts. Table 21 lists all the courses in education and gives the percentage of students taking the courses and the amounts taken in the courses for which 10 percent or more of the students majoring in the various fields had enrolled. What conclusions can be drawn concerning professional materials?

First, may be noted, the difficulty of determining exactly the nature of such studies, due to methods of classification. Mention<sup>2</sup> was made earlier concerning the variety in terminology. Second, and related to the preceding problem is the probability that not all the students in the 4-year curricula in education take certain methods courses, such as methods of teaching art, music, reading, spelling, and the like, but yet they may have had contact with such work in courses under the title of special, primary, or intermediate methods. Third, it is clear from the averages of the medians that the predominant length of the courses was one term (quarter or semester). Fourth, the ranges<sup>3</sup> for the length of a given course are more significant than the median. Fifth, some gaps in professional study are evident unless such contact is treated in more general courses.

Consideration should be given to such concepts as creative education, educational biology, extracurricular activities, and mental hygiene.

Insofar as the nature of the professional studies is concerned the courses in education and psychology are apparently the conventional courses. There is a school of opinion which contends that most courses throughout a teacher-preparatory curriculum should be taught in terms of the possible applications of the materials being studied to teaching. There are, of course, difficulties in doing this in colleges and universities where classes are composed of many with nonteaching objectives. Yet in teachers colleges it would appear that some modicum of professionalization is desirable each term from the beginning of the first year of a program of teacher education. Impressions from visits led to the conclusion that there is apparently a clearer idea of the professional objective of teacher education in those institutions where the ideals of professionalization are stressed. In one institution visited many of the college instructors also teach one class daily in the training school and in addition supervise student teachers in training in adjacent public schools.

*Opinions on the kind of education courses.*—Opinions of teachers of representative courses in selected teachers colleges were gathered on several points in connection with the amount and kind of work to be taken in education.

The respondents to the inquiry accepted (with varying degrees of reservation for the presidents, academic, special, and education teachers) the proposal that there should be only a limited amount of education and psychology in the preservice education of teachers.

<sup>2</sup> Crabb, A. L. *A Study of the Nomenclature and Mechanics Employed in Catalog Presentations of Courses in Education*. Nashville, Tenn., George Peabody College for Teachers, 1926. (Contributions to Education, no. 21.)

<sup>3</sup> Given only for academic and special curricula because there were only 2 and 3 curricula, respectively, for 4- and 2-year majors in education.

The education teachers were least inclined to agree with this proposal.

TABLE 21.—Courses in education and related fields taken by 10 percent or more of 450 students majoring in education, 543 in academic subjects, and 464 in special subjects, and percentage of students in each major taking and amount taken in semester-hours (transcript data)

Course	Education, 2-year		Education, 4-year		Academic, 4-year			Special subject, 4-year		
	Per cent	Average of median	Per cent	Average of median	Per cent	Range	Average of median	Per cent	Range	Average of median
1	2	3	4	5	6	7	8	9	10	11
<b>Education courses:</b>										
Administration <sup>1</sup>			23	1.6	31	1.3-13.8	3.8	29	1.3-10.7	2.9
Character education and citizenship			13	2.1						
Curriculum	17	2.8	54	4.0	13	1-6	2.5	15	1.3-8	2.9
Discipline	25	2.4	25	2.5						
Educational psychology	67	3.5	91	6.5	90	2-15.7	5.9	84	1.3-24	4.9
Educational sociology	10	2.6	22	2.7	18	1.3-4.0	3.0	18	1.3-7.5	2.6
Elementary education			31	6.2						
Extracurricular activities <sup>2</sup>										
General psychology <sup>3</sup>					14	2-6.0	2.8	16	2.3-6.0	2.9
General survey	78	3.8	83	4.8	75	1.3-16	6.1	79	7-13.3	3.3
History of education	25	2.9	65	2.8	51	2-8	3.2	36	1.3-6.7	3.0
Mental hygiene										
<b>Methods:</b>										
General			28	2.7	11	1.3-6.7	2.7			
Intermediate	19	3.0								
Primary	37	3.8	45	5.0						
Special			11	2.8	61	7-18.7	3.7	53	7-21.7	3.7
Observation and student teaching	95	7.7	99	9.5	82	2-17.3	6.0	93	2-17.3	6.6
Philosophy of education			37	2.6	28	1-8	2.7	19	2-16	2.7
Rural education	24	4.7	17	2.6				13	1.3-8	2.7
<b>Secondary:</b>										
Junior high school				1.9	15	1.3-6.0	3.6	12	2-6	2.7
Senior high school					40	2-10	3.4	39	1.7-8	3.0
Supervision			15	2.9						
Statistics, tests and measurements	42	2.2	65	3.0						
<b>Related courses:</b>										
Art—methods and materials	43	3.0	68	4.1						
English	34	2.6	41	2.6						
Geography methods and materials	32	2.6	27	2.6						
History methods and materials	28	3.2	21	2.4						
Mathematics methods	65	2.6	39	2.7						
Music methods	50	2.5	49	2.7						
Nature study	17	2.6	24	2.5						
Physical education methods	44	3.6	36	2.9						
Reading and spelling	38	2.7	37	2.5						
Rural sociology	12									
Special rural problems	13	6.2								
Story telling			10	2.8						

<sup>1</sup> Range of 8 curricula.  
<sup>2</sup> Range of 7 curricula.  
<sup>3</sup> Percentages taking less than 10.

This table should be read as follows: 23 percent of students majoring in 4-year education curricula took 1.6 semester-hours of administration, 31 percent of students majoring in academic subjects took 3.8 semester-hours, etc.

Note.—Creative education, educational biology, guidance, English—special methods and special problems, extracurricular activities and mental hygiene omitted in table because taken by less than 10 percent of students.

The nature of preservice work was indicated in responses to the following proposals: (1) Teachers should be introduced to various current theories of school organization such as adjustment, creative education, the platoon school, and individual instruction. (2) The emphasis in undergraduate courses should be upon accepted theories and practices rather than upon research. (3) Teachers should be acquainted with the wider implication of the educative process. To the proposal of making teachers critical of varying theories of school organization the respondents were agreed without reservation; to the other two types of proposal they agreed but with reservations.

### 3. CONSIDERATIONS RELATED TO PROFESSIONAL STUDIES AND TREATMENT OF SUBJECT MATTER

Normal schools with limited time to prepare teachers were compelled to undertake professional study at the outset of a curriculum in the freshman year. In limited 1-year and even somewhat in 2-year curricula culture in the sense of knowledge and appreciation of subject matter has had to be assumed in the main from previous study in secondary schools.

As normal schools expanded and lengthened their curricula to 4 years and became degree-granting teachers colleges, this need of insuring early grasp of professional studies became less insistent. The practice of postponing work in education in colleges and universities set a model for another theory of professionalization, particularly where schools of education provide for enrollment as prospective teachers above the junior college work.

*When should education courses be given.*—The instructors of representative courses in 18 subject fields were asked to indicate their judgment on the question of when to introduce education courses. The summarized opinions of 759 respondents yielded the following tabulation:

	<i>Percent</i>
(a) First term, freshman year.....	9.3
(b) Second term, freshman year.....	6.7
(c) Beginning with the sophomore year.....	28.6
(d) Beginning with the junior year.....	47.3
(e) Beginning with the senior year.....	5.3
(f) End of the senior year.....	2.8

More than half of these teachers would postpone education and psychology courses until the senior college level and more than five sixths at least until the sophomore year. In one teachers college visited where a junior college organization is maintained the claim was advanced that better selection of students could thus be made and that the increased maturity enhanced the quality of work in the education courses.

A consideration on the point of professional treatment of subject matter should be mentioned here in anticipation of subsequent dis-

discussion of the issue. An attempt to discover the extent of professionalization in representative courses leads to the conclusion that there is little professional treatment of subject matter in these courses. Out of approximately 2,600 courses in 18 subject fields in more than a score of selected teachers colleges, less than half of the courses were checked as professionalized. An attempt to obtain specific illustration of concrete ways of professionalizing these courses failed, though the instructors claimed to provide for the following aspects of professional treatment in some degree as follows:

	Percent		Percent
(a) Present aims of teaching subjects.....	43	(g) Principles in selecting materials and in making courses of study.....	19
(b) History of the subject.....	23	(h) Psychology of the subject.....	17
(c) Development of methods of teaching subject.....	32	(i) Use of standard tests.....	15
(d) Evaluation of teaching subject.....	26	(j) Use of new type tests.....	15
(e) Available materials for teaching the subject.....	34	(k) Specific difficulties in presenting materials.....	17
(f) Professional literature for teaching the subject.....	20		

The visits to the selected institutions did not result in the impression that there was wide acceptance of the theory of professional treatment of subject matter. Yet there is some attention to aims of subjects, methods of teaching, and testing as evidenced in the inquiries relating to representative courses.

The respondents were asked to indicate the best method of insuring that prospective teachers are given: (1) Grasp of new theories of organization, (2) types of activities of teachers in the field, and essential skills of teaching. The average percentage of votes of about 750 teachers and the rank order of the votes to media suggested are given in table 22. The outstanding medium of professionalization is clearly the training school.

TABLE 22.—Percentages of instructors of representative courses suggesting various methods of insuring that prospective teachers are taught concerning theories, activities, and skills of education

Method	New theories of organization		New types of teaching observation		Essential skills	
	Rank	Percent	Rank	Percent	Rank	Percent
1						
Discussion in usual educational courses.....	2	44	2	36		
Discussion on professional subject-matter courses.....	3	37	3	34		
Separate required courses.....	4	8	4	7		
Separate elective courses.....	5	5	5	4		
Practice in application in training school.....	1	57	1	60		
Divided observation in separate courses.....					5	8
Divided observation in professional and subject courses.....					4	16
Student teaching alone.....					2	29
Observation and teaching.....					3	23
Special method, observation and teaching.....					1	57

## 4. PROFESSIONAL TREATMENT OF SUBJECT MATTER

The respondents in the teachers colleges believed that about two fifths of subject-matter courses should be professionalized. A proposal that courses in special method should be eliminated was disapproved by these respondents. From responses of instructors and reactions of instructors visited to the extent of professional treatment, it is apparent that special method is the dominant plan of professionalization.

*Place of demonstration in professional treatment.*—These respondents agreed that demonstration plays a part in professional training. They agreed practically without reservation to a proposal that there should be many opportunities for prospective teachers to observe good teaching in the training schools, and with reservations to a proposal that college instructors frequently should teach demonstration lessons in the training school. The respondents approved demonstration in all subject-matter classes in the major, and were about evenly divided in using demonstration in some courses in the major and in separate courses in observation. They asserted that demonstration should be given by: (1) Both subject-matter teachers and supervisors in the training schools—46 percent; (2) subject-matter teachers—28 percent; (3) supervisors in the training schools—27 percent; (4) student teachers in the major—13 percent; and (5) teachers in the education department—4 percent.

In recent years it has been suggested that prospective teachers would learn more by constant supervised observation of good teaching than by supervised courses in practice teaching. The respondents in the main are opposed to this proposal but with reservations.

As to amount of student teaching, these respondents agreed to the proposal that the conventional standard of the American Association of Teachers Colleges of 90 clock-hours be required.

Finally, they agreed that practice teaching should be given in situations typical of those in the regions served by the institution.

## SUMMARY

In the conventional sense separate professional courses have been narrowly concerned with the mere study of pedagogy or education. In the broad sense the entire program of formal studies in fields of specialization, education, psychology, general background courses, and the extracurricular activities is professional.

It is maintained that while the individual culture of each student should not be lost sight of, the paramount task is to develop a true professional spirit. An attempt to set up distinguishing criteria for teacher education would require first of all that intangible thing called professional spirit. Second, it should demand unity or singleness of purpose. Third, it ought to demand a program of experiences which

would equip prospective teachers with the knowledge, techniques, appreciations, and ideals of teaching and at the same time produce cultivated and educated teachers. Fourth, it should provide the essential equipment and laboratory facilities by which at least the simpler aspects of practice or application of theory can be carried out under supervision.

As yet there is no one proved way of professionalizing. Each hypothesis of professionalization should be submitted to further study.

The ideal of "competency" is as important in professional studies as in fields of specialization. Obviously, required amounts of work will vary with individuals.

The long-term principle of preparation should result in distinction between professional preparation on preservice and inservice levels.

Experimentation with other phases of professional materials is essential, particularly on such issues as supervised observations versus student teaching, unification of educational theory and practice, and schemes of internship and apprenticeship teaching.

It is possible that the education department may best promote integration.

#### PROPOSALS

1. Professional work in education, psychology, observation, and teaching:

(a) In teachers colleges where unity and singleness of purpose make it possible, provision should be made for continuous study of materials representative of needed professional information, skills, and techniques, and appreciations. Whereas general education should probably comprise much of the preliminary junior college years of any preservice program and provision for fields of specialization be made in senior college years, it would appear to be desirable to have the student conscious of his professional needs during the entire 4 years of his undergraduate work.

(b) There should be provision on the junior college level for a limited amount of course work (not to exceed one-eighth) in education and psychology. There should be frequent observations and demonstrations to make the student increasingly aware of possible applications of theory to practice. On the senior college level formal course work in education and psychology should be continued in more advanced sequences and emphasis should be placed upon the student's own ability to apply his theoretical equipment of professional knowledge and skill through student teaching in each field of specialization and on varying levels or grades.

- (c) Lacking experimental evidence of the value of directed supervised observation compared with practice teaching, it would appear that the latter should be stressed. But periodic tests of competency should be given which should result in variations in amounts and lengths of practice teaching for individual students in a given teacher-preparing institution.
- (d) (1) Serious study should be made of the nature of course work in education and psychology, eliminating those phases now carried for traditional reasons and including new phases of work obviously applicable in present-day teaching activities.
- (2) Rather than detailed knowledge and great skill, teachers on preservice levels need to be informed of accepted principles with illustrative examples, and to be given opportunities to verify the worth of the principles in their practice teaching; further, they should be made constructively critical of new proposals and innovations.
- (3) The professional work should include all major categories of a teacher's work, such as management and control, learning, teaching, testing, records and reports, personnel relations, professional and social contacts, and sponsorship of extracurricular activities in school and out.
- (e) The total professional work, particularly when proper professional treatment of fields of specialization is carried on, can well be limited on the preservice level to amounts much below what many students now take.
- (f) Much of the technical and specific professional course work in education and psychology should be provided on graduate levels or in summer sessions when students have greater maturity or more direct recognition of gaps in professional knowledge and techniques.
- (g) By virtue of their opportunity as the interpreters of the work of a teacher, those in charge of education and psychology work should make prospective teachers aware of the broad implications of education, both in school and out of school. Grasp of concepts such as growth, activity, the school as a miniature society, character, leadership and followership, where and how education takes place, social psychology, and the like, is essential if teachers are to be anything more to children in the classroom than mere purveyors of knowledge and promoters of skill.
- (h) Student teaching requirements should be flexible in amount so that all students may be expected to reach satisfactory standards of performance before being approved for certification as teachers.

**2. Professional treatment of subject matter:**

- (a) It is the responsibility of any division which is permitted to guide majors to insure professional competency upon the part of its students.
- (b) It is still an issue in many institutions whether materials (subject matter) and methods should be merged or whether there should be a series of appropriate subject-matter sequences in each field of specialization, with a culminating course or series of courses in the applications of the materials suited to a particular level of secondary or elementary education in special methods. In either case the teacher needs to have over and beyond the essential competency of one who would guide and direct children in a field of study, proficiency in: (a) knowledge of the place and function of his work in the entire program of the school; (b) specific objectives of the fields of instruction he is teaching; (c) selection of materials, textbooks, supplementary reading, equipment, etc.; (d) use and interpretation of various types of tests—standardized and nonstandardized, essay and objective; (e) methods of adapting assignments to groups of children; (f) selecting varying methods of teaching; (g) guiding and directing activities of pupils, both curricular and extracurricular; (h) knowledge of special problems of content and method in teaching his fields of specialization.

**3. Training schools:**

- (a) It is essential that every teachers college have adequate training-school facilities for the types of teachers they prepare.
- (b) Teachers colleges should be certain that students obtain sufficient practice under conditions typical of those in schools in which students are likely to obtain their first teaching experience.
- (c) Where possible to utilize public affiliated schools for actual practice, it is desirable to make the campus training school largely a laboratory agency for demonstration and experimentation.
- (d) Administrative attention should be given to all means by which close relationships between all instructors in college departments and those in training schools can be promoted.
- (e) There should be constant opportunity for students to observe good teaching. Part of this observation should be the gradual growth of individual students, systematically scheduled to spend a stated number of periods each week in training-school classes, and part of it should be class or group observation with college instructors in charge.

## CHAPTER VI

### GENERAL EDUCATION

#### I. AMOUNT OF GENERAL EDUCATION

Institutions of higher learning have customarily set up certain requirements in fields other than majors. Over and beyond specialization in teacher-preparatory agencies, liberal and cultural ideals have long been operative.<sup>1</sup> It has been felt that general education must not be lost sight of even in curricula largely specialized on vocational bases.

General education is idealized in curricula patterns reviewed in the analyses of catalog statements of required work in the various fields of knowledge. Data on the required and actual contacts, as revealed in the analyses of catalog statements and students' transcripts, are given in table B and B1 appendix (cols. 21-26). Table 23 shows the required nonspecialized or general education courses according to catalog statements and table 24, figures 6 and 7, and charts 1 and 2 show the extent of nonspecialized or general contacts actually made by teachers college students.

TABLE 23.—Nonspecialized contacts for work required in various curricula in general education according to analysis of catalogs of 68 teachers colleges and normal schools<sup>1</sup>

Field knowledge	Number of institutions offering	Academic subjects										Fine arts		Vocational subjects		Physical education											
		English		Science		Social science		Mathematics		Foreign language		Art	Music	Home economics	Industrial arts												
		Percent required	Amount	Percent required	Amount	Percent required	Amount	Percent required	Amount	Percent required	Amount	Percent required	Amount	Percent required	Amount		Percent required	Amount									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22						
English.....	38	(1)	(1)	95	8	95	12	58	6	84	15	26	3														
Mathematics.....	33	100	12	85	7	94	12	(1)	(1)	24	11	33	3							3	4	97	4				
French.....	17	100	12	94	7	88	11	65	6	16	14	18	15	3									88	4			
History.....	22	95	11	86	8	80	18	45	8	26	12	27	18	3										95	6		
Chemistry.....	16	100	12	19	3	94	9	44	7	31	10	6	6	3										94	4		
Music.....	34	97	10	85	7	86	9	32	6	26	12	29	6	(1)	(1)									100	5		
Social science.....	18	100	11	94	9	(1)	(1)	50	5	6	12	33	3											94	4		
Physical education women.....	32	97	11	94	12	94	10	34	5	25	11	38	2	34	2	6	3										
Latin.....	18	94	11	94	7	89	11	50	6	16	14	22	2	22	2									94	3		
Biology.....	29	100	10	45	12	68	11	55	7	28	12	14	2	17	2									7	1	86	4

<sup>1</sup> Only work in addition to prescription in the major subject is recorded.

NOTE—This table should be read as follows: Of 38 English curricula, 95 percent require 8 semester-hour credits in science, 95 percent require 12 semester-hours in social science, etc.

<sup>1</sup> See ch. I, pt. II.

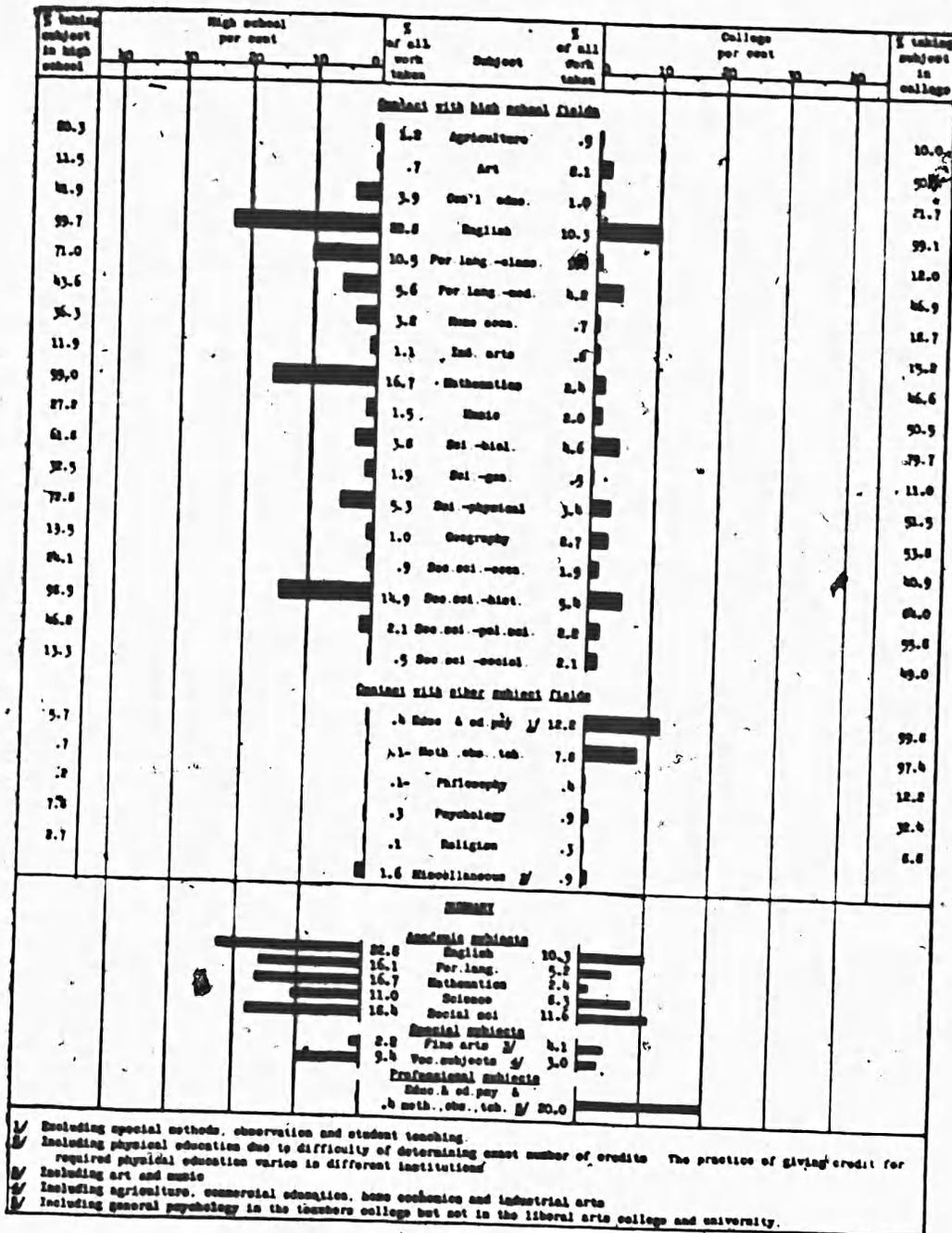


FIGURE 6.—The extent of nonspecialized contacts with the principal fields of knowledge made by 1,000 prospective teachers graduating from 20 teachers colleges.

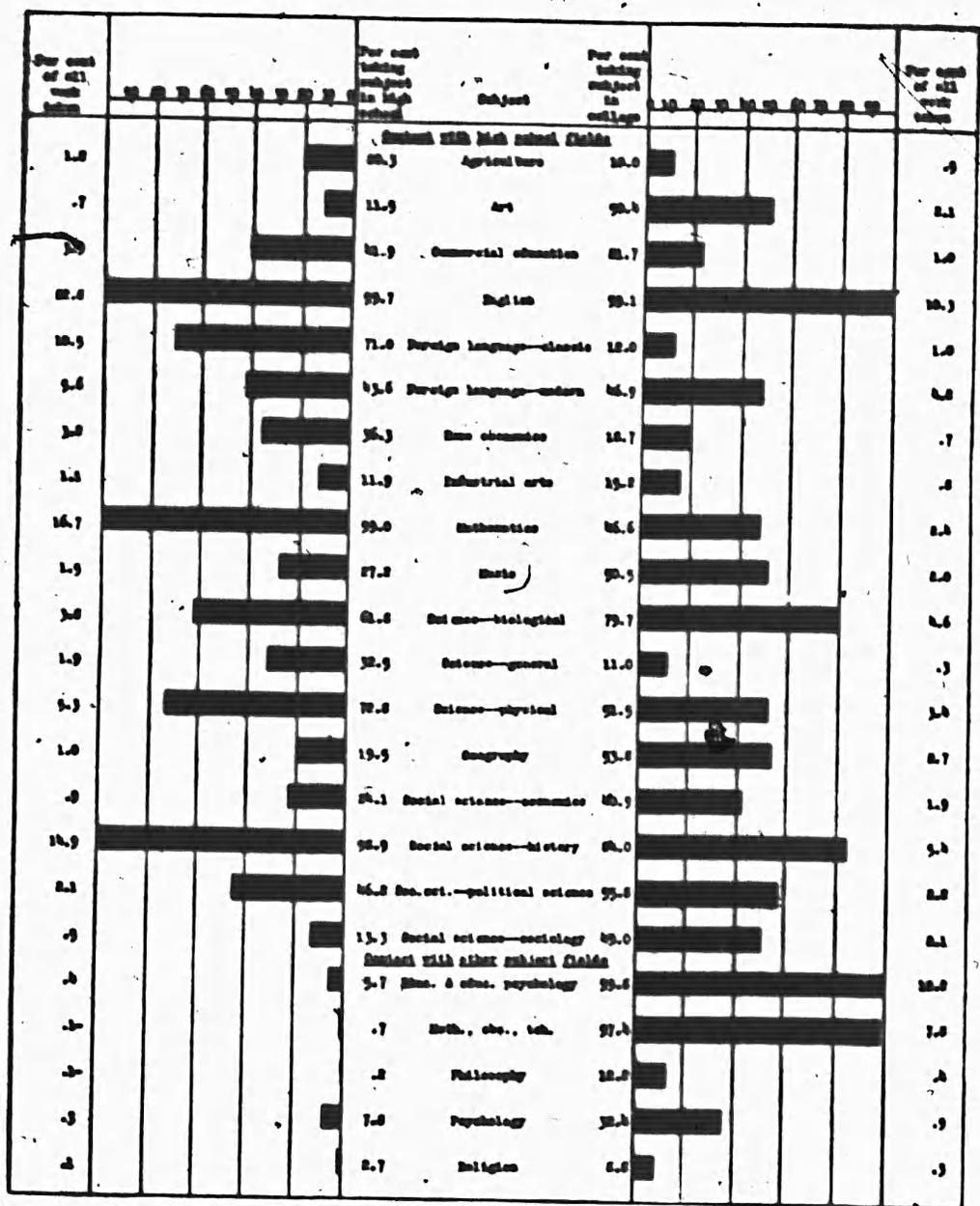


FIGURE 7.—The extent to which 1,000 graduates from 20 teachers colleges have taken work in specific courses on the high-school and college levels.

Subject field	Per cent of all work	Relative amount of work in divisions of each field			
Fine arts	3.7	Music 1.8		Art 1.9	
Health lessons	3.9	Geography 1.9		Health lessons 1.2	
Vocational subjects	6.2	Commercial education 2.5	Home economics 2.0	Industrial arts .9	Agriculture .8
Mathematics	9.6				
Science	9.7	Physical 4.6		Biological 4.2	
Education	10.2	Education and educational psychology 5.7		Methods, observation and student teaching 5.9	
				General psychology	
Foreign language	10.7	Classical 5.8		Modern 4.9	
Social science	15.0	History 10.2		Political science 2.1	
				Economics 1.5	
Major	15.4				
English	16.9				

CHART 1.—The general education pattern of high-school and college work of 1,000 graduates of 20 teachers colleges.

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High school		College	
Fine arts	2.2	Mathematics	2.4
Miscellaneous <sup>1/</sup>	3.1	Vocational subjects	3.0
Vocational subjects	9.4	Fine arts	4.1
Science	11.0	Miscellaneous <sup>2/</sup>	4.3
Foreign language	14.1	Foreign language	5.7
Education	16.7	Science	6.3
Social sciences	18.6	English	10.3
English	22.8	Social sciences	11.6
		Education and educational psychology	20.0
		Major	24.6

<sup>1/</sup> Miscellaneous includes: Miscellaneous 1.6  
 Geography 1.0  
 Education and psychology .4  
 Religion .1

<sup>2/</sup> Miscellaneous includes: Geography 2.7  
 Miscellaneous .9  
 Philosophy .3  
 Religion .3

CHART 2.—Percent of all work taken in high school and college by 1,000 graduates of teachers colleges.

All figures and charts represent a composite of 1,000 students selected in the ratio that the number of graduates per major sampled were of the total sample. Furthermore, all credits taken in the major field of specialization for each student have been eliminated to prevent any undue weighting in the attempt to present a picture of general education. The bars in figure 6 represent the amount of work taken by the students, and in figure 7 they represent the percentage of students taking the work. Likewise, charts 1 and 2 show, respectively, the amounts of work taken and the percentages of students taking.

TABLE 24.—Extent of nonspecialized contacts with the principal fields of knowledge made by 1,000 prospective teachers from 80 teachers colleges, as shown by their transcripts<sup>1</sup>

Field of knowledge	Number of graduates out of 1,000 who did not major in field	Extent of contact of nonmajor graduates							
		Percent who took courses		Average number of credits taken by those who contacted the field		Range in number of credits taken by those who contacted the field		Percent which work taken in field is of all work taken	
		High school	College	High school	College	High school	College	High school	College
1	2	3	4	5	6	7	8	9	10
Agriculture.....	1,000	20	10	8.0	6.5	1.6-40	1.0-24.0		
Art.....	963	12	60	8.1	6.7	1.6-32	7-56.0	1.2	6.6
Commercial education.....	921	42	23	12.5	6.6	9-30	7-56.0	7	2.1
English.....	810	100	99	30.1	16.7	2.0-48	2.0-50.0	1.0	1.0
Foreign language.....								22.8	10.8
Classical.....	867	71	12	19.6	11.2	4.0-36	1.0-53.0		
Modern.....	972	44	47	17.0	12.0	4.0-48	7-58.0	10.6	1.0
Home economics.....	936	36	19	11.8	5.4	1.6-40	7-58.7	5.6	4.2
Industrial arts.....	968	13	15	12.0	6.7	1.6-78	3-41.7	2.2	.7
Mathematics.....	928	69	47	22.2	7.3	2.0-48	1.0-45.3	1.1	.8
Music.....	930	27	51	7.5	5.5	5-32	5-48.7	16.7	2.4
Philosophy.....	1,000	1	12	8.0	7.7		7-12.0	1.5	2.0
Psychology—general.....	866	6	32	4.6	3.8	4.0-8	1.0-26.7	.1	.6
Religion.....	1,000	3	9	6.0	6.9	4.0-8	3-15.0	.1	.8
Science.....									
Biology.....	976	63	80	8.1	6.7	2.0-32	1.0-45.0	5.6	4.6
General.....	946	33	11	7.6	6.6	1.6-24	7-23.3	1.9	.8
Physics.....	970	73	52	9.7	6.0	4.0-32	1.0-43.3	5.7	2.4
Geography.....	1,000	20	54	6.5	5.1	2.0-24	7-20.3	1.0	2.7
Social sciences.....									
History.....	882	66	84	12.9	6.6	4.0-48	1.3-36.0	14.9	5.4
Economics.....	1,000	24	41	5.0	4.4	2.0-32	1.0-26.0	.9	1.9
Political science.....	1,000	46	56	6.9	12.5	1.6-16	1.0-26.0	2.1	2.2
Sociology.....	1,000	13	49	4.7	7.0	4.0-8	1.3-36.7	.6	2.1
Education and educational psychology.....	866	6	100	9.3	7.1	2.4-48	2.7-48.0	.4	12.2
Special methods.....	866	4	78	7.7	3.8	4.0-24	1.0-26.0	.1	2.6
Student teaching.....	866	1	90	6.0	4.1		1.3-19.1	.1	4.2
Miscellaneous.....	1,000							1.6	.9

<sup>1</sup> In the analysis of these transcripts, (1) in each field at the college level the complete record of those students who had majored in that field was omitted. (2) Each high-school unit was assumed to represent an equivalent time emphasis of 8 college semester-credits. (3) In each field the complete high-school record of those students who had majored in that field at college was omitted.

NOTE.—This table should be read as follows: Of 1,000 students whose permanent record cards were analyzed, none majored in agriculture in college. Of these 1,000 students 20 percent took courses in agriculture in high school ranging in amount from 1.6 to 40 semester-credits, with an average of 8 credits, which was 1.2 percent of all work taken by them in high school. Of the same 1,000 students, 10 percent took courses in agriculture in college ranging in amount from 1 to 24 semester-credits with an average of 6.5 credits, which was 0.6 percent of all work taken by them in college.

General education conventionally implies study of the traditional academic studies—English, mathematics, foreign language, science, and history. The interested reader can by inspection of the tabular data see clearly the emphasis on what appears to be a narrow concept of liberal or general education. In contrast may be noted the neglect both on the high-school and college levels of the fine arts, health and physical education, and home and family relationships. History appears to be emphasized at the expense of the other social studies.

Secondary education for 15 years has idealized certain cardinal objectives. These include: Health, command of fundamental processes, worthy home membership, vocation, civic education, worthy use of leisure, ethical character. By implication<sup>2</sup> institutions of higher education recognize such objectives as aims at least in some departments. These aims tend somewhat to reflect the needs of the average person in life outside the school. It should be borne in mind that teachers apart from the technical preparation for a given field of specialization require for their own individual growth formal preparation in the common fields of experience.

## 2. THE NATURE OF GENERAL EDUCATION

The preceding section has indicated that general education consists largely of the study of a few academic fields plus requirements for active physical exercise. Several types of policies have been pursued: (1) Group requirements which demand that the student choose a foreign language, a science, and a social science course for one term; (2) specific requirements such as English composition and active physical exercise, and (3) more recently the survey-orientation movement.

*Orientation and survey courses.*—Of 145 teachers colleges and normal schools which responded to a general inquiry on curricular policies, 49 claimed to have orientation courses—defined as courses which cover large areas of human knowledge. An analysis of representative course practices also sought data on survey courses. The proposals related to orientation-survey work were included in the list of 63 checked by nearly 800 instructors in teachers colleges. To the two statements which expressed the need of a considerable proportion of survey-orientation courses, the respondents indicated complete agreement. In general, they would vote for about 10 percent of a 4-year curriculum of survey-orientation courses and about 18 percent in addition of the usual introductory courses limited in scope to a subject but designed for cultural values. They accepted with reservations, however, the proposal that extreme specialization

<sup>2</sup> See ch. I, pt. II.

should be minimized and synthesis<sup>3</sup> magnified. On this proposal the presidents and educators were more inclined to agree than were the teachers of academic and special subjects.

It is evident that the "survey" concept to most respondents is still restricted to specialized departments. Twenty-one subjects with 26 additional subdivisions were listed in Inquiry 14 as a check-list of orientation courses. Every subject and subdivision was checked by some of the 770 respondents. The ranking orientation courses included:

	<i>Percent</i>		<i>Percent</i>
1. History.....	74	6. English—speech.....	63
2. English literature.....	69	7. Art.....	58
3. English composition.....	67	8. Economics.....	57
4. Sociology.....	64	9. General literature.....	57
5. Health and hygiene.....	63	10. General psychology.....	55

When asked more specifically to check these integrating course titles, 694 of the respondents indicated their approval of the titles below as follows:

	<i>Percent</i>		<i>Percent</i>
Contemporary civilization.....	64	The fine arts.....	45
Community and public relations.....	54	Science.....	44
Human behavior.....	50	Creative arts.....	42
Home and family relations.....	48		

In theory the instructors agree almost completely that any adequate program for the education of teachers should provide in proper proportion for the cultivation of physical, social, and esthetic experiences as well as for intellectual experiences. In practice the program appears to be largely intellectual; there is, in proportion, relatively slight formal course provision for the promotion of physical, social, and esthetic activities, both in the amounts of course work taken and in proportion of students taking such studies.

### 3. VALUES OF GENERAL EDUCATION

General education in the past has assumed knowledge of the social heritage or race experience. In particular the academic subjects have been conventionally identified as the essential elements of a general education. It has been assumed that one would apply in performing one's daily activities and in meeting one's daily problems the knowledge and skills learned in the various subject-matter compartments. Virtually, transfer was assumed.

It is maintained, however, that the objectives of education must also consider functionality. The school is an agency created to

<sup>3</sup> The proposal read "Prospective teachers need few specialized courses and more integrating synthetic courses; for example, the subjects of study which cut across departmental lines, as in courses called "Contemporary Civilization."

teach growing children to do well the things they need to do. This implies as a primary responsibility analysis of present-day living and as a secondary responsibility utilizing of the race experience as "service" materials.

The instructors of representative courses agree to the broad proposal that any curriculum for prospective teachers should equip them to teach not only the implications of the social heritage but it should equip them to teach the contemporary modes of living and should inform them thoroughly on contemporary problems. But, as was indicated earlier, insufficient attention is given in practice to this proposal.

As implied previously what one (teachers included) has to do and the problems one faces day by day may be grouped into several major classes.<sup>4</sup>

(a) *Health and physical efficiency.*—The very nature of contemporary industrial urban life places a premium on the knowledge, skills, and appreciations of physical and mental health. Yet less than a fifth of the graduates under review had had contacts in these fields to the extent of 1 or 2 percent of their high-school program; two-thirds had had on an average of but 2 or 3 percent of such work in college, and that was largely the typical required active physical education covering 2 or 3 periods a week on the junior college level.

(b) *Home and family relations.*—About 80 percent of prospective teachers in teachers colleges are women. Normally about half of the women students in these institutions marry within 5 years of graduation. The professional preparation for teaching is not lost by this group who marry and face the problems of parenthood and education in the home and general community life. However, the real implications of home and family relations are largely ignored even in the courses for women. It should be added that men, who ought also to have analogous instruction in home and parental responsibilities, are not taught such content. A small percentage of women actually take on both secondary and college levels about 3 percent of their work in home economics.

(c) *Preparation for leisure.*—It is almost trite to point out the effects of a shorter working day and the increasing time surplus of adults. Leisure has been democratized almost over night. Yet many of the fields which might contribute to the wise use of leisure have been undervalued or have not been organized with direct attention to their contribution to leisure. Physical education programs emphasize sports with little carry-over in later life. Reading emphasizes a type of literary standard—the novel, poetry,

<sup>4</sup> For a more extended treatment of the nature of a program to meet the conditions of present-day living see Rugg, Earle. *Some Recent Criticisms of American Contemporary Life and Their Implications for Public Education.* *School Review*, 39:15-32, January 1931.

drama—yet the American people read periodicals in the main. The arts have emphasized skills remotely applicable to common modes of living because of a traditional ideal of promoting fine art rather than practical art; even so, the transcripts of student records show that there was but little attention given to the fine arts either in high school or college.

(d) *Preparation for civic-social responsibilities.*—America assumes democracy and a consequent democratic philosophy of education. This principle is based upon the capacity of each youthful citizen to learn to make wise social decisions. Unless one accepts this premise, democracy and democratic education break down. What obligations rest upon each citizen in a democracy? Several facts are evident from recent analyses of social trends. First, there has been a revolution in modes of production and distribution of economic goods. America has become an industrial urban nation. Second, there has been an enormous expansion of governmental services. The people are increasingly turning to government as an agency to do things for them. Third, a revolution in social activities and forces has occurred. On the assumption that all youth must be taught concerning their civic-social responsibilities, must not general education give far greater emphasis than 4 or 5 percent to social science aside from history?

(e) *Science.*—While science is not so directly a major field of experience as are the fields discussed above, most of them rest upon science. Hence another phase to which general education must give attention is generalized science, particularly in its relationships to health, to economic life, and to its social ramifications.

#### SUMMARY

In brief, general education, at least on the junior college level, should consider the synthesis of the major fields of culture.

Professional leaders in recent years have been pleading for synthesis, integration, coordination, and articulation. How else may these be attained except by first setting up curricula for teachers, which in turn will react for similar reconstruction of general education on the secondary level?

#### PROPOSALS

1. A considerable proportion, at least one-fourth of a total curriculum pattern, should consist of general nonspecialized courses in the major fields of experience.
2. Where there are only minimum 3-year and 4-year preservice curricula, this work should probably be concentrated, particularly in the junior college.
3. General education should be based upon the social and individual needs of students. For one or both of these needs it would appear

that such fields of experience as (a) health and science, (b) civic-social responsibilities and adjustments, (c) recreation and appreciation activities, (d) home and family relations, and (e) philosophy and values should be represented.

4. Each field should provide for sufficient time and continuity (at least a sequence of a year's work) to insure adequate grasp of survey courses in the field.

5. The dominant criterion for selection of materials to be taught with general education expected as an outcome is understanding and appreciation of present-day modes of living and problems.

6. Synthesis and articulation are to be sought; hence the orientation courses should use materials which are related to the more important problems of contemporary life but should utilize any related materials from the present systematized subjects as secondary sources of "service" value.

7. Alternate plan. Specific orientation—survey courses should be provided in such fields as physical hygiene, mental hygiene, home and family relationships, consumer economics, government, human behavior, speech, comparative literature, and nature of world and man.

## CHAPTER VII

### ELECTIONS AND PRESCRIPTIONS

#### 1. AMOUNT OF ELECTIVE WORK

It was noted earlier in this report that part of a total program has traditionally been set apart to permit each student to make choices of courses of interest to him or to permit adaptations to different types of students. It has been held, for example, that students should have an opportunity, irrespective of requirements, to study such subjects as music and foreign language or to have work under instructors with whom they would not in the pursuit of course requirements have opportunity to study.

*Free and restricted electives.*—Two types of electives are found in the analysis of curriculum patterns, namely, restrictive electives and free electives. In the former, a definite amount of work is required in certain fields (e.g., 8 hours in science), but the student is left free to choose specific courses to fulfill the requirement. In the free electives the student may select any course.

Table 25 summarizes the data on free and restricted electives obtained from the analysis of catalogs.

TABLE 25.—*Size of elections, free and restricted, according to catalog analysis of 66 teachers colleges and normal schools*

Subject	Restricted elections			Free elections		
	Percent prescribing restricted electives	Range of credits	Median of credits	Percent prescribing free electives	Range of credits	Median of credits
1	2	3	4	5	6	7
<b>4-year curricula:</b>						
English.....	92	6-60	23	95	6-67	45
Speech.....	100	8-90	33	100	18-53	35
<b>Foreign language:</b>						
Classical.....	94	6-73	28	100	13-76	43
Modern.....	92	18-101	40	92	3-52	43
French.....	94	6-67	35	100	11-73	41
German.....	85	6-67	43	100	32-67	48
Spanish.....	89	20-80	47	100	32-64	42
Mathematics.....	97	3-81	26	97	9-68	42
Science, major.....	91	11-54	30	91	9-53	33
<b>Sciences:</b>						
Biology.....	97	12-74	27	93	6-66	45
Natural.....	91	6-63	34	91	9-51	40
Chemistry.....	88	12-88	38	100	22-79	46
Physics.....	92	10-86	40	100	19-79	48
Geography.....	100	8-74	36	95	22-49	40
<b>Social sciences:</b>						
Major.....	94	8-78	24	94	7-60	43
History.....	100	3-90	30	95	17-58	42
Sociology and economics.....	100	7-76	39	92	12-60	43

TABLE 25.—Size of elections, free and restricted, according to catalog analysis of 66 teachers colleges and normal schools—Continued

Subject	Restricted elections			Free elections		
	Percent prescribing restricted electives	Range of credits	Median of credits	Percent prescribing free electives	Range of credits	Median of credits
1	2	3	4	5	6	7
<b>4-year curricula—Continued.</b>						
Agriculture.....	86	8-72	30	93	3-54	41
Art.....	88	2-94	23	94	2-48	27
Commercial education.....	90	8-70	39	83	11-58	27
Home economics.....	68	5-43	21	68	1-56	25
Industrial arts.....	96	5-54	34	88	3-51	30
Library science.....	80	12-43	40	80	21-46	40
Music.....	85	2-73	28	82	2-53	28
Physical education:						
Men.....	87	9-59	31	90	2-60	30
Women.....	91	11-68	28	91	3-61	32
Education:						
Elementary.....	76	10-70	30	86	2-56	27
Intermediate.....	78	4-72	25	94	3-46	28
Kindergarten-primary.....	83	2-76	23	90	2-51	29
Rural.....	82	8-67	27	91	13-46	29
Upper grades.....	80	3-60	38	90	2-65	33
<b>3-year curricula:</b>						
Education:						
Elementary.....	63	6-25	19	50	1-56	11
Intermediate.....	50	8-41	30	88	7-39	21
Kindergarten-primary.....	31	6-41	26	62	1-27	15
Rural.....	100	3-40	26	80	9-41	24
Upper grades.....	50	15-38	32	83	1-33	7
<b>2-year curricula:</b>						
Education:						
Elementary.....	27	2-48	5	55	1-24	10
Intermediate.....	44	2-34	5	63	1-11	4
Kindergarten-primary.....	24	5-14	7	76	2-22	6
Rural.....	68	2-4	3	74	1-25	8
Upper grades.....	47	3-34	9	73	2-23	12
<b>1-year curricula:</b>						
Education—rural.....	40	2-10		20	5	

Table 26 shows the mean of the medians for curricula by types for 4-year curricula. It is evident that relatively large amounts are permitted in restricted and free electives—about one-fourth and one-third, respectively, of a total program. In other words, less than half of a curriculum is specifically prescribed. The ranges indicate considerable variation in practices in prescription and election.

TABLE 26.—Summary of elections by types of curricula

Electives	Curricula			
	Academic	Special	Education	All
1	2	3	4	5
<b>Restricted:</b>				
Percent of majors providing <sup>1</sup> .....	93.9	89.7	79.8	89.0
Range of credits.....	2-101	2-40	2-76	2-101
Medians <sup>2</sup> .....	34.9	30.4	28.6	31.0
<b>Free:</b>				
Percent of majors providing <sup>1</sup> .....	96.2	85.4	90.2	91.0
Range of credits.....	3-79	1-61	2-65	1-79
Medians <sup>2</sup> .....	42.3	32.2	29.2	39.0

<sup>1</sup> The mean of all percentages for all curricula was used.  
<sup>2</sup> The mean of the medians for all curricula was used.

Elective work in curricula of less than 4 years is naturally more restricted. Traditionally the limited 1-year and 2-year curricula in normal schools were almost completely prescribed. In fact, the large amount of preparatory material in such curricula necessitates a high degree of prescription in order to provide the essential professional materials.

As the normal schools became degree-granting teachers colleges and expanded their curricula, they extended very considerably the elective privilege.

How much work should be elective? A study made some years ago<sup>1</sup> though not exactly comparable since free and restricted electives were not differentiated, showed nearly 50 semester-hours of elective work in teachers colleges. The data in this analysis of catalogs reveal an average of 70 hours of free and restricted electives; 40 hours of free electives alone.

The instructors of representative courses were asked to indicate how much work they believed should be elective. In general, 604 instructors in the 18 subject fields would provide about one-sixth of a total program, the range by subject fields being one eighth to one fifth.

## 2. THE NATURE OF ELECTIVES

How do students use their elective time? It is commonly asserted that students choose "snap" courses, discriminate in choice of instructors by electing courses under instructors known as "easy markers", and avoid classes scheduled at what are regarded as "inconvenient" hours.

One intensive study<sup>2</sup> of the electives of 808 4-year graduates and 183 2-year graduates of a teachers college for the period of 1921-22 through 1925-26 found evidence of guidance of students into some departments in order to increase the size of the major group or the enrollment in courses as minors. In still other departments, student caprice and whim seemed to operate.

Certain departments, notably fine arts and industrial arts and home economics in which instructional materials involve highly specialized skills and activities, tend to minimize opportunities for election.

The transcript data of work actually taken do not reveal elections, except by implication. The excess, in some departments, of the amount of work actually taken over the amount required according to catalog statements in the major, professional studies, and required fields of contact indicates that students use their electives in fields in which they already have taken work.

<sup>1</sup> Rugg, E. U., and Dearborn, N. H. Op. cit. p. 138.

<sup>2</sup> Blue, H. G. A study of the Electives Embodied in the Training of 2-year and 4-year Graduates of Colorado State Teachers College, Greeley, Colo. Colorado State Teachers College, 1929. (Unpublished master of arts thesis.)

The instructors of representative courses (742 of them) indicated their judgments as to the use of electives as follows: The elective should be:

	Percent of Instructors
In the teaching major.....	57.4
In the teaching minor.....	48.9
In education and psychology.....	34.9
In fields of knowledge for general culture.....	89.5

*Guidance in choice of electives.*—What are the principles of determining elections? Blue<sup>3</sup> asserts that guidance on the part of the college administration and faculty is fundamental to the elective work. Prescription is guidance. To be consistent in philosophy, why should not elections be guided?

Since prescription is of paramount importance in a professional institution, this phase of a program should probably embrace three-fourths to five-sixths of a 4-year curriculum. The respondents to the inquiry on this point voted for 75-percent prescription. The area in which prescription should probably be made involves the fields of specialization, professional materials, and general requirements designed to broaden and liberalize the student both in utilization of the social heritage and in meeting situations of contemporary life. This area is primarily social, and demands for the most part adjustment and conformity.

There is an additional area of importance, namely, individual culture. The instructors of representative courses accorded full agreement to two proposals, namely, (1) the dual task of teacher education—to provide for the individual culture or education of the prospective teacher, and to give him the knowledge, techniques, and appreciations essential to his task; and (2) provision for the development of latent abilities and aptitudes of teachers. These proposals reflect two assumptions: (1) That each student has interests, aptitudes, and abilities; and (2) it is as much the task of the educational institution to discover, direct, and develop latent talent as it is to equip the student to deal with the common needs of all citizens. For teachers this individual education is even more essential because over and beyond their fields of specialization they may properly be called upon to sponsor clubs and other extracurricular organizations for creative activity.

<sup>3</sup> Blue, *op. cit.*, p. 80-82.

TABLE 27.—A summary of the catalog analyses of prescriptions in academic, special-subject, and education majors, and education majors, curricula of 66 teachers colleges and normal schools (in semester-hours)

Prescription	Academic majors (17 majors)			Special-subject majors (9 majors)			Education majors (8 majors)			Summary of all curricula (31 majors)		
	Percent of majors	Range of credits	Median of credits	Percent of majors	Range of credits	Median of credits	Percent of majors	Range of credits	Median of credits	Percent prescribing	Range of credits	Median of credits
	3	3	4	5	6	7	8	9	10	11	13	13
Hours for graduation.....	100	120-153	127.0	100	120-153	128.1	100	120-157	124.6	100	120-153	129
Major.....	90.0	10-67	26.8	100	9-59	28.8	100	2-38	12.4	100	2-89	29
First minor.....	92.4	6-26	17.3	72.8	6-23	16.6	30	11-30	16.4	77	6-36	17
Second minor.....	27.4	6-13	12.1	28.2	6-13	12.1	19.8	11-18	13.0	28	6-13	13
Restricted electives.....	93.9	3-101	34.9	85.7	2-40	30.4	79.8	2-76	23.6	89	2-101	81
Free electives.....	96.2	3-79	42.3	85.4	1-61	32.2	90.2	2-95	29.2	91	1-79	29
Education and psychology.....	100	8-26	16.3	100	4-28	14.6	100	6-29	14.6	100	4-29	16
Special methods and professional courses in major.....	50.9	1-14	3.6	73.7	1-40	4.9	100	2-15	7.8	100	2-32	7
Student teaching and observation.....	100	2-17	6.1	95.6	2-32	5.8	20.4	2-15	2.3	7	2-5	3
Agriculture.....	4.6	1-8	2.5	6.0	2-4	2.7	85.2	1-12	5.0	28	1-12	3
Art.....	23.8	1-8	2.5	27.9	1-10	2.7	3.4	2-3	3.0	1	2-3	3
Commercial education.....	0			0			0	3-32	10.1	99.0	3-31	11
English.....	94.3	4-33	10.8	96.0	4-20	11.0	10.8	3-18	9.0	97	2-24	13
Foreign language.....	33.8	4-24	11.4	26.1	4-20	11.0	6.0	1-6	2.3	4	1-6	3
Home economics.....	0			2.4	2-8	5.0	13.0	0-1	2.5	5	1-8	3
Industrial arts.....	0			6.3	0-3	1.0	29.6	0-1	1.0	29	0-3	1
Library science.....	27.0	0-3	1.0	30.9	0-3	1.0	6.7	1-13	6.2	50	1-19	6
Mathematics.....	54.6	3-19	6.8	43.1	2-16	6.7	21.0	1-12	4.0	35	1-14	3
Music.....	23.6	1-8	2.6	21.0	1-14	2.2	64.8	1-15	2.2	43	1-11	3
Psychology—general.....	45.8	1-11	3.1	46.0	1-7	3.0	33.8	1-5	2.2	43	1-11	3
Physical education.....	91.9	0-16	4.1	95.7	0-16	4.3	89.0	0-16	6.4	94	0-16	6
Science.....	87.2	3-28	7.9	85.6	1-47	12.2	91.4	2-25	9.4	89	1-47	9
Social sciences.....	92.6	2-26	10.5	92.1	2-30	10.1	96.0	2-35	10.0	93	2-35	10

1 Major curricula in subject are omitted; e.g., the percent, range, and median for English do not include English major. Majors in classical and modern languages French, German, and Spanish are omitted from the summary of foreign languages, etc.  
 2 The mean of the percentages for all curricula was used.  
 3 The mean of the medians for all curricula was used.  
 4 Based on actual percentages.  
 5 The median of medians was used.

This table should be read as follows: For 17 academic majors, the major (Item 3) averages 20.6 semester-hours, ranges 10-57 hours; for 9 special-subject majors, the major averages 20.8 hours, ranges 9-69 hours, etc.



## 3. SUMMARY OF PRESCRIPTIONS AND ELECTIONS ACCORDING TO THE CATALOG ANALYSIS

(a) *4-year curricula.*—Table 27 summarizes the data obtained in the catalog analysis on 17 academic majors, 9 special-subject majors, and 5 education majors in the 4-year curricula.

First, comparisons by types of curricula may be made. The major varies little<sup>4</sup> except for education curricula. The minors are approximately the same, but there is a higher prescription of first minors in the academic curricula. In professional work, there is slightly more education and psychology prescribed for the academic subjects and considerably more special methods for the special subjects. Student teaching shows about the same amount of course work for the academic and special-subject curricula, but considerably more for education majors. Academic majors have the most opportunity for elective work, free and restricted. The main fact revealed in the analysis of the requirements is that education majors appear to distribute more work over the various major fields of knowledge than do either the majors in the academic or in the special-subject fields.

Only about a third of all 636 curricula require contacts with the fine arts; and those that do prescribe such work require but the equivalent of 3 semester-hours in music and in art. The amount of physical education required in most curricula is the equivalent of 1 semester-hour for 5 semesters, which probably implies that it involves in the main active physical exercise. The data show slight provision for the vocational subjects and preponderant emphasis on the academic subjects.

Comparative and historical evidence of prescriptions and elections is given in a recent investigation<sup>5</sup> by Class based on catalogs of various periods—1870, 1900, 1910, 1920, and 1930. While restricted to elementary curricula, his study is so important that several paragraphs of the summary are quoted here:<sup>6</sup>

## RELATIVE AMOUNTS OF PRESCRIPTION AND ELECTION

To ascertain the history of the relative amounts of prescription and election in teacher-training curricula, studies of catalogs of normal schools and teachers colleges were made for the years 1870, 1900, 1910, 1920, and 1930.

These studies indicated that in 1870 there were practically no elective privileges in normal-school curricula. By 1900 although electives, free and restricted, had appeared in normal-school curricula, their numbers were on the whole comparatively small. Only in courses for experienced teachers and college graduates, and postgraduate courses, all of which were rarely offered then, did elec-

<sup>4</sup> To the 12.5 hours in education must be added general professional courses in education and psychology and more related work in other subjects.

<sup>5</sup> Class, E. O. *Prescription and Election in Elementary School Teacher-Training Curricula in State Teachers Colleges.* New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1931. (Contributions to education, no. 481.)

<sup>6</sup> Class, *op. cit.*, p. 53-53.

tive privileges approximate or exceed those of the present time. In other courses, including those most frequently offered, prescribed studies constituted no less than 93 percent of the whole. Fifty-two out of a total of 82 curricula studied were entirely prescribed.

With the advent of the teachers-college movement came a marked increase in the use of free and restricted electives. The study of 1910 shows that an average of only 35 percent of the 4-year post-high-school teacher-training curricula of 7 teachers colleges was prescribed; in the 2-year post-high-school courses for the same year, one study shows an average prescription of 82 percent, and the other of 78 percent.

Since 1910 there has been a marked decrease in the use of electives in the 4-year degree courses, while in the 2-year courses the change has been negligible. The average amount of prescription in 1930 in 2-year courses (exclusive of strictly junior high school courses) for training regular elementary teachers is 76 percent; for 3-year courses, 73 percent; and for 4-year courses, 50 percent.

The average amount of prescription in the 4-year art courses is 42 percent; in music, 58 percent; in physical education for men, 62 percent; in physical education for women, 59 percent; in home economics, 70 percent; and in industrial arts, 54 percent.

The findings of that study tend to confirm the generalizations concerning increases in elections as normal schools expanded and became degree-granting teachers colleges. The amounts of prescription which Class found for elementary fields are similar to the amounts prescribed and free electives found in the present investigation. For example, he reports that 50 percent of the work in the 4-year elementary curricula is prescribed, as compared to 61 percent indicated in the Survey data.<sup>1</sup> Variation in certain special 4-year curricula are given below.

TABLE 28.—Comparison of prescriptions of Class' study and Survey data in illustrative curricula

Curricula	Percent prescribed	
	Class' study	Survey data
	1	2
Art.....	42	64
Home economics.....	70	69
Industrial arts.....	54	54
Music.....	58	63
Physical education:		
Men.....	62	58
Women.....	59	63

(b) *Limited curricula.*—In the 1-, 2-, and 3-year curricula (see table 29 for 2-year curricula), the essential generalizations are: (1) a somewhat greater tendency to prescribe in short-length curricula; (2) identical requirements in the major and professional studies (educa-

<sup>1</sup> Variations in sampling and in methods of classification in the 2 studies probably account for the discrepancies.

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tion and psychology) because the majors for these curricula are sponsored by education department; (3) a pronounced tendency to emphasize, insofar as limited curricula permit, relatively specific subject-matter courses, more professionalized than in other types of curricula, in such fields as art and music materials and methods, nature study, children's literature, geography, history, and teaching; and (4) less attention to elective work.

TABLE 29.—Summary of requirements in 2-year curricula offered in 66 representative teachers colleges and normal schools<sup>1</sup>

Item	Range of medians (semester-hours)	Median (semester-hours)
1	2	3
Hours required for graduation.....	64.00-66.00	65.00
Hours required in:		
Major.....	8.00-9.75	7.00
First minor.....		
Second minor.....		
Restricted electives.....	2.40-2.80	4.75
Education and psychology (outside major).....	7.00-8.25	7.20
Special method and professional courses in major. (See major field.) <sup>2</sup>		
Observation of teaching.....	2.00-4.00	2.17
Student teaching.....	4.00-6.00	4.83
Combined courses in observation and student teaching.....	4.00-6.00	5.00
Student teaching and observation—total.....	6.00-7.23	6.83
Hours offered in free electives.....	4.00-11.50	6.00
Required contacts outside major field:		
Agriculture.....	2.00-2.00	2.07
Art.....	2.25-2.53	2.60
Commerce.....	2.07-2.07	2.07
English.....	8.50-12.00	9.00
Home economics.....	1.00-2.34	2.23
Industrial arts.....	1.50-2.00	1.84
Library science.....	.57-.87	.84
Mathematics.....	2.07-2.50	2.53
Music.....	2.45-2.75	2.80
Psychology—general.....	2.00-3.00	3.00
Physical education.....	2.53-3.00	4.83
Science.....	4.50-6.00	5.00
Social sciences.....	9.00-12.00	9.83
Miscellaneous.....	.75-2.00	1.00

<sup>1</sup> Five 2-year curricula (or majors) are offered in the 66 schools.

<sup>2</sup> All 2-year curricula are in education; therefore special methods and professional courses are included in the major.

(c) *Prescriptions as evident from transcript data.*—A sampling of seventeen 4-year and three 2-year curricula in the analysis of work actually taken by more than 1,400 recent graduates in 20 selected teachers colleges shows the following: (1) A pronounced tendency on the part of most students to concentrate work in academic subjects; (2) a decided concentration of academic work on the high-school level; (3) a heavy concentration of work in one field of specialization and in educational psychology, special method, observation, and teaching—roughly half; (4) a wide spread of work taken by students in other subjects except in English.

**A SUMMARY OF CURRICULUM PRESCRIPTIONS AND ELECTIONS**

What broad conclusions may be made from the data presented? Although there are admitted limitations in the sources drawn upon in this study, several tendencies are evident.

First, it is clear that more attention in "paper" organizations is being given to 4-year curricula, notwithstanding the fact that the primary load of the institutions from an enrollment point of view is still with limited curricula. It is also evident that the tendency is to expand curricula to a 4-year pattern; this tendency has been most apparent in the past few years.

Second, notwithstanding limitations of these analyses reflected in the more quantitative rather than qualitative trends, the fact remains that there is insufficient evidence of continuity of curricula. As normal schools became teachers colleges and shifted from limited curricula to 4-year curricula they tended to adopt the basic liberal arts pattern of majors, minors, and required contacts with various fields of knowledge. The requirements have been chiefly restricted to conventional academic subjects; there is slight evidence of required work in the fine arts, the vocational subjects, and physical education and hygiene.

Third, in 4-year courses leading to a degree, there is a close similarity between the teachers colleges and the colleges and universities in major, minor, and professional requirements. The variations in tabulation do not permit exact comparison of elective practice; yet it would appear that teachers colleges make greater provision for electives, both free and restricted. This is in contrast to much greater prescription in limited curricula of 2 and 3 years in length.

Fourth, the philosophy underlying prescription and election is not clear. Traditional procedure of liberal-arts colleges have seemingly been imitated by teachers colleges.

**PROPOSALS****ELECTIONS AND PRESCRIPTIONS****1. Creative education:**

(a) Teacher education should give greater attention for its concomitant effects to that phase of culture or education that contributes to individual growth. This recommendation assumes that every student has some latent talent, and it is as much the task of schools and colleges to give it expert direction and guidance as it is their duty to provide socially valuable experiences.

(b) Provision should be made through the personnel departments for obtaining records of the interests, aptitudes, and abilities of each student at the time of his entrance to a teachers college.

(c) Opportunities should be provided through a variety of activities for various talented groups, particularly in fields offering opportunity for creative expression, such as creative writing, creative music, and creative art.

2. Electives:

(a) A small proportion, probably not to exceed one-sixth or one-fifth of a 4-year program and one-tenth of a 2-year program, should provide for elective work.

(b) All elective work should be guided on the basis of the best personnel data obtainable concerning the interests, abilities, and aptitudes of each student.

(c) A philosophy of electives should attempt to—

(1) Aid students, through formal course work, to gain some real insight into the main areas of human experience, insofar as individual adaptations reveal such work to be needed.

(2) Promote individual education of students; that is, give each student opportunity to obtain under expert guidance further mastery of a field of special interest to him, but not in his major fields of specialization. This proposal seeks to develop talent rather than provide the opportunity to increase the amount of professional work.

3. Prescription:

(a) All curricula should be highly prescribed; at least 75 to 80 percent of all work should be organized in definite sequences, either for values to be obtained for essential common and general education or for values involved in guaranteeing mastery of one's chosen fields of specialization.

(b) Prescription further implies: (1) Progression in the sense that basic courses are taught first and that due attention is given to sequence and rank; and (2) increasing adaptation through "honors" work and other media tending to produce individuals with proved capacity for independent and self-directed attack on further problems in various fields of experience-on in-service levels of study.

## CHAPTER VIII

### FACULTY PERSONNEL IN REPRESENTATIVE COURSES

#### STATUS, NONTEACHING DUTIES, AND READING INTERESTS

A curriculum is a series of more or less related courses designed to provide essential experience in a given field for a group of students. Thus far various aspects of representative curricula for the education of teachers have been described and evaluated. In the teacher-preparation institutions selected for intensive analysis it was possible to gather data concerning detailed practices in representative courses within most of the more frequently offered curricula.<sup>1</sup>

The methods of obtaining the facts about representative courses were as follows: (1) A frequency list of the course offerings in the 29 selected teachers colleges was made—as a rule the first 10 of the many different courses offered were chosen for the list (see table 39, ch. IX), being representative of course titles in approximately half or more of the selected institutions; (2) the presidents of the cooperating institutions were asked to furnish the Survey staff with the names of the instructors of each course selected as representative; (3) inquiry forms dealing with faculty personnel and teaching practices in the courses were sent to each instructor.

There were 805 (71 percent) of the faculty personnel blanks returned and 2,637 (67 percent) of the course blanks returned, representative of the following teaching curricula: Art, biology, chemistry, commercial education, education, English, foreign language, geography, history, home economics, industrial arts, mathematics, music, physical education, physics, political science, economics, and sociology.

In volume II, a detailed presentation of personnel of approximately 22,000 college faculty members of 637 teacher-preparing institutions including teachers colleges and normal schools is given. The present chapter merely summarizes the data given by 835 instructors of the more representative courses in the teachers colleges studied intensively. The evidence is presented largely to indicate the teaching

<sup>1</sup> The data for this and the succeeding chapter are based upon more detailed and special studies of graduate students, submitted as master of arts theses in Colorado State Teachers College by the following students: Doris Audrey, Fred Baylis, S. J. Gillis, Margaret Juchem, Oatharine Kelly, E. E. Mohr, L. D. Moore, Edwin Piper, Lettie Scott, R. B. Spear, H. L. Stanley, Margaret Tubbs, J. W. Wadsworth, T. W. Walker, I. W. Weber, and Ruth Wolfe. Only the summary averages are discussed here. In general the fluctuations between subject matter groups were not great.

situation in representative courses. Where possible, comparisons will be made with the general college staff data.

*Sex and rank of the respondents.*—Of the 800 faculty members teaching the representative courses, 55 percent were men and 45 percent were women. Their distribution by rank is shown in table 30.

TABLE 30.—Rank of faculty personnel in selected teachers colleges and normal schools

Rank	Men		Women		Both	
	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7
President.....	1	0.23	0	0.00	1	0.12
Dean.....	1	.23	1	.28	2	.25
Professor.....	227	52.82	77	21.45	305	38.45
Associate professor.....	69	15.82	58	16.15	127	15.97
Assistant professor.....	70	16.05	80	22.28	150	18.86
Instructor.....	69	15.82	133	37.32	202	25.40

There is close correspondence in the summary distribution of the ranks of the personnel of the representative courses and of the faculty in teachers colleges in general.

*Preparation.*—The summary data in tables 31 and 32 reveal the educational preparation of the instructors of representative courses.

In the selected institutions under review all except 1 percent of the faculty members have at least the equivalent of a bachelor's degree. Similar distribution of preparation was found for the personnel reporting in the general college staff inquiry. Data from that source showed size of institution to be a significant factor. In the larger institutions the faculty members are seemingly better prepared. As would be expected, the latest preparation, obviously graduate work, was chiefly in universities.

In 1925 the American Association of Teachers Colleges first announced standards including one involving preparation of college faculties. Fifty-nine percent of the faculty members reported receiving degrees since that date.

An attempt to discover the fields of subject matter in which the faculty personnel under review had taken at least one course was limited by the difficulty of instructors recalling in detail all college courses taken and further by the inability of the Survey staff to obtain data on the relative amounts of college study in various subjects. The most contacts were reported in the academic studies of English, history, modern language, mathematics, and science. Most of the respondents also reported general and educational psychology, history of education, and methods of teaching.

TABLE 31.—Educational preparation of 3,866 faculty members in 28 selected teachers colleges and normal schools

(a) Types of degrees:		Percent
No degree	-----	3.1
Bachelor's degree	-----	12.1
Master's degree	-----	38.3
2 years above bachelor's	-----	21.3
Doctor's degree	-----	25.2
(b) Recency of preparation:		
Last degree taken before 1925	-----	41.85
Last degree taken after 1925	-----	59.15
(c) Where last preparation was taken:		
Normal school	-----	7.6
Teachers college	-----	18.20
University or college	-----	74.61
Miscellaneous	-----	1.41
(d) Region in which last degree was taken:		
Northwest States	-----	6.15
North Central States	-----	41.02
Southern States	-----	14.42
Middle States	-----	30.03
New England States	-----	6.02
Europe	-----	1.75
(e) Major and undergraduate subjects:		
		<i>Undergraduate</i> <i>Graduate</i> <i>Both</i>
Majoring in teaching subject	-----	57.71 66.09 45.34
Minoring in teaching subject	-----	24.06 37.49 12.89
Majoring and minoring in teaching subject	-----	66.61 61.96 55.31
Neither majoring nor minoring in teaching subject	-----	18.21 6.11 4.78

TABLE 32.—Field of contact<sup>1</sup> reported by 804 instructors of 171 courses

	Percent		Percent
Agriculture	20	Science:	
Art	47	Biology	71
Commerce	25	Physics	73
Education	97	General	30
English	95	Economics	67
Foreign language:		Government	56
Classical	45	Sociology	67
Modern	82	Social science—general	68
Geography	47	History of education	79
History	89	General psychology	81
Home economics	18	Educational psychology	75
Industrial arts	26	Social aspects of education	43
Mathematics	77	Educational methods	80
Music	45	Educational philosophy	55
Philosophy	69	Education, secondary, elemen-	
Physical education	70	tary, or higher	65
Psychology	88	Administration and supervision	53
Religion	32		

<sup>1</sup> One or more courses.  
<sup>2</sup> Only 631 checked.  
<sup>3</sup> Only 428 checked.  
<sup>4</sup> Only 740 checked.  
<sup>5</sup> Only 748 checked.  
<sup>6</sup> Only 785 checked.

<sup>7</sup> Only 574 checked.  
<sup>8</sup> Only 790 checked.  
<sup>9</sup> Only 355 checked.  
<sup>10</sup> Only 747 checked.  
<sup>11</sup> Only 711 checked.

*Experience.*—The teaching background of most instructors of representative courses is shown in table 33.

TABLE 33.—*Teaching experience and nonteaching duties reported by 707 instructors<sup>1</sup> in selected teachers colleges and normal schools*

Experience	Percent	Nonteaching duties	Percent
Elementary experience.....	40	None.....	23
Secondary experience.....	58	Administrative.....	23
No experience below college.....	15	Supervisory.....	23
Administrative experience:		Community activity.....	23
Elementary principalship.....	6	Extracurricular activities.....	19
Secondary principalship.....	9	Coaching.....	6
Superintendency.....	9	Editor.....	1
College administration.....	11	Miscellaneous.....	11
Supervision.....	7		

<sup>1</sup> The percentages are based on number reporting on each item.

Most of the instructors reported elementary or secondary experience; only 15 percent reported no experience on the levels for which teachers colleges are preparing teachers. The median amount of teaching experience is 10 years.

*Nonteaching duties.*—The load of most instructors is more than classroom work. Only about one-fourth reported no nonteaching duties. In addition to the usual administrative duties of department heads, such duties as community activities, sponsorship of extracurricular activities, and the like were reported.

Returns on the college staff inquiry showed in general about 42 hours' work a week, apportioned as follows: Teaching class, 11.5 and laboratory, 6; preparation, 4.8; extension, 1; administrative responsibilities, 2.5; research, 2; others, 4. Comparison with other types of institutions shows the teaching load in teachers colleges to be higher than in other types of institutions of higher education except junior colleges.

From the replies received to the questions concerning committee activity and research it is difficult to generalize in any summary way except to say that some instructors indicated committee activities and research publications. In the general inquiry it was found that teachers college staffs for the most part are not as much concerned with research as are the staffs of colleges and universities. The data gathered in that inquiry, on the number of books and articles written since 1926, indicate that teachers college and normal-school instructors do not devote as much time to writing as do instructors in some other types of institutions.

TABLE 34.—Percentage distribution of instructors in various types of institutions according to number of books and articles produced<sup>1</sup>

Production	Teachers colleges and normal schools—3,875 teachers	State universities and land-grant colleges—3,246 teachers	Denominational universities or colleges—3,241 teachers	Private nondenominational institutions—2,058 teachers
	2	3	4	5
<b>Books:</b>				
None.....	86.5	72.4	84.8	73.7
1.....	10.3	14.5	10.2	14.5
2 or 3.....	2.1	8.9	8.2	7.9
4 or 5.....	.5	2.4	.8	2.1
More than 5.....	.2	1.8	.4	1.8
<b>Articles:</b>				
None.....	76.1	49.1	74.6	56.2
1 to 3.....	17.7	25.2	16.4	24.0
4 to 9.....	1.1	15.7	5.8	11.6
10 to 19.....	1.1	6.4	2.0	5.6
20 or more.....	.6	2.6	1.2	2.6

<sup>1</sup>Based on data from College Staff Inquiry, National Survey of the Education of Teachers.

*Reading interests.*—An attempt was made to discover the reading interests of the instructors of representative courses. They were asked to name 5 books and 3 periodicals which they regarded as most stimulative to their thinking. Tables 35–38 summarize the detailed tabulation for both professional and nonprofessional reading of 725 instructors. While there are obviously limitations to such lists, they are, nevertheless, worthy of citation in summary form. In general, the reading interests of the instructors of representative courses is of relatively high order. The frequencies are low, as would be expected in the variety of specialization involved in the 17 subject fields under review.

TABLE 35.—Reading interests of instructors—professional books

Author	Book	Frequency
1	2	3
Morrison.....	Practice of Teaching in the Secondary School.....	36
Rugg and Shumaker.....	Child-Centered School.....	31
Beard.....	Rise of American Civilization.....	21
Kilpatrick.....	Education for a Changing Civilization.....	19
Dewey.....	Democracy and Education.....	16
Bagley.....	Education, Crime, and Social Progress.....	14
Mursell and Glenn.....	Psychology of School Music Teaching.....	14
Eddington.....	The Nature of the Physical World.....	11

The total number of different professional books mentioned was 785; the frequencies in addition to those given were as follows: 1 book was mentioned by 10 instructors; 2 by 9; 4 by 8; 4 by 7; 6 by 6; 12 by 5; 20 by 4; 43 by 3; 86 by 2; and 599 by only 1 instructor.

TABLE 36.—*Reading interests of instructors—nonprofessional books*

Author	Book	Frequency
1	2	3
Durant.....	Story of Philosophy.....	44
Adams, James T.....	Epic of America.....	25
Lippmann.....	Preface to Morals.....	25
Wells.....	Outline of History.....	16
Hincus.....	Humanity Uprooted.....	14
Buck.....	The Good Earth.....	13
Chase.....	Mexico.....	13
Lynd.....	Middletown.....	13
Beard.....	Whither Mankind.....	12
DeKruif.....	Microbe Hunters.....	12
Dimnet.....	The Art of Thinking.....	12
Dorsey.....	Why We Behave Like Human Beings.....	12

The total number of different nonprofessional books mentioned was 563; the frequencies in addition to those given in table 36 were as follows: 1 book by 11 instructors; 3 by 9; 3 by 8; 3 by 7; 6 by 6; 7 by 5; 10 by 4; 24 by 3; 63 by 2; and 428 by only 1 instructor.

TABLE 37.—*Reading interests of instructors—professional magazines*

Magazine	Frequency	Magazine	Frequency
1	2	1	2
Journal of the National Education Association.....	75	American Historical Review.....	26
Journal of Health and Physical Education.....	48	Journal of Educational Research.....	24
Journal of Home Economics.....	43	School and Society.....	24
Science.....	38	Educational Administration and Supervision.....	23
The English Journal.....	36	Journal of Chemical Education.....	23
Current History.....	28		

The total number of different magazines mentioned was 244; the frequencies in addition to those given in table 37 were as follows: 1 periodical was mentioned by 22 instructors; 2 by 18; 1 by 17; 5 by 16; 3 by 15; 3 by 14; 1 by 13; 1 by 11; 6 by 10; 12 by 9; 5 by 8; 4 by 7; 2 by 6; 10 by 5; 16 by 4; 21 by 3; 45 by 2; and 95 by only 1 instructor.

TABLE 38.—*Reading interests of instructors—nonprofessional magazines*

Magazine	Frequency	Magazine	Frequency
1	2	1	2
Harpers.....	145	New Republic.....	59
Atlantic Monthly.....	125	National Geographic.....	52
Literary Digest.....	101	Current History.....	23
Readers Digest.....	83	The Nation.....	21
Forum.....	72		

The total number of different nonprofessional magazines was 99; the frequencies in addition to those given in table 38 were as follows: 1 periodical was mentioned by 19 instructors; 1 by 17; 1 by 16; 2 by 13; 3 by 12; 2 by 10; 1 by 8; 2 by 7; 3 by 6; 4 by 5; 2 by 4; 5 by 3; 14 by 2; and 48 by only 1 instructor.

#### SUMMARY

The faculty personnel as revealed by returns on inquiry blanks sent to instructors of the courses selected as representative of typical curricula was (1) fairly well prepared quantitatively at least: Approximately five-sixths had the equivalent of the master's degree or more in graduate training; (2) acquainted through actual teaching experience on levels for which teachers colleges are preparing teachers; and (3) in general engaged in the typical activities and interests of college instructors.

#### PROPOSALS

1. The ratio of faculty to students should be scrutinized with a view to economies in size of staff. The tendency of faculty members to utilize most of their load to offer specialized elective courses, particularly where records indicate small enrollments, should be, especially, watched.
2. Faculties should be constantly stimulated to give evidence of professional growth in one or more of the following ways:
  - (a) Frequent visits to training schools and public schools to keep in contact with work in their field of specialization and to aid in its constant reconstruction.
  - (b) Active cooperation in professional organizations related to their fields of specialization.
  - (c) Periodical formal study or travel.
  - (d) Contributions either through original research or interpretative writing in their field of specialization.

## CHAPTER IX

### CONTENT AND METHOD OF REPRESENTATIVE COURSES

Over and beyond theory and practice in various curricula treated thus far there remain the more detailed activities within specific courses that comprise a curriculum. It was impossible to analyze all courses even in the teachers colleges selected for intensive analysis. However, from preliminary investigation it was found that analysis of practice in the 10 to 12 most frequently offered courses would yield a sufficient number of returns for purposes of generalization about content and method.

As pointed out earlier, analyses of representative courses were made in the following curricula:

<b>Academic:</b> Biology Chemistry English Foreign language Geography History Mathematics Physics Political science and economics Sociology	<b>Special:</b> Art Commerce Home economics Industrial arts Music Physical education Education
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Table 39 shows the 5 courses selected for intensive study. The frequencies revealed lack of clear-cut agreement as to which courses are essential in a curriculum.

TABLE 39.—Rank-order frequency of representative courses in 29 teachers colleges

Biology:	Frequency	Chemistry:	Frequency
General botany.....	19	General inorganic chemistry ..	20
General biology.....	17	Organic chemistry.....	19
Human physiology and hygiene.....	16	Qualitative analysis.....	16
Taxonomy (plants).....	16	Quantitative analysis.....	16
General bacteriology.....	16	Methods in teaching chemistry.....	11
Elementary science.....	14	Industrial chemistry.....	9
General zoology.....	13	Biochemistry.....	9
Entomology.....	12	<b>English:</b>	
Plant physiology.....	11	Composition and rhetoric.....	-26
Biology, methods.....	10	American literature.....	23

TABLE 39.—Rank-order frequency of representative courses in 29 teachers colleges—  
Continued

English—Continued.	Frequency	Mathematics—Continued.	Frequency
English literature.....	21	Differential calculus.....	14
Contemporary literature.....	19	Integral calculus.....	13
Shakespeare.....	19	Intermediate grade methods.....	13
Journalism.....	16	High-school methods.....	13
Child literature methods.....	15	Trigonometry.....	12
Speech.....	15	Solid geometry.....	12
Composition, speech types.....	14	Advanced calculus.....	12
Language.....	14	History of mathematics.....	9
Foreign language:		Physics:	
Elementary French.....	20	General survey.....	22
Intermediate French.....	20	Methods.....	19
Advanced French.....	16	Electricity and magnetism.....	15
Elementary German.....	16	Light and sound.....	13
Elementary Spanish.....	15	Heat.....	13
Fourth-year French.....	14	Mechanics.....	12
Intermediate Spanish.....	14	Radio.....	11
Advanced Spanish.....	13	Electricity, measure and use.....	10
Intermediate German.....	13	Political science and economics: <sup>1</sup>	
French, methods.....	12	Political science:	
Advanced German.....	11	National Government.....	
Fourth-year Spanish.....	10	International relations.....	
Spanish, methods.....	4	Principles of political science.....	
Geography:		Municipal government.....	
Economics—social geography.....	23	State government.....	
Principles of geography.....	21	Political parties.....	
Geography of South America.....	14	Comparative government.....	
Climatology.....	13	Economics:	
Physiography and geology.....	13	Principles.....	
Geography of North America and United States.....	13	Economic history.....	
General methods.....	12	Labor problems.....	
Geography of Europe.....	11	Sociology:	
Geography of States.....	10	Principles, introduction to sociology.....	17
History:		General sociology.....	13
Ancient history.....	23	Rural sociology.....	10
European history.....	23	Social problems.....	9
History, methods.....	21	Family.....	8
American colonial history.....	16	Art:	
Recent American history.....	16	Art appreciation.....	20
Development of the American Nation.....	15	Craft work.....	20
English history.....	14	History of art.....	17
Latin-American history.....	12	Lettering.....	16
State history.....	12	Freehand drawing.....	15
Social and industrial history of the United States.....	10	Interior decorating.....	14
Mathematics:		Costume design.....	15
Analytic geometry.....	25	Design.....	12
College algebra.....	21	Advanced design.....	10

<sup>1</sup> Frequency not tabulated.

**INTERNATIONAL SURVEY OF THE EDUCATION OF TEACHERS**

**TABLE 39.—Rank-order frequency of representative courses in 29 teachers colleges—Continued**

Art—Continued.	Frequency	Home economics—Con.	Frequency
Painting.....	9	Home nursing.....	9
Teaching art.....	9	House furnishing and deco- ration.....	8
<b>Commerce:</b>		<b>Industrial arts:</b>	
Beginning accounting.....	10	Elementary woodwork.....	16
Beginning typing.....	16	Mechanical drawing.....	15
Commercial law, I.....	16	Cabinetmaking.....	14
Beginning shorthand.....	14	Architectural drawing.....	14
Business English.....	13	Modern drawing.....	12
Problems of commercial teach- ing.....	12	Mechanical drawing (2d).....	11
Business arithmetic.....	10	Cabinetmaking.....	10
Secretarial training and prac- tice.....	9	Progressive and administra- tive industrial arts.....	10
Commercial law, II.....	8	Vocational guidance.....	10
Auditing.....	8	Elementary printing.....	10
Cost accounting.....	8	Wood turning.....	9
Advance typing.....	6	Wood turning (2d).....	9
Speed shorthand and dicta- tion.....	5	Technical industrial arts.....	9
Intermédiaire typing.....	4	<b>Music:</b>	
Advanced accounting.....	4	Harmony and composition.....	83
Penmanship.....	4	History and appreciation.....	76
Accounting problems.....	3	Sight singing and ear training.....	76
Bank accounting.....	3	Instrumental class instruc- tion.....	55
Commercial geography.....	3	General methods.....	25
Junior business training.....	3	Orchestration.....	25
Methods of teaching.....		Kindergarten-primary meth- ods.....	22
Typing.....	3	High-school music.....	19
Bookkeeping.....	3	Intermediate grade methods.....	18
Shorthand.....	3	Conducting.....	18
Typing and shorthand.....	2	Form analysis.....	13
Bookkeeping.....	2	<b>Physical education—women:</b>	
Miscellaneous accounting.....	2	Health and hygiene.....	20
Filing.....	2	Folk dancing.....	19
Stenotyping.....	1	Tennis.....	17
Methods, filing.....	1	Basketball.....	16
<b>Home economics:</b>		Hockey.....	16
Clothing construction.....	18	Club and recreation activities.....	16
Foods and cooking.....	18	Clog and esthetic dancing.....	16
Household management.....	16	Theory plays and games.....	16
Textiles.....	15	Natural dancing.....	15
Costume design.....	14	Plays and games.....	15
Child care.....	14	Administration and organiza- tion, physical education.....	15
Nutrition.....	13	<b>Education:</b>	
Advanced dressmaking.....	13	History of education.....	24
Advanced cookery.....	12	Educational psychology.....	23
Dietetics.....	11	Tests and measurements.....	21
General methods.....	11	Child psychology.....	19
Institutional management.....	10		
Food marketing.....	10		

Education—Continued.	Frequency	Education—Continued.	Frequency
Junior high school (prin.).....	19	Principles and problems.....	15
Philosophy of education.....	18	Educational sociology.....	14
Psychology of adolescence.....	16	Rural education.....	14
Administration.....	16	General psychology.....	14
Secondary education.....	16	Curriculum.....	13
General survey.....	15	General method.....	12
Statistics.....	15		

## I. COURSE PRACTICES

(a) *Credits*.—In this sampling (2,290 courses, or 88 percent of the returns to form 14) the typical course was one term in length (all courses were transmuted into semester-hours). The median of medians for 17 subject fields was 2.79 semester-hours. The one extreme variation from this average was foreign language with an average of 7.34 semester-hours. Apparently this variation was due to requirements that a foreign language be pursued for at least a year in order for a student to obtain any credit at all.

Data dealing with sequence revealed little attention to continuity aside from the common requirement of a year of foreign language in order to obtain credit. Hence the typical unit was a term of study (3 or 4 quarter-hours or 2 or 3 semester-hours). The result for a student's program in a 4-year curriculum was more than 40 different courses, largely uncorrelated. It seems that a term, particularly under the quarter plan, is too brief a time for a student to digest a field of subject matter.

Continuity in organized course work for a year at a time with consideration given to sequence is seriously needed.

(b) *Size of class and frequency of offering*.—Evidence was presented earlier concerning the number and variety of course titles. Other evidence revealed that a large proportion of courses were elective. Hence there is an inevitable spread of student enrollments resulting in many small classes. This fact has serious financial implications, chiefly in the increase in per-student costs.

Of 2,290 courses (88 percent of these on which returns were made) the average size of class (average of the medians) was 23.1, with the middle 50 percent ( $Q_1$ – $Q_3$ ) ranging from 14.2 to 24.7. Table 40 shows the sizes by various curricula.

There are certain limitations in these data. First, the returns probably involve for the most part the large beginning junior college courses. Second, they represent the more frequently offered courses—in many subjects the 10 most common of 40 or 50 courses. Had data been collected on all courses in a curriculum it is probable that the figure for the class size would have been materially reduced. However, the medians and  $Q_1$  in several curricula revealed small classes to an extent that demands serious study of ways and means to increase

class size and reduce per-student costs. Since the median denotes that half of the classes were smaller than the figure indicated and  $Q_1$  that one fourth of the classes were smaller than the figure indicated, efforts to increase class size notably in physics, home economics, and industrial arts, are urgently needed.

TABLE 40.—Class size in representative courses in selected teachers colleges and normal schools<sup>1</sup>

Academic subject	Median	$Q_1$	$Q_3$	Range <sup>1</sup>	Special subjects	Median	$Q_1$	$Q_3$	Range
1	2	3	4	5	6	7	8	9	10
Biology	19	11	29	1-100	Art	26	18	37	1-100
Chemistry	18	9	28	1-100	Commerce	(7)	(7)	(7)	(7)
English	22	20	37	1-100	Home economics	18	10	30	1-75
Foreign language	19	11	27	1-100	Industrial arts	13	8	18	1-40
Geography	26	17	36	6-100	Music	30	13	35	1-100
History	30	22	44	6-100	Physical education	26	20	41	1-100
Mathematics	23	16	30	1-100	Education	31	22	43	1-100
Physics	10	7	24	1-75					
Political science	29	22	36	6-100					
Economics	28	19	38	6-100					
Sociology	30	24	40	6-100					

<sup>1</sup> There was an average of 60 courses offered per major, and this sampling involved the ranking 10 in frequency.

<sup>2</sup> On the check list 100 represented the high point.

<sup>3</sup> No data.

Data collected from the college staff inquiry revealed distinctions in class size as shown in table 41. It is significant that class size did not vary much by types of institutions. These data though differentiated according to types of institutions and college levels do not take into account the variation in size of the universities and colleges, teachers colleges and normal schools. Most of the representative courses are probably junior college in rank. Class size may be held to be an important phase of instructional offerings for both educational and financial reasons.

TABLE 41.—Class size as revealed in college staff inquiry

Type of institution	Junior college				Senior college			
	Number of cases	$Q_1$	Median	$Q_3$	Number of cases	$Q_1$	Median	$Q_3$
1	2	3	4	5	6	7	8	9
State university or land-grant college	2,536	21	26	36	2,707	11	17	26
State teachers college, or normal school	3,378	21	27	35	2,573	11	17	26
Denominational university or college	2,465	16	22	30	2,526	8	13	20
Private nondenominational university or college	349	18	24	31	1,514	9	15	24

<sup>1</sup> The teachers colleges studied intensively were for the most part large institutions.

Related to class size is the frequency of offering courses. Of 2,366 courses only 4.3 percent were reported as given in alternate years, and 93.1 percent were reported as offered during the academic year 1930-31, the year in which the investigation discussed in this chapter was made. Variations by subject departments were slight, though biology, foreign language, geography, and economics average 8 percent alternation.

Apparently the offerings in summer sessions are either reduced or changed in character; for on an average only 61 percent of the representative courses were given during the summer session. There was a greater tendency to offer general courses in music (83 percent) and industrial arts (76 percent) in the summer term. This reduction in the offering of the representative courses during the summer term is significant because the courses are the more general and frequent courses. Possibly more specialized work is offered in summer sessions.

Data were presented earlier to show a seemingly great overspecialization in number of curricula and courses offered. This part of overspecialization added to the practice of offering most courses every year and some courses several times a year<sup>1</sup> makes it essential to study possible economies in class organization. Certainly all concerned with the education of teachers should study economical and efficient methods of organizing detailed materials in a curriculum.

(c) *Required and elective courses.*—The data on the status of these representative courses under review showed that they were somewhat specialized in scope. Only 10 percent were reported as required of all students, even though they were the more frequent courses in the respective major fields of subject matter. It has been pointed out that students were generally required to take work in English, foreign language, science, and education. The fields shown to be predominantly high in required studies for all students were education, English, foreign language, and physical education. In some subject fields the returns indicated work related to the major, notably in biology, chemistry, geography, and sociology.

Forty-nine percent of the courses were required of majors alone and 44 percent were elective. There is slight evidence that many of these courses were required for State certification. This finding reflects a main conclusion of investigators of certification, namely, the lack of sufficiently specific qualitative requirements for certification.

(d) *Rank, prerequisites, and sequence.*—It is exceedingly difficult to determine the rank of a course. Apparently there are diverse practices in various institutions; a course offered for freshman in one institution may be offered as a senior college course in another college. In general, about one-fifth of 2,300 representative courses were taken only on the junior college level and about one-third on the senior col-

<sup>1</sup> 44 percent of these representative courses are offered in more than 1 section per year.

lege level. It is probable that few courses were restricted to any given class or level.

Analysis of catalogs of the courses revealed few courses which state prerequisites. Returns from 1,800 of the courses investigated showed about one third of the courses with no prerequisites indicated, one fourth with but one prerequisite, about one fifth with more than one prerequisite.

On an average 58.5 percent of the courses were checked as being included in a sequence and 41.5 percent as not belonging to a sequence. Most of the courses in sequences imply placement in a time schedule of 2 or 3 terms. Subject departments which reported that they are least affected by sequences were education, geography, physical education, and sociology; those most affected were English, and home economics.

## 2. AIMS OF REPRESENTATIVE COURSES

A check-list of 34 aims was included in the inquiry. Table 42 (required and elective courses) shows in summary fashion the objectives claimed for 2,367, or 88 percent, of the representative courses.

The rank order of outcomes claimed is shown in table 42:

TABLE 42.—Rank order of aims of representative courses in selected teachers colleges and normal schools

10 highest in rank		5 lowest in rank	
1	2	3	4
1. Acquire facts.....	83	1. Religious training.....	7
2. Knowledge of principles.....	80	2. Direct vocational training.....	15
3. Aims and problems of subject.....	71	3. Practice in teaching.....	17
4. Background for teaching purposes.....	68	4. Health.....	15
5. Appreciation—contemporary life.....	62	5. Training in research methods.....	18
6. Right methods of teaching study.....	59		
7. Appreciation of social heritages.....	58		
8. Mastery for culture's sake.....	53		
9. Breadth of view.....	56		
10. Pragmatic interests.....	48		

The typical ranking statements imply conventional objectives of knowledge, backgrounds, appreciation, culture, techniques of study, and interest. In contrast as a whole these courses did not seek to promote religion, health, research, or practice teaching.

In summary, the 9 aims ranked highest by subject-matter teachers and the 3 aims ranked lowest showed preponderant concern for facts, knowledge of principles, background, and an implied professional ideal—to make students familiar with the aims and problems of the subject. The spread to other aims is interesting. Habits and skills were of concern to art, chemistry, commerce, industrial arts, music, and physical education. Appreciation of the social heritage was

ranked high in art, history, physical education, and political science; and appreciation of the present was of concern seemingly to geography, home economics, mathematics, physical education, political science, economics, and sociology. Several claimed in high degree broadening values, but only 4 evaluated highly the promotion of a scientific attitude—biology, physics, economics, and sociology. Right methods of study ranked as important for education, English, geography, and history.

The remaining aims were not high in frequency. Apparently conventional phrases express the typical aims of college courses. The implications of a functional philosophy was little in evidence, nor were techniques of independent creative activity.

### 3. METHODS OF TEACHING AND TESTING

(a) *Assignment practices.*—Apparently about 25 pages of textbook material and 30 pages of reference material were assigned weekly for about 1,850 and 1,660 courses, respectively, reported for these types of activities. Variations in practice by departments were those that would be expected; there was least reading in chemistry, commerce, foreign language, home economics, mathematics, and music and most in education, English, geography, and history and the other social sciences.

Only about one third of the courses demanded term papers. These were most frequently required in education, geography, history, and sociology. Most courses (69.3 percent) seemingly utilized directions for reading. Syllabi, notebooks, dictated exercises, and mimeographed materials were used in about one fourth to one third of the courses. Inquiry concerning length of assignments revealed daily assignments used in about half of the 2,169 courses reported and a combination of weekly or large units in the remaining courses.

(b) *Classroom activity.*—To determine what goes on in the classroom is difficult inasmuch as various techniques are used in combination daily. The data in this study of representative courses agree with the findings of a study<sup>4</sup> made on the teaching of the social studies in teachers colleges. Combinations of the recitation, discussion and lecture techniques together with laboratory work projects, reports, quizzing, and testing were found. Frequencies found in this investigation showed the recitation, discussion, and lecture techniques and written testing predominate.

(c) *Professional treatment of subject matter.*—The philosophy of professional treatment of subject matter has previously been discussed,

<sup>4</sup> Political science is closely affiliated in teachers colleges with history; and hence the same instructors are often involved.

<sup>4</sup> Rugg, E. U., and Dearborn, N. H. *The Teaching of the Social Studies in Teachers Colleges and Normal Schools*, p. 153.

particularly the issue of special method versus continuous application of subject matter to the teaching needs of prospective teachers. As pointed out in chapter V, special method seems to be the prevailing procedure.

Attempts to discover whether each representative course was professionalized showed about 43 percent in which it was claimed that professional treatment of the subject matter was sought. It is evident from analysis of the responses that at most even the instructors who claimed to professionalize the courses under review were concerned chiefly to make the student aware of the aim of general problems of teaching the subjects. Table 43 shows the number and percentage of instructors reporting use of techniques of professionalized subject matter.

TABLE 43.—*Extent of professionalization in representative courses—selected teachers colleges and normal schools*

Number	Per- cent <sup>1</sup>	Aims checked	Number	Per- cent <sup>1</sup>	Aims checked
1	2	3	1	2	3
533	42.5	Aims of teaching.	295	18.8	Principles in making courses of study.
284	22.7	History of the subject.	209	46.7	Psychology of the subject.
411	32.4	Development of methods.	217	17.3	Specific difficulties in presenting materials.
319	25.5	Evaluation of textbooks.	185	14.8	Use of standard tests.
425	33.9	Available materials for teaching the subject.	189	15.1	Use of new-type examinations.
251	20.0	Professional literature relative to the subject.			

<sup>1</sup> Percentage based on 1,252 courses.

In reality but a small fraction of the 2,600 courses was seemingly professionalized, and for those for which these claims were made the request for concrete illustrations of techniques was not often fulfilled.

(d) *Textbooks, references, and topics of each course.*—An attempt was made to ascertain from textbook and reference materials checked and topics indicated the nature of the representative courses. Of course, the highest frequency for a course was rarely over 20 since few courses were found in all 29 institutions where catalogs were used as a source of determining representativeness. Even in such courses, however, little agreement was evident. Space forbids the inclusion of the long lists of tabulated textbooks, references, and topics of low frequency.

(e) *Testing.*—Evidence on frequency of written testing was requested in the inquiry. A range of from 1 to 10 tests per term was reported, but most departments reported an average of 3 or 4 tests. As might be expected, written tests were not as frequently employed in art and industrial arts as in other departments; on the other hand,

in biology, commercial education, geography, and mathematics more use was made of tests than in the average subject departments.

Most instructors used both the essay and new-type (true-false, completion, matching, best reason, and multiple-choice) tests, as the following data show: Essay, 62 percent; true-false, 48; completion, 42; multiple choice, 29; best reason, 15; matching, 17.

Biology and the social sciences utilized the essay examination most of all.

The tests are, according to 2,176 instructors of the representative courses, most used to:

	Percent	Particularly in—
Promote a basis for grades.....	69	Chemistry, industrial arts, and mathematics.
Check knowledge comprehensively..	68	Chemistry.
Verify growth in reasoning.....	53	Geography and political science.
Evaluate skills.....	48	Mathematics and music.

Grading seems to have been the primary purpose of testing. For 2,261 courses the following purposes were reported: Class participation, 74 percent; final examination, 66; series of tests, 61; general attitude, 60; impression of work, 48; written papers, 43; laboratory exercises, 35; oral quiz, 35; regular attendance, 31; term paper, 30; work on recitation, 27.

Class participation was largely stressed in the social sciences; the final examinations in history, political science, and foreign language, mathematics, physics, and economics gave greater consideration apparently to a series of tests. General impressions seemingly counted considerably in industrial arts, home economics, physical education, and political science. The recitation was stressed in foreign language and mathematics. Physical education retained an emphasis on attendance. Laboratory grades counted much in home economics and the sciences.

Testing was apparently a combination of oral and written examinations, laboratory exercise, and impressions of the instructor regarding the student. Grading appears to have been the ultimate reason for testing and there is most concern to check knowledge, which was shown to be the dominant aim of these representative courses.

(f) *Miscellaneous items*—(1) *Correspondence work*.—Few courses (250, or 16.4 percent, of 1,521 reported) were checked as being given in correspondence. This type of study was most frequent in mathematics, history, and the other social sciences. When given, they were usually given by the regular instructor and the same textbooks and syllabi were used as in residence courses in the same subjects. Other data from analysis of transcripts already reported also indicated that relatively slight use of extension correspondence work is now made.

(2) *Standardization of content of courses.*—For 2,235 courses (84 percent of the total number studied), a claim for standardization was made for half of the courses. This was most evident in political science, 80 percent; economics, 79; mathematics, 64; and commerce, 63. For nearly three-fifths of these courses the content was determined solely by the instructor: Political science, 87 percent; economics, 71; industrial arts, 71; and English, 70.

(3) *Duplication of material.*—In 2,092 courses few instructors reported unnecessary duplication. The following reveals the status of duplication of content as stated by instructors of these representative courses:

	Percent
Instructors who claim unnecessary duplication by other instructors.....	5.4
Instructors who deny unnecessary duplication.....	82.8
Instructors who believe that there is no duplication.....	66.9
Instructors who believe that others duplicate their courses but that they do not duplicate.....	13.5
Instructors who believe that they duplicate materials of other courses but that others duplicate their work.....	16.2

#### SUMMARY

From estimates of the number of courses analyzed in the 29 teachers colleges and normal schools the representative courses, comprising approximately one-fifth of all courses, were probably the more general courses.

The typical course was offered for one term every year—quarter or semester—and enrolled 23 students.

Knowledge of facts and principles, together with vague phrases such as background, appreciation, breadth of view, culture, and interest were the ranking composite aims expressed for the representative courses. Apart from an attempt to teach a student some facts, it is earnestly hoped that margins of subject matter will be built up, taste and interests cultivated, and the student's outlook broadened.

Approximately 25 pages of material in textbook or references, much varied in authorship, were assigned weekly. Oral directions for reading were usually given. There was not much evidence of use of syllabi, mimeographed materials, or notebooks. Term papers were required for about one-third of the courses.

Combinations of recitation, discussion, and lecture techniques and written examinations were the most evident classroom methods. There was slight evidence of professional treatment of subject matter in many courses; for the most part provision for this was probably made through a course or two in special method or in the materials and methods of the field.

Written tests appeared to be given about once a month. Both the essay type and new objective examinations were used. They were given chiefly as a basis of grading and to test knowledge. Grades

were based on a combination of factors such as class participation, attendance, tests, other activities, and impressions of the instructor regarding the student's work.

There was little correspondence work. Courses were standardized to some extent though for three-fifths of the courses the content was determined solely by the instructor. Few instructors reported unnecessary duplication.

In general, the content and methods of the more general representative courses were somewhat standardized. For all subject-matter departments most of the courses were composed of subject-matter content. Related materials and methods of teaching the subject matter on elementary or secondary levels were usually restricted to 1 or 2 special courses.

### PROPOSALS

1. Class size of representative courses:
  - (a) All classes should first be segregated into two types:
    - (1) Those which must be given every year.
    - (2) Those which may be given in alternate years. It is assumed that such provisions will take care in the main of all required work.
  - (b) Elective courses must next be studied in terms of such principles as:
    - (1) Value of the courses in providing for special interests of certain students.
    - (2) Special preparation of some students in a phase of another curriculum; e. g., courses in guidance for some majors in secondary administration.
    - (3) In each of these types of cases, economy demands that unless there is a fairly large enrollment each time the course is offered, it should be given in alternate years.
  - (c) Principles for determining class size in summer terms should vary, especially since these sessions increasingly become mediums for meeting more specific and peculiar needs of groups of students. The summer term should probably stress more specialized but advanced studies.
2. Instruction:
  - (a) (1) The aims of all courses should be specified in terms of knowledge (basic concepts and principles), skills, appreciations, and problem-solving values expected to result from the courses.
  - (2) Differentiation of objectives in courses providing for technical equipment in one's fields of specialization should be made in terms of aims sought in the courses and aims that the student should subsequently strive to realize in his own teaching.

- (3) Careful studies should be made to ascertain in what degree various aims are actually realized.
- (b) Variety of activity should be encouraged in each course, as, for example:
  - (1) The principle of extensive reading rather than intensive reading.
  - (2) Much written work.
  - (3) Problems to be solved.
  - (4) Things to be done in laboratories and shops.
- (c) There should be constant evaluation of the progress and growth of each student through various types of tests—written examinations, performance, and interpretation.
- (d) Much attention should be given to provision in increasing degree for independence of the student in attacking study.
- (e) Provision should be made for broader and larger courses in sequence to promote continuity and assure time on the part of the student to digest and apply the material studied.
- (f) Assignment on junior college level should probably be relatively more specific, indicating in more detail what is expected and how the objectives of the lesson are to be realized; increasingly on senior college level students should reveal ability to work more independently with long-unit assignments.

## CHAPTER X

### SUMMARY AND RECOMMENDATIONS

There are many theories and practices evident in the program of teacher education. Practically all procedures in the preparation of teachers are based on assumptions. Questions of policy are implied in the organization. Practices reflect the conclusions or generalizations of those responsible for the preparation of teachers. The basic meanings of these conclusions are epitomized in phrases or concepts of teacher education which are summarized in this chapter.

#### 1. FUNDAMENTAL CONCEPTS OF TEACHER EDUCATION

(a) *Articulation.*—Articulation implies relationship, synthesis, integration. There is an obvious need for relationships between subjects of study, between levels of instruction, and between agencies of teacher education.

But the education of teachers suffers from lack of articulation at a number of points. Too much concern has been given to analysis—breaking things up into parts on the assumption that the totality is too complex.

Some of the points at which articulation is lacking and where remedial measures should be taken are here suggested. First, there are the present-past relationships between levels of instruction. There is much evidence of duplication and overlapping in materials taught on the elementary level and on the high-school level, and in the subject matter of the high school and that of the junior college.

Second, curricula in a score or more of different subjects operate to prevent integration even in departments where obvious relationships are apparent. Similar poor relationships are apparent in duplication in various courses.

Third, the fact that students take during a 4-year program on an average of 40-50 different courses each but a term in length results too frequently in a "hodge podge" of scattered unrelated work.

Fourth, little relationship exists between the systematized subject-matter departments and life outside the school. Traditionally it has been assumed that a student should obtain on each level a birdseye view of the social heritage. Transfer has been expected. It has been hoped that when one has to do something or has to solve a problem he will use or apply the facts and skills taught in the various compartments called school subjects.

Why not reverse the order? First, one should discover what one has to do and what problems one is likely to encounter. Second, one should teach at least types of the more frequent, common, and difficult activities and problems. Third, one should use the race experiences imbedded in the school subjects as "service" materials.

## RECOMMENDATIONS

1. Previous work in high school should be taken into account through placement tests of competency. Results of classification tests given at entrance should lead to the adaptation of all phases of the professional curriculum for each individual student. It is conceivable that many students will be excused from certain course work now offered in teacher-preparing levels, since they have devoted the equivalent of 20-30 semester-hours to the subject in high school. It is also conceivable that revealed deficiencies may be clearly specified and remedial work with or without credit required.
2. In the interest of efficiency, study should be made of opportunities for integration between courses within a department and between departments.
3. Relationships between levels of work in college should be standardized in terms of the difficulty of learning and techniques of instruction.

The more general survey types of course work should probably be placed on the junior college level, and there should be in the teachers colleges some slight but continuous provision in sequence for professionalized studies and guided electives throughout the preservice period of preparation.

4. Closer relationships must be provided among the subject-matter departments directing majors, the activities of training schools and the public schools, and life itself.

There is of course no one way to promote this type of articulation. The greater use of the training schools on the part of subject-matter teachers for observation is essential. Where possible, demonstration and even responsible class teaching of a course by a college subject-matter teacher seems desirable.

All members of the faculty should be more closely in touch with public schools. Various procedures, devices, and agencies may be employed, such as visitation, keeping informed in educational research, in curriculum and method, learning, testing, administration, surveys, and by serving on State, regional, and National committees. Pertinent in this connection is Judd's plea that teachers colleges aggressively assume leadership in the improvement of public education:

My exhortation to this body is to abandon the traditions of the arts colleges, make a first-hand study of the needs of American schools, invent the curriculum materials which these schools need, prepare for these schools teachers who have a broad outlook and an acquaintance with the larger issues of present-day life, and cultivate the respectability which comes from creative leadership rather than from imitation.<sup>1</sup>

(b) *Certification*.—Probably the greatest single obstacle to making teaching a profession, comparable in quantitative standards to the professions of medicine and law, for example, is the present chaos in certification practices. In many States certificates to teach may still be obtained by means of examinations and even in States where they are issued on the basis of college study it is possible on the elementary level, with but few exceptions, for one to teach with less than a 4-year period of preservice college preparation. And it is further possible for many to teach in high school without this amount of preparation. Standards which govern entrance to teaching activities in the field reflect *minimum* regulations.

Furthermore, qualitative standards are decidedly lacking for most types of teachers in most States. There is little insistence, for example, that one must have specific course work in the fields of specialization one wishes to teach. The requirements with respect to courses in education and psychology, special method, and practice teaching are also inadequate.

According to Bachman,<sup>2</sup> certificates as a rule neither give the prospective teacher definite information, beyond the length of period of study, as to what must be done to prepare for a given position nor do they give the teacher-preparing agencies guidance data as to appropriate materials in a given curriculum by which to insure that prospective teachers are actually equipped for a given type of teaching position.

#### RECOMMENDATIONS

1. Certificates should be restricted to levels and fields of specialization comparable to trends in types of teaching activity.
2. The life certificate should be abolished and in its place indefinite certificates which provide for evidence of professional growth within stated periods should be substituted.
3. National organizations such as the Association of State Superintendents, the accrediting organizations, and the American Association of Teachers Colleges should investigate possibilities of establishing uniform titles of various certificates and licenses in order to promote better reciprocity in licenses between the various States.

<sup>1</sup> Judd, C. H. *Next Steps in Teacher Education*. Washington, D. C., American Association of Teachers Colleges, National Education Association, 1924. Yearbook, 1923, pp. 25-21.

<sup>2</sup> Bachman, F. P. *Present Certification Requirements and Implications for Teachers Colleges*. *Educational Administration and Supervision*, 19: 97-112, February 1923.

4. Certificates should be accompanied by credentials (not seen by the holder) revealing all essential personnel data, test data, ratings, health, character, evidences of aptitudes, interests, abilities, etc.
5. All certificates should be under the control of the State educational authorities.

(c) *Curriculum policies of teachers colleges.*—The transformation of normal schools into degree-granting institutions has resulted in expansions in curricula and courses which have led to conditions of extreme specialization. The result is a confusion of objectives, both for curricula and for courses. Policies of individual institutions are affected by their particular ambitions, often at the sacrifice of efficiency and economy.

The following recommendations reflect criteria which should be kept in mind in setting up curriculum policies for teacher education.

#### RECOMMENDATIONS

1. A liberal education should be considered as the ways and means by which one is freed to the point where he can direct himself. The liberal studies should represent the activities and problems of society and of the person being educated. In short, conventional interpretations of what is a liberal education must be greatly changed. The teacher should be so liberated intellectually that he can direct the learning of students at various levels of education and also be brought to the point of self-direction in the performance of those activities and in the attack on related problems which constitute the basis of education for all citizens.
2. The primary responsibility of teacher-preparing institutions is to educate teachers for the elementary and secondary schools. It follows, then, that programs of teacher education should be concerned with and should supplement what is taught in the better public schools on these levels. While teachers need to be *critical* of present practices, nevertheless, they need to be equipped to meet existing teaching conditions.
3. Presidents, deans, personnel officers, and department heads can and should do much to improve such factors as:
  - a. Standardization of catalog announcements:
    - (1) Uniform system of numbering courses.
    - (2) Titles descriptive of content.
    - (3) Descriptions based on actual enumeration of topics in detailed syllabi of courses submitted by instructors.
  - b. Class size—the desirability of alternating more courses, since students are now more continuously in residence than formerly.
  - c. Professional discussion, both by the faculty as a whole and by departments, on problems of teacher education such as:
    - (1) Articulation and synthesis:
      - (a) Between departments.

- (b) Between department and training schools.
  - (c) Between department and public schools.
  - (2) Philosophy and nature of elective work.
  - (3) Values of extracurricular activities.
  - (4) Philosophy and nature of general education.
  - (5) Instructional problems.
  - (6) Innovations in content and method in higher education.
  - (7) Function of library in the education of teachers.
  - (8) Majors and minors:
    - (a) Variations in terms of competency—needs in the field.
    - (b) Variations in terms of previous secondary work in field.
  - (9) Techniques of professionalizing subject matter:
    - (a) In special method courses.
    - (b) In subject-matter courses in major and minor fields.
  - (10) Selective principles in educating teachers.
  - (11) Standards, qualitative as well as quantitative.
  - (12) Application of supply and demand data.
- d. The formulation of objectives both for college curricula and courses and for the work of the teacher following graduation.
- e. Evaluation of the administration of student affairs.
4. Administrative leaders in the education of teachers should provide for constant appraisal of objectives.
5. a. As much as possible related subjects should be unified through departments. This is already evident in some institutions in departments or divisions of science, social science, and foreign language.
- b. Some departments should be designated as "service" subjects, either because their content is of value to majors in other departments (e.g., geography for elementary teachers) or because the materials afford opportunities for needed minors (e.g., foreign language for English majors) or because the subject has important contributions to make to the general education of students (e.g., sociology).
- c. In States where duplication of effort is evident, opportunities to secure majors in certain fields should be studied with a view to the allocation of curricula preparing for those fields to different State institutions.
6. Extreme differentiation should be minimized, particularly in fields of specialization which have obvious relationships, such as the social sciences and sciences, history and English, mathematics and science, home economics and art, and primary and intermediate education.

7. There should be some differentiation of curricula for urban and rural teaching. The character of community life in a given State should color the program of studies in the institutions preparing teachers in the State. For example, in a highly urbanized State, the program should stress urban adaptations. In a State predominantly rural the adjustments sought ought to result in applications to rural life. Insight is needed into the activities and problems of both urban and rural conditions.
8. The ratio of faculty to students should be scrutinized with a view to economies in size of staff. The tendency of faculty members to utilize most of their teaching load to offer specialized elective courses, particularly where past records indicate small enrollments, should be specially watched. Administrators who seriously study specialized course work and the facts of class size in many such courses in their institutions will readily perceive a source of financial economy. Restriction in the number of curricula to be offered, maximum limits on the amount of work offered in any department, and high prescription of courses in sequence should tend to reduce departmental costs.
9. Colleges should provide a preliminary period (freshman week) sufficiently long to ascertain by tests, interviews, and the like, the individual interests, abilities, and aptitudes of prospective students.
10. Systems of curricular guidance should be promoted, by which each student is systematically checked for all types of growth, thus providing for constant adjustment.
11. All welfare activities—housing, health, social training, clubs and organizations, personal counseling, employment, and the like—should be integrated under one personnel, preferably in close proximity to the other administrative offices, thus making it possible to guide and direct each student in the light of all available data concerning the student.
12. Personnel officers should appraise the potential placement of each student in order to guide and direct students in choice of their fields of specialization.
13. Each child in a rural area is as fully entitled to instruction at the hands of an educated, professionally prepared teacher as is a child in a city. Hence, rural curricula should be comparable in length and depth of content to those curricula organized with the city child in mind.
14. In view of the difficulties of determining where teachers will locate, but in recognition of the fact that first placements are most likely to be made in rural schools, each teacher should be informed concerning rural problems and equipped to make the necessary adaptations in techniques and in materials of instruction. Limited-certificate curricula from which the prospective teachers

- will probably be placed in a rural school should include materials in agriculture, nature study, rural sociology and economics, and special adaptations of the course sequences in health, civics, and the appreciational subjects.
15. Requirements for admission to teacher-preparing colleges should demand not merely accumulation of high-school units, but also a combination of other measures such as cumulative records of the intelligence, the interests, personal and social traits of the students, health, and for some curricula, special abilities. Persons found deficient in secondary work should be required to make up such deficiencies prior to student teaching.
  16. *a.* Requirements for graduation and for amounts of work in fields of specialization, professional areas, and general education might well vary in terms of established norms of proficiency demanded of preservice teachers in a given curriculum.  
*b.* Continuity in residence study is highly desirable.
  17. There should be studies of the materials most needed in libraries—books and periodicals—with provision for duplicates and distribution of periodicals to fit the needs of the institutional program.
  18. *a.* Progression in prescribed sequences of courses is essential.  
*b.* Distinctions in level and depth need to be made for junior and for senior college courses.  
*c.* Recognition of individual differences will call for adjustments of requirements for individual students.
  19. Some national agency should provide at least at intervals of 5 years for adequate studies of supply and demand.
  20. *a.* With the data available, each State should study the facts as they apply to its area, even entering into cooperative arrangements with adjoining States where transfer of teachers from State to State is common.  
*b.* Each State should, through detailed conference, endeavor to obtain cooperation of all teacher-preparing agencies, both public and private, in order to restrict new teachers in fields already overcrowded and should certificate only the number of teachers necessary according to the evidence of trends in teaching positions.  
*c.* Each State should endeavor to coordinate efforts, at least in State-supported institutions, so that the present tendency for all institutions to prepare all types of teachers can be minimized.
  21. *a.* It is essential that every teachers college have adequate training-school facilities for the types of teachers which are to be prepared.  
*b.* Teachers colleges should be certain that students obtain sufficient practice under conditions typical of those in schools in which they are likely to obtain their first teaching experience.

- c. Where it is possible to utilize public affiliated schools for actual practice, it is desirable to utilize a laboratory school for demonstration and experimentation.
22. Administrative attention should be given to all means by which close relationships between instructors in college departments and those in training schools can be promoted.
23. There should be constant opportunity for students to observe good teaching.
24. Education is a State function; thus the State has the right to set up standards of teacher education which all higher institutions, private as well as public, preparing teachers should meet. The following are suggestive of standards which might be set:
- a. A unit of organization by which singleness of purpose is promoted.
  - b. Selection of prospective teachers on a combination of criteria which take into account the broad specifications implied in teaching. Fitness to teach must take into account the knowledge, skills, and appreciations of fields of specialization, insight into the broad sociological and psychological phases of education, and the personality and character development of the teacher himself, resulting in a professional, social, and personal code of conduct with the "service" motive uppermost.
  - c. An organization of curricula which recognizes the duties and difficulties of teachers in each field for which teachers are prepared and which recognizes in addition the necessary social and individual culture of the teacher himself.
  - d. A faculty equipped with all requisite professional and scholarly equipment to guide and direct the preparation of teachers.
  - e. Laboratory facilities under the control of the teacher-preparing agency, such as model schools—for observation, demonstration, and practice; libraries; shops; gymnasiums; and museums.

(d) *Elections and prescriptions.*—In curricula designed for professional preparation of teachers it would appear that prescription should be the dominant principle of organization. Preparation for teaching is relatively specific. It is known that the beginning teacher will be called upon to teach several fields of subject matter. In addition he will need that background coming from study of general fields of knowledge for cultural and social-civic purposes. Furthermore, he must be equipped with the professional knowledge, techniques, and appreciations designed to equip him at least as a novice in teaching.

Yet there should be some provision for the education of the students as individuals. It may be assumed that each student has some interests and aptitudes which may profitably be guided even on the college level.

## RECOMMENDATIONS

1. All curricula for the education of teachers should be highly prescribed; at least 75 or 80 percent of all work should be organized in definite sequences, either for values to be obtained for essential common and general education or for values involved in guaranteeing mastery of one's chosen fields of specialization.
2. Prescription implies: (1) Progression in the sense that basic courses are taught first and that due attention is given to sequence and rank; and (2) increasing adaptation through "honors" work, and other mediums tending to produce individuals with proved capacity for independent and self-directed attack on further problems in the field.
3. A small proportion, probably not to exceed one-sixth or one-fifth, of a 4-year-program and one-tenth of a 2-year program should provide for elective work.
4. All elective work should be based upon the best personnel data to be obtained concerning the interests, abilities, and aptitudes of each student.
5. Electives should be used to:
  - a. Aid students to complete, through formal course work, areas in fields of specialization needed by them as individuals.
  - b. Promote individual culture of students; that is, give a student opportunity to obtain under expert guidance further mastery of a field of special interest to him, not in the major field.
6. Teacher education should give greater attention for its concomitant effects to that phase of culture that contributes to an individual's growth. This recommendation assumes that every student has some latent talent, and it is as much the task of schools and colleges to give it expert direction and guidance as it is their duty to impart socially valuable experiences.
7. Opportunities should be provided through a variety of activities (preferably in appropriate departments or divisions) for various talented groups, particularly in fields offering opportunity of creative expression, such as creative writing in English, creative music, and creative art.
  - (e) *Fields of specialization—the conventional quantitative "major" versus competency.*—Specialization on the assumption that scholarship can come only from detailed study of one field, is prevalent in institutions of higher education. Students choose a major field of specialization, in most curricula a minor, and in a few cases a second minor. Depth is sought, in the sense that a student takes a considerable proportion (20-25 percent) of his work in a major. For many students with related work in a minor field, between two-fifths and a half of a total preservice program may represent concentration in 1 or 2 fields. Depth is even more evident for some students,

due to lack of regulation concerning the maximum amount of work to be taken in a field of specialization and further due to failure in many cases to provide for study of all phases of the major. It is possible, for example, for a student to take practically all of an English major in literature and slight the oral and written composition activities.

This type of specialization is most evident among prospective secondary teachers. For elementary teachers specialization is largely a question of studies appropriate to a level. Curricula are generally differentiated in various combinations for the kindergarten and grades 1 to 8. In addition there is usually a general program for rural majors, assuming a possible need for teaching all elementary grades in a 1-room school.

The result of these conventions and existing practices of certification and teaching assignments is shown in studies which reveal that beginning teachers have as a rule less than an even chance to obtain a teaching assignment in their field of specialization.

It would appear that extreme specialization should be minimized, particularly in high school and on the undergraduate college level.

The traditional assumption of a prescribed amount in a major for each student ignores certain variables, notably previous study and proficiency and the fact that individuals vary widely in ability, aptitudes, interests, and even in mastery of knowledge and skills studied prior to entrance to a teacher-preparing institution.

#### RECOMMENDATIONS

1. Teacher-preparing institutions should consider primarily the needs of children rather than conventional values implied in specialized study.
2. Teacher-preparing agencies should assume leadership in promoting teaching organizations by which the materials to be taught can be arranged in combinations of subject matter naturally related.
3. Prospective secondary teachers should be equipped to teach three fields of subject matter.
4. Competency should be the criterion, not quantitative requirements in terms of courses taken.
5. Required work in any subject, if proficiency is used as a standard, will vary in amount and in the percentage of students taking courses in that subject.

(f) *Functions and objectives of teacher education.*—What are the distinctive elements which should characterize the institutional program for the preparation of teachers? The following list presents some of the elements which may be considered distinctive in a teacher-education program:

## TEACHER EDUCATION CURRICULA

1. A recognition that the entire process of educating teachers is a long one necessitating distinctions between the nature of preservice and inservice education.
2. A thorough but broad preparation in the fields and levels of specialization in which the students plan to teach, with these fields organized to meet teaching needs.
3. A progressive program involving careful recruiting, admission, and selection of potential teaching personalities, eliminating the unfit and finally recommending only those adequately prepared quantitatively and qualitatively.
4. A general education for marginal values and for its contribution on the college level to the civic-social and cultural education of the teacher—partly formal through survey-orientation sequences of courses and partly informal through a carefully planned educational organization of the extracurricular life of the school.
5. Provision for the professionalization of the fields of specialization for prospective elementary and secondary teachers through (1) orientation in education, biology, psychology, and sociology; (2) professionalization of all subject-matter courses or, apart from the needed content for fields of specialization, a separate sequence of courses dealing with the materials, techniques, aims, psychology of the field, testing, and the like; and (3) provision for adequate and carefully supervised observation, demonstration, and practice teaching in situations representative of good practices in the placement area served by the teacher-preparing institution.
6. A unity of purpose with whole-hearted interest and cooperation of all concerned with the education of teachers, designed to increase articulations and to promote an optimum program of professional education in the broad sense.

(g) *General education.*—American education above the elementary level of instruction is based on a theory of specialized differentiated curricula. It has been assumed that common needs should be taught early to preadolescent pupils, but above the elementary grades differentiation is demanded.

It is significant that differentiation has been based largely upon a vocational criterion, influenced perhaps by the prevalent feeling that education above the elementary grades should fit one for a job—to earn one's living.

No one would gainsay the tremendous contribution to knowledge that has come as a result of specialization. But can it be assumed, with the greatly increased amount of knowledge, that a student can encompass even any large part of it? Indeed, even in a major field of specialization one does not succeed.

## RECOMMENDATIONS

1. A considerable proportion, at least one-fourth of a total pattern, should consist of general, nonspecialized courses in the major fields of experience.
2. Where there are only minimum 3-year and 4-year preservice curricula, this work should probably be concentrated in the junior college.
3. General education should be based upon the social and individual needs of students. On one or both counts it would appear, particularly until secondary education is modified to meet more satisfactorily the needs for a general education, that the fields below should be represented:
  - a. Health and science.
  - b. Civic-social responsibilities and adjustments.
  - c. Recreatory and appreciation activities.
  - d. Home and family relations.
  - e. Philosophy and values.
4. Each field should provide for sufficient time and continuity (at least a sequence of a year's work in each) to insure adequate grasp of survey courses in the field.
5. The dominant criterion for selection of materials to be taught with general education expected as an outcome is understanding and appreciation of present-day modes of living and problems.
6. Synthesis and articulation are to be sought; hence orientation courses must make use of objective studies which reveal what are the more important problems to be solved in contemporary modes of living, and at the same time utilize any related materials from the present systematized subjects as secondary sources of service value.

An alternate plan would be: Specific orientation—survey courses in such fields as physical and mental hygiene, home and family relationships, consumer economics, government, human behavior, speech, comparative literature, and nature of world and man.

7. The organization of elementary education in most schools demands the room teacher who is called upon to teach a dozen or more subjects under present conditions. The very complexity of this task demands at least a minimum period of preservice preparation of 3 years, if not 4 years. There is thus in addition to general education for all prospective teachers for social reasons a need for broad but general education for elementary teachers in those fields which represent the several majors of the elementary teachers.

(h) *Instruction*.—A curriculum is a series of courses. From the curricula analyzed, it appears that almost all courses offered except in foreign language are one term in length.

There are scores of courses available for a student within each department; specialization is rampant. The dominant principle of curriculum-making seemingly is choice by the student of courses to be presented as a pattern for a given curriculum.

A sampling of the more frequently offered courses suggests the following conclusions:

- a. The objectives sought are apparently "faith" aims, summed in vague terms or phrases such as "knowledge", "background", "appreciation", and "culture."
- b. The typical activities imply use of textbooks and reference readings culminating in a combination of lecture, recitation, and discussion in the classroom.
- c. Written examinations, both the essay-type and new-type tests, are resorted to about once a month, primarily to check knowledge. Grading is based largely on a combination of factors such as attendance, class participation, tests, final examinations, and oral and written activities.
- d. There is slight evidence of professional treatment of subject matter. This principle is probably most utilized in separate courses known as special method.

In curricula for the education of teachers the courses should seemingly be based upon the needs of teaching and upon added collegiate preparation and culture for the teacher.

#### RECOMMENDATIONS

1. All classes should first be segregated into two types:
  - a. Those which must be given every year.
  - b. Those which may be given in alternate years.
2. Elective courses must next be studied in terms of whether or not they provide for the interests and aptitudes of certain students or prepare some students in a phase of another curriculum.
3. Principles for determining class size in summer terms should vary, particularly as these sessions increasingly become mediums for meeting more specific and peculiar needs of groups of students.
4. a. The aims of all courses should be specified and itemized in terms of knowledge (basic concepts and principles), skills, and appreciations, and problem-solving values expected to result from the course.
  - b. Differentiation of objectives in those courses providing for technical equipment in one's fields of specialization should be made in terms of aims sought in the course and aims that the

- student should subsequently strive to realize in his own teaching of the fields on a public-school level.
- c. Careful studies should be made to ascertain in what degree various aims are actually realized.
5. Variety of activity should be encouraged in each course; as for example,
    - a. The principle of extensive reading rather than intensive reading.
    - b. Much written work.
    - c. Problems to be solved.
    - d. Things to be done in laboratories and shops.
  6. There should be constant evaluation of the progress and growth of each student through various types of tests—written examinations, performance, interpretation, and the like.
  7. Much attention must be given to provision in increasing degree for independence of the student in attacking study.
  8. Provision should be made for broader and larger courses in sequence to promote continuity and provide time for the student to digest and apply the material studied.
  9. Assignments on junior college level should probably be relatively more specific, indicating in more detail what is expected and how to realize the objectives of the lesson; increasingly on the senior college level students should reveal ability to work much more independently with long unit assignments.

(i) *A differentiating criterion in teacher education—professionalization.*—What distinctions should be made in the courses designed to educate teachers? Assuming that a profession is a calling demanding long preparation, how can curricula for prospective teachers be made professional in character? Assuming further a relatively prolonged period with the resulting values—time and maturity—what differentiations are demanded for equipping prospective teachers with the materials to be taught, with techniques of teaching, and with concomitants or professional intangibles—the spirit of education in the wide sense?

In the first place, it must be kept in mind that professionalization is not to be conceived narrowly as merely giving a prospective teacher the "tricks" of the trade. In the second place, in contrast to what one proposes to teach (the what of teaching) it should be noted that the how, when, and why of teaching have not been studied by the student previous to entrance to a teachers college. In the third place, the what of teaching must be approached in an entirely different way. For prospective teachers each item of subject matter is not alone of value in promoting the culture of the teacher himself, it is also either directly or indirectly an item for the future "what to teach" for that student in preparation. Real insight and resulting

appreciation of the meaning of education and the school is the ultimate goal of professionalization.

Education is a social science, but like all fields that have been systematized, it is not a thing apart. Other specialized studies make their contribution, particularly physiology, biology, psychology, and sociology. Prospective teachers require insight into education as a social process, mastery of scientific principles, and practice in the technique of teaching.

#### RECOMMENDATIONS

1. Where possible, as in teachers colleges with teaching the sole institutional function, continuous study of professional activities is desirable throughout the preservice period of preparation. In the early years it can be slight, possibly one eighth to one fifth. It is probably better to have the student conscious continually of professional demands both in his junior and in his senior college studies than to postpone these and concentrate upon them on the senior college level.
2. As with fields of specialization, competency, not amount, is the real criterion. Obviously it should take longer to establish proficiency in materials and techniques not previously studied. Yet for many students the amount will be considerably less than what is now taken under a laissez-faire policy of curriculum organization.
3. Careful distinction must be made between professional studies that can be taught to preservice students and materials that are better postponed to inservice levels. The latter applies particularly to these materials better learned after some experience in the field.
4. The professional work should reflect all major categories of a teacher's work and service, such as management, learning, teaching, testing, records and reports, personal relations, professional and social contacts, and nonteaching activities in school and out.
5. (a) Serious study should be made of the materials to be continuously taught on preservice levels. The nature of the individual, behavior, learning, ability, interest, nature and nurture, growth, where and how education takes place, educative institutions and their operations—these are concepts around which preservice courses in education might profitably expand.  
(b) Rather than being provided with detailed knowledge and great skill, teachers on preservice levels need to be oriented to the field. Accepted principles with much concrete illustrative materials should be the core of preservice studies. There should be constant opportunity, even in the freshman year, to observe good teaching in the training school and in the public schools. Toward the end of the preparatory period,

prospective teachers should be given opportunities as student teachers to test and apply teaching principles in the classroom.

(c) Prospective teachers should be made critical of new proposals in organization, curriculum, and method. Various hypotheses and schools of opinion should be studied, not taught.

6. (a) The conventional courses in special method and the newer principles, sponsored in recent years by Bagley and others, of professional treatment of subject matter are hypotheses that require experimentation.

(b) In either case, in order to attain even the minimum essentials in professionalization, the prospective teacher needs to be made proficient in: (1) Knowledge of the place and function of his work in the entire program of education of youth; (2) setting up specific objectives of the fields of instruction in which he is planning to teach; (3) selection of materials of instruction (textbooks, supplementary reading, equipment); (4) methods of adapting assignments and teaching techniques; (5) psychology of teaching in fields of specialization to children of varying interests and abilities; (6) guiding the activities of pupils, both curricular and extracurricular; (7) use of and interpretation of various means of testing—standardized and nonstandardized, essay and objective in nature.

(c) Professionalization is not a narrow activity to be promoted alone by instructors in education. Where singleness of purpose, as in teachers colleges, permits, most of the teaching of all faculty members in courses specifically organized for fields of specialization can provide for at least enough illustrative applications to make prospective teachers conscious of teaching problems. In such cases of unified professional treatment of subject matter, the amount of special course work in education can be minimized. Under the other hypothesis, conventionally expressed in special method courses, provision should be made, first, for a more continuous sequence of separate professionalizing study, and, second, for a broadened scope of the studies along the line implied under 6(b) above.

7. The culminating level of professionalization is teaching, both as a student and possibly as an apprentice in the field. Again competency is the criterion.

The future of American education depends upon making teaching a real profession. The schools are predominantly what the teachers make them. On teachers colleges rests a great responsibility—a great opportunity.

# PART 3

## PART III: TEACHER-EDUCATION CURRICULA IN UNIVERSITIES, COLLEGES, AND JUNIOR COLLEGES<sup>1</sup>

### CHAPTER I

## TEACHER-EDUCATION AIMS OF UNIVERSITIES, COLLEGES, AND JUNIOR COLLEGES

### EMPHASIS ON EDUCATIONAL OBJECTIVES

One phase of the National Survey of the Education of Teachers was an effort to ascertain the relative emphasis which presidents of universities, colleges of liberal arts, junior colleges, and teachers colleges believe their institutions are giving to certain objectives of higher education involved in the education of teachers.<sup>2</sup> Twenty-five aims derived from various sources but more largely adapted from an earlier study by Koos and Crawford<sup>3</sup> were sent to all presidents of the institutions which had agreed to cooperate in the survey. They checked in appropriate columns (1) those aims which were directly and specifically provided for throughout the institution; (2) those aims directly and specifically provided for in some department; (3) those aims directly or incidentally provided for; and (4) those which were not considered. Three hundred and one presidents responded. Their composite reactions are presented in table 1 and a comparison with similar aims in teachers colleges may be made by studying figure 1 of appendix A. The statements of aims are classified under six general categories and are listed under each in rank order of their emphasis by all institutions. An arbitrary method of securing a single index to institutional emphasis was employed by multiplying the percentage reporting that the aim was directly and specifically provided for throughout the institution by 3, multiplying percentages reporting that the aim was directly and specifically provided for in some department by 2, multiplying the percentage reporting that the aim was indirectly or incidentally provided for by 1, and multiplying the percentage reporting that the aim was not considered by 0. The sum of these products supplied a rough, not an accurate, measure called the index to emphasis, which is listed in column 7 of table 1. Column 8 supplies the rank order of each aim in terms of all institutions together, while columns 8-11

<sup>1</sup> This part was prepared by Dr. W. E. Peik, associate professor of education, University of Minnesota, Minneapolis, and principal specialist in curriculum research.

<sup>2</sup> Dr. Earle U. Rugg of Colorado State Teachers College has made a parallel study of the aims and objectives of teachers colleges, which appear in full in part II.

<sup>3</sup> Koos, Leonard V. and Crawford, C. O. *College Aims Past and Present*. School and Society, 14: 400-500, Dec. 3, 1921.

give for comparison the rank orders of these aims for the universities, colleges, and junior colleges. This index has a minimum value of 0 when an aim is not considered by any institution, or a maximum value of 300 when an aim is specifically provided for throughout every institution. Positions between 0 and 300 on the scale indicate roughly the relative emphasis given. The positions of 53 universities (u), 191 colleges of liberal arts (c), and 57 junior colleges (j) are indicated on the scale for each aim in figure 1, appendix A.

TABLE 1.—The emphasis given to 25 aims of higher education by 301 universities, colleges, and junior colleges, 1930-31

Aim	Number voting	Percentage stating that aim is—				Weighted index of emphasis <sup>1</sup>	Rank order			
		Provided for throughout institution	Provided for in some departments	Incidentally provided for	Not considered		All	University	College	Junior college
1	2	3	4	5	6	7	8	9	10	11
<b>I. General education:</b>										
Liberal education—a general rather than a specialized education.....	287	75.3	17.8	5.9	1.0	267	2	2	2	1
Coordination of integration of major fields of knowledge.....	290	15.9	34.5	40.0	9.7	157	18	23	18	16.5
<b>H. Direct provisions for functional aims:</b>										
Training for physical efficiency and health throughout life.....	278	31.7	49.3	17.3	1.9	211	7.5	9	7.5	10
Religious training.....	275	42.5	36.2	16.0	11.3	204	9	20.5	5.5	12
Civic-social responsibility—duties of citizen—intelligent public opinion.....	288	18.4	52.8	27.4	1.4	188	11	15	13	5
Training for leadership—social rather than technical.....	276	27.9	29.3	39.9	2.9	182	13	18.5	12	11
Training for life needs—the more practical subjects.....	277	11.6	56.3	26.4	5.8	174	15	14	16	13
Training for home, life, parenthood, etc.....	276	9.1	46.0	35.1	9.8	154	19	18.5	19	18
Training for leisure.....	279	13.6	25.4	55.9	5.0	148	20	20.5	20	16.5
<b>III. Indirect provision for functional aims:</b>										
Conserving the accomplishments of mankind—race experience.....	282	26.6	29.1	29.4	14.9	167	17	16	15	21
Mental discipline, exercise of mind, transfer of training.....	275	15.6	23.6	56.4	24.4	130	22	5	25	21
<b>IV. Outcomes expected:</b>										
Knowledge of subject matter—particularly in a special field.....	285	79.3	19.3	.7	.7	277	1	1	1	2
Command of fundamental processes, oral and written speech, numbers.....	286	43.4	49.3	7.0	.3	236	3	3	4	3
Scholarly and scientific attitudes.....	285	48.1	34.7	15.4	1.8	229	4	4	3	9
Morality and character.....	282	46.7	26.2	25.2	2.9	215	5	17	5.5	4
Scientific techniques.....	281	11.0	66.2	16.0	6.8	181	14	7.5	14	19
Manners—acquaintance with established forms of etiquette.....	287	13.9	20.2	64.1	9.8	138	21	24	22	15
<b>V. Provision for individual values:</b>										
Attention to individual differences in interests, aptitudes, etc.....	283	31.8	36.4	30.4	1.4	199	10	12	10	8
Uncovering latent talents and providing for their culture.....	279	22.9	43.0	31.5	2.5	186	12	13	11	14
<b>VI. Professional objectives:</b>										
Education of teachers.....	284	22.5	70.1	4.9	2.5	212	6	10	7.5	6
Preprofessional training.....	286	25.5	63.6	7.7	3.1	211	7.5	6	9	7
Specific professional or technical training to promote occupational or vocational efficiency.....	280	13.9	57.1	16.4	12.6	172	16	7.5	17	20
Research (productive research by faculty).....	278	10.8	33.5	30.6	25.2	130	22	5	11	23
Education of graduates to master's degree level.....	220	18.6	20.5	5.0	55.9	102	24	5	24	24.5
Education of graduates to doctor's degree level.....	206	6.8	9.2	2.4	81.6	41	25	23	25	24.5

<sup>1</sup> The index of emphasis is a weighted sum of the product of the percentages (through tenths) in columns 3, 4, 5, and 6, multiplied by 3, 2, 1, and 0, respectively.

*The aims in rank order of emphasis.*—It is apparent from the ranks given in column 8 that intellectual objectives took first rank; the four most emphasized objectives were: Knowledge of subject matter particularly in a special field; a liberal education, command of the fundamental processes involved in the tool subjects, e.g., oral and written English, and the attainment of scholarly and scientific attitudes. All of these have paramount importance in the education of teachers. These four more or less intellectual aims were followed closely by the ethical aim, the desire to provide ethical and moral training in order to assure proper judgments in terms of high individual and social ideals. This objective ranked higher with the colleges of liberal arts (fifth) than with the universities (seventeenth) or with the teachers colleges (twelfth). The ethical aim is of importance in the education of teachers, who as a group should be characterized by superiority in ideals. Sixth in order was the specific provision for the education of teachers in the knowledge, skills, and traits involved in differentiated curricula for prospective teachers. The placing of teacher education among the more emphasized aims is not surprising if it is recalled that 45 percent of the graduates of liberal arts colleges, according to studies by Meyer<sup>4</sup> and Withers,<sup>5</sup> aim to be teachers and that more than 40 percent of 840,000 elementary and secondary teachers and a large majority of 80,000 instructors of higher education, according to data recently tabulated by the survey, are furnished by universities, colleges, and junior colleges. This objective ranked first with teachers colleges. The next in order of emphasis by colleges and universities related to the provision of preprofessional training for the learned professions and technical industries.

*Foremost objectives.*—The seven foremost objectives of these institutions may then be classified as having been intellectual, cultural, ethical, preprofessional, and professional so far as teaching is concerned. These were followed by the aim to provide for physical efficiency and health through life, and religious training.

All nine of the objectives so far listed may be included in a group for which so specific provision is made throughout the institution or in some departments that on the scale of emphasis<sup>6</sup> used in figure 1 (appendix) they rate above 200 for the universities, colleges, and junior colleges together.

<sup>4</sup> Meyer, Jacob G. *Small Colleges and Teacher Training*. Bloomington, Ill. Public School Publishing Co., 1928. 182 p.

<sup>5</sup> Withers, John W., chairman, committee on teacher training. *The Arts College as a Teacher-Training Institution*. *The Seventh Yearbook, 1929*, Department of Superintendence, pt. V, pp. 450-464.

The next 10 aims in order received not such outstanding emphasis but only strong to moderate emphasis. They were: Attention to individual differences in the interests, aptitudes, and abilities of students; civic-social responsibility; provision for the cultural development of prospective teachers by uncovering and guiding the latent talents of the students; training for social leadership; training in scientific techniques; training for the more practical life needs; specific or professional and technical training to promote occupational or vocational efficiency; conserving the race experience of mankind; coordination or integration of the major fields of knowledge and experience; and training for worthy home membership.

*Objectives receiving less emphasis.*—In this last group of 10 which received less emphasis than the first 9, the universities put enough emphasis upon provision to train students in scientific techniques and to provide specific professional and technical training to promote vocational efficiency as to place these among their own first 8 aims, while in junior colleges they stood in nineteenth and twentieth place, respectively. The latter aim limited to education, is also higher in teachers colleges, which usually rate much the same as do universities, colleges, and junior colleges on most aims. Otherwise the differences in rank among universities, colleges, and junior colleges were not outstanding.

*Provision for a liberal education.*—One significant observation should be made here; although the provision of a liberal education rated second among all objectives, the closely related aim of coordination and synthesis or integration of the major fields of knowledge and experience, such as: Health, economic life, citizenship, home and family relationships, and leisure, was given decidedly below average status largely because it was so often only incidentally provided for or not considered at all. The colleges and the junior colleges rated higher on it than did the universities.

The six aims which ranked lowest in direct emphasis were: Training for leisure throughout life; education in manners—the acquaintance with established forms of etiquette; mental discipline; productive research by faculty; the education of graduate students to the master's degree level; and the education of graduate students to the doctor's degree level.

*Aims not provided for.*—Aims rated low because they were not considered or because they were incidentally and not directly provided for, or for both reasons. To the "education of graduate students to master's degree level" and to "research", the universities gave fifth and eleventh place, respectively. Graduate work was not strongly stressed outside of the universities. Data collected for the Survey show that 98 percent of the universities and only 33 percent of the colleges reported the awarding of master's degrees, and that 44 percent

of the universities and only 5 percent of the colleges reported the awarding of doctor's degrees.

*Place of mental discipline.*—Mental discipline, which in the earlier study by Koos and Crawford<sup>6</sup> rated second in statements about college aims in literature printed from 1842 to 1876 and tied for first place in literature printed from 1909 to 1921, fell to third from last place among those here considered.

It is not possible to base sweeping generalizations upon this picture of the aims of higher institutions of learning. It does appear, however, that many important aims were directly provided for either throughout or in part by most institutions. The problem lies more with that smaller minority of schools which did not provide or which provided only incidentally that which most institutions provided for directly.

A number of observations, however, can be made. Subject-matter aims for the most part emerge at the top of the list. One may ask: Is not subject-matter mastery a means to the more functional aims even of higher education? Should not the functional aims have outranked them? The data do seem to indicate that provision for integration and synthesis of education, for taking care of individual differences, training for civic-social responsibility, for leadership, for home life, for leisure, and possibly training in manners are cultural and functional aims that were often not considered at all or were left to be incidental, therefore largely accidental, in the processes of acquiring a higher education.

*Emphasis upon social aims.*—Certain objectives of higher education which relate to the more effective functioning of the college graduate in society as it is today are being emphasized more and more, approaching in certain cases the emphasis of those objectives which relate to the formal mastery of facts and principles of subject matter. For teachers, the attainment of accurate scholarship must never be relinquished; it is their stock in trade. However, as guides of childhood, youth, and adolescence in their developmental stages, teachers must also be broad in point of view and interests, sensitive to the social, civic, and industrial needs and problems of today, accurate in their knowledge and active and stimulating in thought. For a program which includes all these, the colleges and universities have facilities and resources, and they show recent trends of curricular development which qualify them for continued participation in the education of teachers, even if it is not yet done to the entire satisfaction of all concerned. Never has more thought and experimentation been given to curriculum problems than is taking place now in the best of these institutions.

<sup>6</sup> Op. cit., p. 500.

## THE AIMS AND TEACHER EDUCATION

The education of teachers in universities, colleges, and junior colleges is never the sole function of these institutions as it is in the teachers college. The university is a community of colleges or schools, such as liberal arts, law, engineering, medicine, and agriculture, each of which has its primary purpose. In the university is also the school of education which functions usually, as do the other vocational units of the university, at both the undergraduate and the graduate levels. It prepares for most types of teaching, supervision, and administration in education just as other units of the university tend to bring together preparation for various types of specialization in other professions. Most of the 105 schools or colleges of education are located in universities and have a distinct professional purpose. It would appear that all preparation of teachers in universities should be assigned to these colleges and schools. A more complete exposition of the features and functions of schools and colleges of education will be presented later in the chapter.

The independent college of liberal arts, as its name implies, is emphasizing a general education of 4 years at the college level, typically providing in the last 2 years such specialization through the choice of majors or minors as serves the special interest and sometimes the future work of the student. The institution itself does not usually wish to function as a final finishing school for the vocations in which highly technical training is demanded. Where general background is most of what is needed, students actually can select certain advanced courses that in a sense do provide directly helpful background for entering vocations immediately upon graduation. This is done in business, in journalism, and frequently in music. It is done in teaching more extensively than in any other field. There are altogether about 485 institutions which have departments of education, most of which are in independent colleges of liberal arts and in junior colleges.

*Provision by liberal arts colleges for the education of teachers.*—The percentage of liberal arts college graduates who go into teaching, according to Meyer in the study already cited, rose from 18 percent in 1900-04 to 45 percent in 1925-29. The data of the survey show that typically the independent colleges of liberal arts are meeting minimum State requirements as set up at the undergraduate levels of teacher preparation. They have provided courses in education, teachers' courses in the teaching fields usually designated rather unfortunately as special methods courses, together with practice teaching and observation facilities—sometimes not well supervised, to be sure—almost as universally as do the teachers colleges, and the current trend is the rapid development of these facilities rather than the elimination of teacher education. A number have added special

schools of education just as some have schools of music. The college has thus been moving steadily though reluctantly toward the professional education concept. In the academic field it is equally evident from the data of this survey that the "teachers college has largely adopted the curriculum pattern of the liberal arts college for its 4-year curricula, the major differences in the whole pattern being a somewhat stronger, but not much stronger, emphasis upon education, a little less preparation in pure subject matter of the major and the larger use of campus training schools rather than local public-school situations for student teaching. It is likely also that all instructors of teachers colleges are more conscious of their participation in the education of teachers. It is very apparent that the two types of schools, so far as the education of 4-year high-school teachers is concerned, are moving toward each other rapidly.

*Attitudes of instructors.*—A wide study of the attitudes of academic instructors, special subject instructors, administrators, and education instructors in teachers colleges, as well as in liberal arts colleges and universities to be presented later, revealed that these respective groups in teachers colleges, liberal arts colleges, and universities think much the same on curriculum issues pertaining to the education of teachers. Similarities of attitude are much more characteristic than differences on most proposals based on issues. It would thus seem that since the education of teachers concerns all departments, they should cooperate rather than accentuate minor differences. Under these conditions of majority agreement of academic, special subject, administrative, and education groups on the issues, the tense feeling which exists here and there to the detriment of the education of teachers and the fear and unwillingness of each group to cooperate with the other should be eliminated and faculties should combine on the best possible program that the institution, working cooperatively throughout all departments, can provide. A number of institutions visited during this survey are examples of the fact that this can be done. In others the controversial issues seemed unnecessarily accentuated.

*Levels of teacher-education programs.*—One procedure for the liberal arts college seems advisable because of the apparent conflict of the general education objectives with the needed professional objectives in teacher education. Each institution should decide definitely and formally by administrative or faculty action whether or not it chooses to educate teachers in a vocational sense and what kinds of teachers it wishes to prepare, selecting definitely one of the following levels:

1. No effort is made to educate teachers in preparation for certification.
2. A partial but not a complete preparation of teachers for certification is undertaken during the undergraduate years. In this case only

certain general professional courses like general psychology, educational psychology, general principles of secondary education, introduction to education, or history of education might be offered during the third or fourth year. There is also definite provision to suit the content of special majors and of minors for teachers to the broader actual needs of 10 to 15 secondary teaching fields than to the narrower study majors which 25 to 50 departments provide. Specialization of prospective teachers in nonteaching fields is prevented. The students are sent to professional schools for teachers to complete their preparation during a fourth or fifth year. They should be sent to institutions which have provisions for articulation with such a plan. Sometimes cooperative relationships to take care of such students are being made as, for example, between Swarthmore College and the University of Pennsylvania.

3. Complete preparation of certain types of teachers for certification is attempted in a 4- or 5-year program. The necessary general and technical courses in education are provided. Proper broad majors and minors which take cognizance of the special needs of teachers are offered. Proper guidance is given. Adequate observation and practice-teaching facilities are offered. A strong education department is built up and given opportunity for effective leadership on curricular matters pertaining to the educational needs of teachers, and for contacts with public schools and State departments of education.

Any institution which formally undertakes to prepare teachers in part or entirely should enter into the program whole-heartedly. The serious opposition of those who believe in no other preparation for teaching than a general liberal education; the cold attitude of mere tolerance toward definite professional preparation for teaching by professional treatment of teaching fields, orientation on the problems of education, and student teaching; or the antagonism of a few, sometimes openly expressed to students, tend to prejudice students toward a profession they should learn to respect, and later causes employing school officials and State departments who hear of these attitudes to view critically the institutions from which they come. Happily the information given to the writer, who visited 30 colleges and universities, was that this sort of thing is disappearing. No type of institution possesses an exclusive option upon the education of teachers; and there is now no scientifically conclusive evidence in favor of any group as such. In the future, increasingly, the professional efficiency and the professional attitude of graduates will more and more decide where better-trained superintendents who demand competency will go to get their teachers and what institutions State departments will accredit for teacher preparation.

*Provisions needed for teacher education.*—The general and distinctive characteristics which should no doubt apply to any institution which educates teachers should be:

1. Ability to secure for the teacher a well-integrated, functional, general education in all major fields of human knowledge with special emphasis upon social studies and in them upon social, economic, and political problems of today; also upon literature, English, the fine arts, biology, the physical sciences, health, and recreation. Traditional requirements in foreign languages or in mathematics may in a changing civilization need less emphasis for the teacher who does not major or minor in them than social studies, fine arts, and the other subjects just mentioned, if there is no time for all during 4 years of preparation.
  2. Ability to give thorough but broad preparation in the subject matter of the fields in which students plan to teach.
  3. Provisions for adequate and carefully supervised practice teaching or demonstration in a situation characteristic of better practices in the region where he is likely to teach, where superior critic or supervising teachers are in charge and student teaching is supervised and adequate.
  4. Provision for the professional treatment of the fields of teaching. This may be done by several plans, for example:
    - (a) Professional treatment of some or all subject-matter courses as is now attempted in some teachers colleges.
    - (b) Professionalization of the teaching fields in separate courses concerned alike with content and method. This plan is probably best suited to colleges.
    - (c) Possibly a combination of (a) and (b) as is frequently found in special subjects like art, music, agriculture, home economics, and business education.
  5. Unity of purpose with whole-hearted cooperation of all departments concerned in the education of teachers to secure the optimum curriculum and to secure for the prospective teacher a sympathetic and whole-hearted professional attitude toward her work.
  6. A real program of selection involving careful admission of prospects to professional courses, the progressive elimination of the unfit, and final recommendation of the adequately qualified only. Those recommended must possess high qualifications: (1) in scholarship, (2) in teaching and social personality, and (3) in character; they should not be lacking in any one of these. Institutions cannot long avoid the responsibility of careful selection, elimination, and responsible recommendation.
  7. Organization of the content of major and minor fields of concentration to meet public-school teaching needs.
  8. Adequate orientation in education and educational psychology.
- These, it seems, are minimum essentials which the profession of teaching should ask of any institution whether it be teachers college,

normal school, university, college, or junior college. They are essentials which universities and colleges are in position to supply if they will.

#### DISTINCTIVE FUNCTIONS AND FEATURES OF THE INDEPENDENT SCHOOL OR COLLEGE OF EDUCATION

There are 105 units largely in universities but also in some colleges that are organized as independent schools or colleges of education. To these an inquiry form was sent to obtain more definite information regarding their status in order to secure an evaluation by them of the functions which they perform and to obtain from them reactions to possible advantages and disadvantages of the plan. Replies were received from 60 institutions in 28 States, although 8 of these arrived too late to be incorporated in the tabulations used for this section. It is believed that data based upon one half of these institutions should be representative.

Schools of education, like teachers colleges, were established relatively recently; in 1905 only 12 percent of them were in existence; the date of origin of the other 88 percent are distributed as follows by 5-year periods:

Period	Percent	Period	Percent	Period	Percent
1906-10.....	16	1916-20.....	20	1926-30.....	18
1911-15.....	6	1921-25.....	22	1931-34.....	6

Of these schools and colleges 73 percent reported practically independent status within their institutions, and 27 percent reported partial independence. In more than half of them differentiated undergraduate curricula for teachers begins with the freshman year; in 28 percent with the junior year; in 8 percent at the graduate level, while in 11 percent the level of college work at which students enroll in the school or college depends upon the particular field.

*Enrollment in schools of education.*—The median undergraduate and graduate campus enrollment for the academic years in these institutions was 525; for the summer sessions which were held in two thirds of the schools it was 550. The median graduate enrollment during the academic year was 112; for the 24 institutions reporting graduate work during the summer session, the median summer graduate enrollment was 206. Graduate work in education is more characteristic of this group of institutions than of any other type of school preparing teachers; and research activities have given them a position of leadership in matters pertaining to education.

Schools and colleges of education include the largest teacher-educating institutions in the United States. Five institutions of the 52 reported enrollments in education of more than 2,000. One of

these reported a total regular year and summer-session enrollment in education, excluding duplicates, of 15,247; another reported 11,858 students for the academic year alone; and 15 reported enrollments for the academic year alone of more than 1,000. The summer sessions would augment some of these enrollments considerably, but in so many cases the duplicates were not excluded that the totals for the years were not tabulated.

*Degrees granted.*—The median number of bachelor's degrees granted annually was 100; the median number of master's degrees granted annually in 31 schools reporting them was 24; and the median number of doctor's degrees granted annually in 20 schools reporting them was 5.

The names of degrees varied. Some schools offered more than one kind of degree for each level. Following is the percentage distribution of the most frequently used titles, based upon the schools reporting for each level:

<i>Undergraduate (52 schools)</i>	<i>Masters (31 schools)</i>	<i>Doctorate (20 schools)</i>
B.S. in Ed. . . . . 60	M.A. . . . . 42	Ph.D. . . . . 85
B.A. in Ed. . . . . 33	M.S. in Ed. . . . . 39	Ed. D. . . . . 50
B. Ed. . . . . 8	M.Ed. or Ed. M. . . . . 23	
	M.S. . . . . 16	

The movement to grant a new B.Ed., M.Ed., or Ed.M., and the D.Ed., or Ed.D. is comparatively recent and is probably still continuing. A considerable number were added last year. Institutions reporting the M.Ed. or Ed.M. degrees are: University of Buffalo, University of Southern California, University of Cincinnati, Harvard University, University of Oregon, Phillips University, University of Pittsburgh, and Rutgers University.

Institutions reporting the D.Ed. or Ed.D. are: University of Buffalo, University of California, University of Southern California, University of Cincinnati, Harvard University, Indiana University, University of Oregon, University of Pittsburgh, Rutgers University, Stanford University, and Temple University.

*Independence of schools of education.*—Not all students in the institutions where these independent schools of education are located who were preparing to teach were enrolled in the school or college of education. State laws and institutional regulations often permit qualification for certification to be obtained in other colleges of the institution. In only 24 percent of the institutions was preparation for teaching restricted to the school or college of education; in 76 percent prospective teachers were enrolled in other colleges as well. Dual or multiple plans of teacher education thus occur frequently within the same institution. However, a median of 71 percent of all undergraduate students who receive degrees with complete qualifications for certification were reported as enrolled in the schools of

education. Based upon the conferences with education, academic, and special subject instructors in the institutions visited the "atmosphere" for teacher education seemed to be best where only one plan of teacher preparation occurs. Where the enrollment of those preparing to teach is large enough to support a school of education with a dean in charge it is believed that the school of education plan is best. The dual plan in larger institutions was sometimes justified because it supplied a transition stage to a future period when it was hoped that all teacher education would be done in the school of education. Some institutions like Cornell or Harvard emphasize graduate work and prefer not to operate as schools of education at the undergraduate levels. At Harvard University minimum education curricula constitute 2 years of the graduate work. Under the new plan of the University of Chicago, the school of education is no longer a separate school; regarding the new arrangement, Dr. Charles H. Judd has written to the Survey staff as follows:

Our organization at the University of Chicago is that of a department of education in the division of the social sciences. We discontinued the College of Education in 1931 and we have even dropped the administrative title "School of Education" which was used for budgetary reasons until this year.

\* \* \* May I add the statement that it is the judgment of our department that the separation of education from the other departments of universities and colleges is harmful to the interests of education as a science and to the training of teachers? It is a matter of great regret to us that the pattern of separation of education into distinct schools and colleges has become common.

The extent of control exercised by schools of education is shown by some of their policies and practices. In four fifths of the cases the schools of education reported that they designate the specific fields that are acceptable as major or minor fields of concentration for teaching; in 20 percent of the cases they reported definitely that they do not. Of those that do not, 70 percent reported that they accepted major and minor sequences of the colleges of science, literature, and art, and other colleges, and 30 percent reported that they do so in certain fields only.

Eighty-six percent of the colleges and schools, with or without the cooperation of the subject departments, designated what courses, prescribed or elective, may constitute the content of majors or minors. It is essential, of course, that this be done with full-hearted cooperation of the members of the subject-matter departments that teach the courses and have much to contribute as specialists. This cooperation between educationists and other departments is apparently getting closer and more cordial, as it should, but there is much to be desired along these lines in some institutions. The fact that rather ideal situations of close cooperation have been achieved, shows that it can be done.

*Control over graduate requirements.*—The administration of graduate requirements was reported to be less under the direct control of schools of education, inasmuch as there is a widespread practice to enroll graduate students from all colleges in separate graduate schools which administer the requirements. However, 42 percent of the schools of education reported that they controlled and administered all the requirements for the graduate degrees of their students and 58 percent reported that they do not do so. Of those who did not control all requirements, however, 70 percent said they obtained the kind of requirements they would have if they controlled the entire administration of their graduate programs. This left a sixth of the institutions reporting and one third of those not controlling their graduate requirements independently as definitely dissatisfied with prevailing requirements for graduate work in education.

*Work required in education.*—The median number of semester-hours in education definitely required in schools of education of future teachers of academic high-school subjects, including general psychology only if classified as education, was 21 semester-hours, approximately one sixth of the entire curriculum. The middle 50 percent prescribed from 19 to 26 hours. The entire range extended from nothing lower than 15 hours to an extreme requirement in one case of 48 semester-hours, which is 16 hours beyond the next highest prescription.

General psychology, it was found, was not classified as education in four fifths of the schools. It was, however, made a prerequisite for education courses by 76 percent of those reporting.

The requirements in education courses as enforced by the schools of education exceeded the minimum requirements of State departments for certification by a median of 4 semester-hours with the middle 50 percent exceeding them by from 1 to 9 semester-hours. Sixteen reports stated that the prescriptions were identical with the requirements of their respective States and 1 institution exceeded it by as much as 24 hours. Evidently from one half to three fourths of these institutions which have control over their own requirements exceeded State requirements by nine or less credits. Since many of the schools with departments of education likewise exceed minimum State requirements, it cannot be said except in extraordinary cases that independent schools and colleges of education have stressed education courses unduly at the undergraduate level, although in several studies a tendency of State universities has been found to exceed prescriptions and of independent colleges to follow them rather closely.

*Purposes of independent schools of education.*—In order to ascertain which of the several purposes that have appeared as arguments for

independent schools of education in the literature were, in the opinion of the deans, being realized, the deans were asked (1) to check those of a list of submitted functions of a school of education which they performed; (2) then to check those which they believed they performed more effectively as a school than they would as a department; and (3) finally, to check those which they did not know whether they performed better as schools than they would as departments. The responses of 47 institutions are shown in table 2, in the rank order of the percentages of institutions believing the functions performed better by the school-of-education plan.

TABLE 2 — Rank order of functions of independent schools of education, 1932-33

Function in order of rank	Percent reporting—			
	Per- formed the function	Believed it was done better as an inde- pendent school	Did not know whether it was done better	Did not perform the function
1	2	3	4	5
1. Guidance of students preparing to be teachers in their entire program while enrolled in the school or college of education	99	96	2	2
2. Control of special methods, courses, and practice teaching	100	93	7	0
3. Control in general of most matters entering into the education of teachers	98	91	7	2
4.5 Closer association of students who are planning to teach	94	87	7	6
4.5 Promotion of professional spirit among students planning to teach	94	87	7	6
6. Promotion of feeling of unity among students planning to teach	94	81	13	6
7. Control of product through control of own standards	94	77	17	6
8. Offering of more specialized curricula of various types	79	75	4	21
9. Maintenance of educational societies, fraternities, sororities, clubs, etc	87	68	19	13
10. Use of off-campus public or private schools for practice teaching	85	68	19	15
11.5 Gathering, filing, and use of pertinent personnel data	89	64	25	11
11.5 Placement service	81	64	17	19
14.5 Selection of students through control of entrance requirements	58	41	17	42
14.5 Graduate work—master's degree level	58	41	17	42
14.5 Operation of own campus training school	47	40	7	53
16. Offering of courses in subject-matter fields or professionalized courses which would not be offered by the liberal arts college with a department of education	47	38	9	53

For the items as a whole the percentage of deans believing the functions were better performed in the school of education than they would have been performed as a department of education is  $4\frac{1}{2}$  times as large as the percentage not knowing whether they were better performed or not, although these ratios varied by items. In no case where the function was performed did anyone believe that it was not as well performed by a school-of-education plan as would have been possible under the department-of-education plan. One of the recent movements is to supply schools of education with well-equipped buildings

in which activities otherwise widely scattered about the campus are pulled together for better administration and closer association. This provision is still an urgent need in some institutions. In many may be found excellent provisions for experimentation and research at all levels of education, including to an increasing extent elementary education.

*Advantages of independent schools of education.*—The deans were asked also to express opinion as to which of the following possible advantages or disadvantages were the result of being an independent school of education compared with what might be true of a department of education. The items are listed in table 3 in approximate order of the percentages of 51 respondents which apparently show the advantage for the school-of-education plan.

TABLE 3.—Advantages of independent schools of education as reported by deans of such schools 1932-33, arranged in rank order

Item	Percent answering—		
	Yes	No	Did not know
	1	2	3
1. Improved prestige within the State	88	0	14
2. Better teacher preparing situation at undergraduate level	86	0	14
3. Improved prestige within the institution	86	2	12
4. Better instruction in education	82	4	14
5. A better situation at graduate level	76	2	22
6. Attraction of stronger men to faculty	75	0	25
7. Unnecessary duplication of courses	10	72	18
8. Improved prestige in Nation	69	0	31
9. Attraction of stronger students	69	2	29
10. Attraction of larger number of students who plan to teach	69	4	27
11. More liberal budget allowance	69	8	23
12. Better working relations of education with academic instructors	63	4	33
13. Decrease of interest of subject-matter faculties in teachers problems	10	59	31
14. More research	55	6	39
15. Increased divisional rivalry within the institution	41	20	39
16. Attraction of more men students	33	6	59

In every item except two the percentages favored the school or college plan. The two items about which the preponderant reaction was in the "did not know" or "unfavorable" column concern the increase of divisional rivalry within the institution which seems present in many institutions and the attraction of more men students by the plan, about which a majority register a "don't know" attitude.

It must, of course, be kept in mind that these reactions are by persons whose interest in the school or college idea is direct and personal by virtue of administrative positions; however, they constitute also the opinions of a group which is in daily contact with these matters and should have better knowledge about functions, advantages, and disadvantages than any other group that might be canvassed. The items to which they reacted are arguments usually put forth for the school-of-education plan. The order of reactions probably show

roughly those most realized and those least realized, since there were decided differences of composite group reactions which indicate thought and discrimination in arriving at the judgments registered. In the evaluation of the benefits or disadvantages of the school-of-education plan it is at present difficult to secure a group competent to judge and at the same time free from possible prejudice.

There is no doubt that in the opinion of the deans, teacher education is served best by the school- or college-of-education plan in universities and the larger colleges. One of the outstanding advantages of schools or departments of education in larger institutions is the tremendous instructional resources which are at their command.

## CHAPTER II

# CURRICULUM PRACTICES AND POLICIES IN THE EDUCATION OF TEACHERS

The curriculum is the heart of an institution's activity. To be effective it can never be fixed or static because the needs of individual students must be met and a changing dynamic society must be faithfully presented in it against the background of racial experience. The machinery that is set up for curricular administration must supply continual change, and modification is an important consideration. This chapter will present a number of the matters dealing largely with the administration of curricula. The source of information is the returns supplied by 301 presidents on Inquiry Form No. 12, which was sent to about 458 institutions that originally had agreed to cooperate. The tabulation and comparison of a considerable number of selected items by the split-group method indicated that the data are sufficiently reliable to present a fair picture of current practices. Replies in considerable quantity were received from small, average, and large institutions from every region of the United States but lack of space prevents the regional presentation and interpretation of data.

The practices to be described in this chapter deal with the kinds of teachers prepared and the length of curricula and agencies involved in curriculum and course-of-study making, number of courses offered, class size, restriction of off-level registration, correspondence and group class extension work, residence, diplomas or certificates awarded, sessions, financing instruction, extracurriculum activities, and curriculum research.

### KINDS OF TEACHERS PREPARED AND LENGTH OF CURRICULA

Institutions vary much in the positions for which they choose to educate teachers, and they vary also in the lengths of the curricula they offer for the preparation of teachers. Both the kinds of teacher and the lengths of the curricula depend upon the instructional resources of the institution, State requirements for certification, the educational policy of the institution, and—somewhat but apparently not as much as they should—on demand and supply. In table 4 is offered a composite picture of what is done by the 41 universities, 124 colleges, and 38 junior colleges which supplied reports about the kinds of teachers prepared and the length of the periods of preparation.

The average university offered a wider range of fields of preparation for teachers than did the average college; and the 4-year college of liberal arts offered a wider range of fields than did the average junior college. The average percentages of universities, colleges, and junior colleges preparing all kinds of teachers represented in the table were 70, 50, and 13 percent, respectively. There was not a striking difference—not more than 10 percent—between colleges and universities, however, in the percentages of them which prepared teachers of English, mathematics, history, French, biology, Latin, German, general foreign language, music, general elementary education, general science, intermediate grades, kindergarten-primary grades, rural schools, astronomy, nursery and preschool education, teachers of defectives, and teachers of school health, but in the other 29 fields the percentages of universities were from 13 to 47 percent greater than corresponding college percentages, while the percentages of colleges preparing teachers were greater than universities in the case of only two subjects, 12 percent in general social science and 21 percent in religion.

Junior colleges exceeded universities and colleges in the percentages preparing general elementary teachers, teachers for intermediate grades, kindergarten-primary teachers, and rural teachers; one half or more of them reported that they are engaged in the preparation of elementary teachers of some sort for whom 2 years of preparation is still standard preparation in most States.

The large number of fields in which universities outranked colleges were (1) in subjects that are more frequently departmentalized by universities, such as zoology, botany, physics, economics, sociology, or political science; (2) in specialized fields for which the demand is less but for which volume of enrollment warrants universities to offer such majors as Greek, geology, geography, or library science; and (3) in the more highly specialized fields in education such as the superintendency, supervisor of instruction, or industrial education. The question of the suitability of some of these majors as fields of specialization for teachers will be raised later in this report.

*Length of curricula.*—In all curricula except those for rural teachers the most characteristic period of teacher preparation in both colleges and universities was the undergraduate curriculum of 4 years. Ninety-eight percent of the universities and one third of the colleges reported the conferring of degrees at the master's degree level. Forty-four percent of the universities and 5 percent of the colleges reported the award of doctor's degrees. There is opportunity, then, for those who wish to continue their preparation at the graduate level in a more limited number of institutions, particularly if the aim is specialization in the major and related fields or in education.

TABLE 4.—Percentages of 203 cooperating institutions that reported the preparation of each kind of teacher and the percentages of institutions preparing them in curricula of specified lengths

Type of teacher	Percent preparing each type of teacher in—			Percent of the 203 institutions preparing teachers in curricula of—			Percent of 124 colleges and 41 universities preparing teachers in curricula of—							
	41 universities	124 colleges	38 junior colleges	Less than 1 year	1 year	2 years	3 years		4 years		5 years		7 years	
							Colleges	Universities	Colleges	Universities	Colleges	Universities	Colleges	Universities
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Academic:</b>														
English.....	95	96	18	0	0	3	2	0	92	93	11	63	1	29
Mathematics.....	95	93	13	0	0	3	7	0	84	93	7	61	2	27
History.....	95	93	11	0	0	3	2	0	89	83	7	66	1	32
Chemistry.....	95	93	5	0	0	2	4	0	87	93	7	66	2	34
Physics.....	95	73	3	0	0	2	3	2	67	93	7	61	2	24
Economics.....	93	69	8	0	0	3	2	2	65	78	5	54	0	29
French.....	88	92	11	0	0	2	2	0	87	85	7	56	0	20
Botany.....	88	53	3	0	0	2	4	2	50	73	3	59	0	27
German.....	81	77	3	0	0	2	1	0	69	78	4	46	0	17
Spanish.....	81	68	16	0	0	3	2	0	65	78	5	56	0	12
Zoology.....	81	55	5	0	0	2	2	0	52	71	3	59	0	27
Biology.....	78	85	3	0	0	2	4	0	78	77	7	42	2	22
Latin.....	78	80	3	0	0	1	1	0	77	86	7	49	1	20
Sociology.....	78	60	3	0	0	2	3	2	58	68	2	54	1	22
Political science.....	78	59	3	0	0	2	2	2	57	66	2	54	0	24
Psychology.....	68	38	0	0	0	0	2	2	36	49	4	54	1	29
Foreign language (general).....	63	72	8	0	0	2	2	0	99	63	3	34	0	15
Greek.....	61	40	0	0	0	0	2	0	37	61	4	39	1	15
Geology.....	59	31	0	0	0	1	0	0	30	54	3	49	1	20
Philosophy.....	54	32	0	0	0	0	2	2	30	49	3	39	1	20
General social science.....	46	58	3	0	0	1	2	0	55	42	4	15	0	5
General science.....	44	44	3	0	0	2	3	0	40	42	4	12	2	2
Geography.....	37	13	3	0	0	1	2	0	8	34	2	24	0	15
Other foreign language.....	32	19	3	0	0	1	0	0	17	29	2	15	0	5
Religion.....	20	41	3	0	0	2	2	0	40	17	3	10	1	2
Astronomy.....	15	10	0	0	0	0	0	0	9	15	2	17	0	12
<b>Special:</b>														
Home economics.....	61	41	11	0	0	4	1	0	37	61	4	29	1	24
Physical education:														
Women.....	61	29	10	0	0	3	2	2	24	59	2	12	0	0
Men.....	61	30	5	0	0	3	4	0	26	54	2	22	0	2
Commercial education.....	54	27	8	0	0	3	1	0	22	52	3	15	0	0
Art.....	51	27	3	0	0	2	2	0	49	49	3	10	0	0
Music.....	49	54	13	0	0	4	6	2	10	37	2	22	1	12
Agriculture.....	37	11	8	0	0	2	0	0	8	27	0	10	0	0
Industrial art.....	34	11	3	0	0	1	0	0	3	17	2	10	0	2
School librarian.....	29	12	5	0	2	2	0	0	2	5	2	17	0	7
Trades and industries education.....	20	4	5	0	0	1	0	0	2	5	2	17	0	7
Guidance.....	17	2	0	0	0	0	0	0	2	5	2	17	0	7
School health officers.....	10	2	0	0	0	0	0	0	2	5	2	17	0	7
<b>Education:</b>														
Secondary principal.....	76	29	5	0	2	0	1	0	25	37	9	78	2	24
General education.....	63	38	18	0	1	4	4	0	35	39	7	51	1	27
Superintendent.....	61	14	5	1	0	1	1	0	12	27	4	66	0	27
Elementary principal.....	59	18	16	1	1	3	2	0	13	29	3	56	0	20
Supervisor.....	51	17	3	0	1	0	0	0	15	22	6	49	0	22
Upper-grade elementary.....	40	27	32	0	2	14	2	2	16	37	1	29	0	12
Elementary education.....	44	32	50	1	4	18	4	0	11	32	1	29	0	12
Educational psychology.....	42	15	0	0	0	1	0	0	14	20	2	34	0	29
Intermediate education.....	32	39	53	1	4	20	4	0	13	27	0	12	0	5
Kindergarten-primary.....	27	23	50	0	3	19	2	2	11	24	2	12	0	2
Rural education.....	17	18	50	1	5	13	1	0	7	12	1	10	0	5
Defectives.....	12	2	0	0	0	1	0	0	2	7	0	10	0	5
Nursery-preschool.....	10	7	8	0	2	0	0	0	4	7	0	10	0	0

It is in the greater prevalence of 4-, 5-, and 7-year curricula that the universities and colleges maintain a considerable lead over the teachers college. (Compare with table 5, pt. II.) The entries of table 4 show that curricula of 3 years, 2 years, 1 year, and of less than 1 year are rather infrequent in colleges and universities. The outstanding exception occurs in elementary education, particularly rural education, in which institutions serve students with short-term curricula or with the needed courses for certification as an accommodation to meet State certification requirements. The possibility of State certification for teaching high-school subjects with short-term curricula for teaching in small schools has tempted some institutions to offer the shorter curricula. The responsibility for short-term curricula rests largely, therefore, with State departments.

The percentages of institutions which prepare teachers of each sort vary widely, from English at the top, included by 96 percent of the colleges, by 95 percent of the universities, and by 18 percent of the junior colleges, to school health work for which prospective teachers could find curricula in only 10 percent of the universities, in 2 percent of the colleges, and in none of the junior colleges reporting. The relative frequency with which each field of specialization is incorporated into the whole program of these institutions, and the general perspective of the situation for all subjects, can be obtained from table 4, which lists the fields of preparation in the order of the frequency of their offering by all cooperating institutions.

More than three fourths of the universities or colleges prepare teachers of English; mathematics, history, chemistry, French, biology, Latin, and German; in addition, teachers of physics, economics, botany, Spanish, sociology, political science, zoology, and secondary school principals are prepared by more than three fourths of the universities and by more than one half but not less than three fourths of the colleges. Additional fields in which more than one half of the colleges prepare teachers are general foreign languages, general social science, and music.

*Curricula for elementary teachers.*—The offering in elementary education in some institutions, as compared with the offering and facilities in other schools, should cause many institutions to discontinue short curricula in elementary education for which they are not equipped; or, as an alternative they should improve the facilities and the offering. State departments should see to it that the policy of certification of teachers on the basis of mere length of curricula, completed without the supervision of the general pattern of content included, does not result in poorly constituted curricula. University schools of education are expanding into the elementary field on the assumption that, like the teachers college, the university school or college of education with ample volume of enrollment should prepare for all types and

levels of positions and should have ample facilities for research in all fields. Some universities are doing outstanding work in elementary education and have assumed positions of leadership in research in this field.

#### AGENCIES INVOLVED IN CURRICULUM CONSTRUCTION

*Curriculum changes.*—Many agencies in many sorts of relationships are involved in building or modifying college curricula, according to the reports of 301 presidents. Table 5 gives for each agency the percentage of institutions in which it usually (*U*) or sometimes (*S*) is utilized. Except that the head of the department, the instructor, the curriculum committee, and the dean of the college may in a majority of institutions usually or sometimes propose a curriculum after it has been stimulated by interest or research and that the faculty of the college in 56 percent of the institutions usually or sometimes adopts a curriculum, there is no agency which operates very commonly in the stimulation, proposal, endorsement, or final adoption of these curricula. Instructors, department heads, departments as a group, curriculum committees, deans of colleges, faculties of the entire universities, the presidents, the trustees, the students, the alumni, the State departments, standardizing agencies, and other agencies may all participate in 1 or more of these 4 steps of curriculum-making.

In rank order of the percentages of institutions (numbers in parentheses) which usually or sometimes utilize each agency for stimulation, proposal, endorsement, and adoption of curricula, the more usual routines utilize one or the other of the following agencies in one fourth or more of the institutions as shown by the following percentages:

- STEP I.** Stimulation: Through interest of department head (46); dean of college (36); instructor (30); department as a group (28); or president (36); or the faculty of the college (24). Through research of curriculum committee (39); department head (34); dean of college (27); or the instructor (25).
- STEP II.** Proposal: By the department head (58); the curriculum committee (47); the dean of college (45); the president (28); or instructor (27).
- STEP III.** Endorsement or approval: By dean of college (38); curriculum or similar committee (35); or president (26).
- STEP IV.** Final adoption: By faculty of college (56).

A greater number of institutions reported stimulation of curriculum construction or changes because of interest than through the utilization of research.

Final adoption of a curriculum also was often vested in or practiced by the following, to the extent shown by the percentages indicated: President (20), trustees (14), the dean of the college (11), or a curriculum committee (9), and to a less extent by practically any one of the agencies previously mentioned. The influence of State departments of education and of standardizing agencies is represented by small percentages at every step. Altogether the heads of depart-

TABLE 8.—Agencies involved in course of study and curriculum making in 301 colleges, universities, and junior colleges

[U=usually; S=sometimes]

Agency involved	Percent of institutions utilizing each agency for— curriculum making in—									
	Step I: Stimulating by—				Step II		Step III		Step IV	
	Interest		Research		Proposal		Approval		Adoption	
	U	S	U	S	U	S	U	S	U	S
	1	2	3	4	5	6	7	8	9	10
Instructor.....	19	11	14	11	12	15	1	3	1	1
Department head.....	31	15	22	12	33	25	12	8	2	2
Department as a group.....	16	12	7	8	14	10	6	5	4	0
Curriculum committee.....	12	7	31	8	35	12	29	7	7	2
Dean of college.....	22	14	16	11	28	17	31	7	9	2
Faculty of college.....	13	11	8	5	11	7	25	7	53	3
Faculty of university.....	1	2	0	0	1	2	5	1	10	1
President.....	16	10	9	5	14	14	18	8	18	2
Trustees.....	1	1	0	0	1	1	3	1	10	4
Students.....	14	9	1	2	1	5	0	0	0	0
Alumni.....	1	3	0	0	1	2	0	0	0	0
State departments.....	6	7	3	3	5	7	3	5	2	2
Standardizing agencies.....	6	4	3	1	1	5	3	2	2	1
Critic teachers.....	1	4	0	4	0	3	0	0	0	0
Supervisors of practice teaching.....	5	3	2	4	4	6	2	1	0	0
Other agencies.....	3	1	2	3	4	1	2	1	1	0

Agency involved	Percent of institutions utilizing each agency for— course of study making in—									
	Step I: Stimulating by—				Step II		Step III		Step IV	
	Interest		Research		Proposal		Approval		Adoption	
	U	S	U	S	U	S	U	S	U	S
	12	13	14	15	16	17	18	19	20	21
Instructor.....	35	10	30	8	37	14	4	2	2	1
Department head.....	37	11	30	11	55	9	18	7	5	2
Department as a group.....	15	12	12	11	14	9	13	2	10	2
Curriculum committee.....	5	7	16	7	9	9	31	7	10	1
Dean of college.....	14	13	7	11	16	12	30	8	13	4
Faculty of college.....	5	5	3	3	6	4	15	5	46	4
Faculty of university.....	0	0	1	0	1	1	1	0	8	1
President.....	6	10	4	2	7	7	15	7	15	2
Trustees.....	0	1	0	0	1	1	7	0	4	0
Students.....	18	5	1	2	1	3	0	0	0	0
Alumni.....	1	2	0	0	1	2	0	0	0	0
State departments.....	6	5	1	4	2	3	1	2	0	1
Standardizing agencies.....	5	2	4	1	3	1	1	0	0	0
Critic teachers.....	0	3	0	1	1	2	0	0	0	0
Supervisors of practice teaching.....	4	4	2	2	5	3	1	0	0	0
Other agencies.....	3	1	2	3	1	1	2	0	0	0

ments, the curriculum committees, the deans of the colleges, and the whole faculty are the agencies most often involved in administering curriculum changes. The modal procedure is stimulation through research or interest of the department head or instructor in department, proposal by the department head, approval by the dean of the college, and final adoption by the faculty of the college. The influ-

ence of instructor and departmental head in the stimulation and proposal of curricula is strong. The curriculum committee, the dean of the college, and the faculty are not so active. This would make persons with special interests outstanding in the development of curricula and does not make faculty supervision universal.

*Course of study changes.*—In course of study changes, the influence of the instructor is larger than in curriculum-making. Again the routines involved are varied. The agencies usually or sometimes utilized by more than 25 percent of the institutions are:

- STEP I. Stimulation by interest of: The department head (48); an instructor (45); the dean of college (27); or the department as a group (27); or by research of: The department head (41); or of an instructor (38).
- STEP II. Proposal: By the department head (64); an instructor (51); or by the dean of the college (28).
- STEP III. Endorsement or approval: By the dean of the college (38); the curriculum committee (38); or the department head (25).
- STEP IV. Final adoption by: The faculty of the college (50).

The influence of State departments of education in stimulating courses (11), and of standardizing agencies (7) was also reported. The stimulation of courses of study through interest of an agency was reported much more often than stimulation through the research of some agency. In 23 percent of the institutions the interest of students is mentioned as an agency stimulating course changes. In general the head of a department and the instructors are the most active agencies in the construction of courses. The modal practice is stimulation or research of instructor or department head, proposal by department head or instructor, approval by curriculum committee or dean, and adoption by the faculty.

So far as the education of teachers is concerned, curricula should be the integrated and interrelated product of much faculty conference and faculty action rather than an aggregation of uncoordinated units presented without review by isolated instructors or departments. More and more, the units of an optimum curriculum should be based upon the evidence from careful research. One conclusion that can be drawn from table 5 is that group action and research are as yet not as extensive in curriculum-making as they might be in higher institutions. Closely related to the problem of curriculum and course-of-study making lies the problem of the number of courses offered by departments.

#### CURRICULUM PRACTICES

*Number of courses.*—The number of courses offered by higher institutions has increased very greatly during the last three decades. This reflects a natural outcome of an increase in enrollment which permits greater differentiation, a tendency for more specialized offerings, and a tremendously increased activity in research. Dr.

Judd recently reported the expansion of course offerings of 10 independent liberal arts colleges and of 10 liberal arts colleges in universities which included 8 of the 30 institutions intensively studied for this Survey.<sup>1</sup> The increase is as follows in terms of the average number of courses for each year:

Number and type of institutions	Number of courses in—				Percent of increase in 30 years
	1907	1910	1920	1930	
	1	2	3	4	5
10 independent liberal arts colleges	95	114	226	291	217
10 liberal arts colleges of universities	325	511	664	920	182

The actual number of courses now available in departments is not only large but exceedingly variable from institution to institution and from subject to subject. This is clearly evident from the data of table 6, which shows for representative departments of larger universities, colleges, and junior colleges the number of course titles and also the total number of credits offered. The average midscore of courses offered in these university, college, and junior-college departments is 28, 11, and 5, respectively. The average midscore of total credits of work offered is 72, 35, and 20, respectively. The variability is probably more significant than these central tendencies. More than the entire years of work could be taken in a single department of a certain university several times over. The number of credits offered in history, which is the extreme case, ranges from 66 to 570 with a midscore of 178 in the 14 universities.

The number of courses in departments by types of institutions may be taken as an index to the breadth or depth of offering. This is not strictly true because in the case of any institution the numbers reported are affected by variations in the number and type of departments, and the occurrence of actual duplication. An analysis of the number of courses offered in unselected departments represented by 2,674 instructors who reported from universities, colleges, and teachers colleges would show roughly the largest median number of courses per department are usually but not always in the case of certain departments found in State universities and land-grant colleges, followed most often by the State teachers college or normal schools, then by the private nondenominational colleges and universities, and then by the denominational university and college.

An advantage of the department or school of education in the large university or college lies in the wealth of available courses for specialization or follow-up of special interests.

<sup>1</sup> Judd, Charles Hubbard. *Recent Social Trends*. Vol. I, ch. VII. Education. New York, McGraw Hill Book Co., 1933. P. 323.

TABLE 6.—Number of course titles and total credits offered in representative subject fields in selected universities, colleges, and junior colleges<sup>1</sup>

Department	Total number of institutions studied	Number of course titles offered								
		Universities			Colleges			Junior colleges		
		Number	Range	Mid-score	Number	Range	Mid-score	Number	Range	Mid-score
1	2	3	4	5	6	7	8	9	10	11
Botany.....	62	28	2-48	23	27	1-22	8	7	1-8	8
Chemistry.....	35	14	19-68	43	14	8-35	14	7	1-10	6
Economics.....	39	16	10-85	40	15	8-35	17	8	2-21	8
English.....	37	14	41-123	56	14	13-55	22	9	2-18	6
French.....	37	14	9-50	22	14	7-36	13	9	2-9	5
History.....	37	14	14-155	49	14	9-35	13	9	2-10	5
Mathematics.....	37	14	11-93	37	14	8-22	14	9	4-9	5
Political science.....	52	18	4-35	14	26	2-11	7	8	1-4	2
Sociology.....	35	14	21-81	35	14	2-26	10	7	1-3	1
Art.....	33	13	10-58	39	12	2-34	13	8	1-15	10
Home economics.....	36	21	14-69	30	8	14-33	20	7	3-17	8
Industrial arts.....	43	25	3-48	13	11	1-20	3	7	2-24	4
Library science.....	29	18	1-132	13	11	1-12	3			
Music.....	40	19	3-50	14	14	4-45	11	7	6-16	10
Physical education.....	17	8	1-48	27	9	2-35	8			
Elementary education.....	50	24	1-96	14	44	1-17	8	12	2-15	6
Secondary education.....	14	14	18-74	30						
Supervision.....	30	24	1-34	5	6	1-5	1			
Average midscore.....				28			11			5

Department	Total number of institutions studied	Number of credits offered								
		Universities			Colleges			Junior colleges		
		Number	Range	Mid-score	Number	Range	Mid-score	Number	Range	Mid-score
1	2	3	4	5	6	7	8	9	10	
Botany.....	62	28	18-225+	55+	27	31-82+	20	7	5-23	12
Chemistry.....	35	14	56-155	101	14	21-73	46	7	3-40	20
Economics.....	39	16	18-218	98	15	28-78	51	8	10-65	18
English.....	37	14	150-324	221	14	60-271	89	9	12-47	25
French.....	37	14	42-163	83	14	29-89	53	9	12-28	22
History.....	37	14	66-870	178	14	25-141+	51	9	12-60	30
Mathematics.....	37	14	46-335	143	14	27-98	60	9	13-38	22
Political science.....	52	18	14-60	33	26	3-33	18	8	4-11	6
Sociology.....	35	14	46-482	126	14	6-81	29	7	3-11	6
Art.....	33	13	39-261	152	12	6-110	44	8	2-63	26
Home economics.....	36	21	43-178	78	8	43-105	50	7	7-47	16
Industrial arts.....	43	25	6-158	31	11	3-33	8	7	4-56	11
Library science.....	29	18	1-305	40	11	2-34	5			
Music.....	40	19	16-176	60	14	9-294	35	7	16-60	33
Physical education.....	17	8	1-67	53	9	2-48	24			
Elementary education.....	50	24	2-276+	37	14	3-52	16	12	6-35	19
Secondary education.....	14	14	43-281	69						
Supervision.....	30	24	1-176	9	6	1-14	3			
Average midscore.....				72			35			20

<sup>1</sup> This selection has resulted in a group of institutions representing those with large or largest enrollments.

*Numbers of courses and needs of individuals.*—For the education of elementary and secondary teachers the expansion of offerings may result in better adjustment to individual needs, better articulation with high schools but also in more “crazy-quilt patterns” of work

taken through misuse of elective privileges. If each added unit covers progressively narrower segments of a field, increased opportunities for unwise choices may lead to gaps in a teacher's preparation. The increase of courses and the addition of advanced courses point to the need of careful prescription to guarantee contacts with necessary subjects of the teaching field and guidance of the prospective teacher in the use of electives to cover the broad range of high-school or elementary teaching fields. Unrestricted opportunity to continue in a field of specialization with many open-course choices may also result in undue specialization at the expense of a teacher's general education.

In the larger institutions the volume of enrollment and the specialized interest of instructors and students should often permit the segregation of that 45 percent of students who are planning to teach into separate classes which are adapted to special teacher needs. For example, nature study is a course closely related to animal or plant biology and the physical sciences which elementary teachers need. Courses in children's or adolescent literature and book selection, social psychology adapted to school situations, appreciation courses in music, art, or fine arts in general, comparative literature for the English or language teacher, biography with special reference to educational implications, mythology—all these and others might be cited as courses meeting special teaching needs, which large institutions are often able to offer without increase of unit costs.

*Class size.*—Closely related to the problem of the number of courses offered is the problem of class size. Of 1,417 courses most often represented in the education of teachers in 24 selected institutions, for the most part relatively large institutions, the reported class enrollments were distributed as follows:

Item	Enrollment											
	1-5	6-10	11-15	16-20	21-25	26-30	31-40	41-50	51-60	61-70	71-100	100+
1	2	3	4	5	6	7	8	9	10	11	12	13
Number of classes.....	89	163	167	155	192	167	137	95	58	47	37	110
Percent of classes.....	6	12	12	11	14	12	10	7	4	3	3	8

Distribution: Range, 1-100+;  $Q_1$ , 14; median, 24.5;  $Q_3$ , 31.2

Of the 15 fields included in this report the median size of class ranged from 16 in chemistry or botany to 36 in elementary education. The median size of the other subject groups reported was as follows: Library science, 17; home economics, 20; French, art, and mathematics, each 21; agriculture, 23; supervision, 23; English, 25; sociology, 27; economics, 28; history, 29; and secondary education, 31. College classes with a median enrollment of 20 were consistently smaller than

university classes. The median junior-college class enrolled 27 students. The median university class enrolled 29 students or nearly 50 percent more than the median college class.

Since class size has not been proved to have significant bearing upon the quality of work done in higher education, there is no special qualitative curricular significance in the above figures. The implications are largely administrative and financial. Inasmuch as courses most representative of the education of teachers are more typically introductory or earlier sequence courses, it is quite likely that median enrollments for all classes in these institutions would show even smaller medians.

It was found that 92 percent of these classes were offered annually during the academic year. Only 8 percent were offered in alternate years, which may be a rather small proportion when 18 percent of the classes enroll 10 or fewer students and 30 percent of the classes enroll 15 students or fewer. These facts may point the way to possible economies in higher education, although, no doubt, the difficulties of curricular adjustment to needs of students would thereby be greatly increased. It must not be forgotten that specialized classes for research are often so advanced that enrollments of necessity will be small. This is indicated by the median size of class for the junior college, senior college, and graduate level in unselected institutions as given in table 7.

TABLE 7.—Median size of classes in different types of institutions and at different levels

Type of institution	Junior college level	Senior college level	Graduate level
1	2	3	4
State university or land-grant college.....	26	17	6
State women's college.....	24	16	8
State teachers college or normal school.....	27	17	10
Municipal-university or college.....	26	22	22
Municipal teachers college.....	25	21	17
Municipal junior college.....	26		
Denominational university or college.....	23	13	8
Private nondenominational university or college.....	24	15	13

Altogether, 54 percent of the university classes most typical of teacher preparation, 26 percent of the college classes, and 19 percent of the junior-college classes in selected institutions were offered during the summer session. It appears, then, that teachers in summer sessions do not have the breadth of offering to choose from that those have who attend during the academic year. Fifty-four percent of these courses were offered in a section scheduled only once during the academic year; 15 percent were offered in 2 sections; 6 percent in 3 sections; and 9 percent were offered in 4 or more sections.

*Restriction of off-level registration.*—Off-level registration refers to the practice of permitting students to register in courses above or below their classification as freshmen, sophomores, juniors, seniors, or more broadly as junior-college, senior-college, and graduate-level students.

The extent to which students are permitted to register above or below their class level is a problem which involves, in conflicting ways, standards, the increasing challenge of courses to student scholarship and initiative that should occur from level to level, the adjustment of college work to individual differences, and the problems of selection and elimination of students.

Practices are varied, although universities and colleges follow similar policies. In general, upward off-level enrollment of 2, 3, or 4 years from lower levels is permitted much less frequently than downward off-level enrollment from upper levels.

According to the report of 301 presidents of institutions, only 9 percent of the institutions permit freshmen to take junior courses, only 4 percent permit freshmen to take senior courses, and 26 percent permit sophomores to take graduate courses. In only two of the instances can freshman students take work at the graduate level. On the other hand in the case of downward off-level registration of 2 or more years, two-thirds of the institutions would enroll juniors in freshman classes and a like portion of them would enroll seniors in sophomore classes, while 56 percent permit seniors to take freshman courses and 6 percent even permit graduates to take freshman courses.

In many institutions hard lines are drawn between lower and upper divisions and between undergraduate and graduate levels. In one-half of the institutions, junior-college students may not normally receive credit in senior-college courses, but on the other hand, about two-thirds of the institutions reported that senior college students may take work in junior college classes.

No standard can be set except the standard of careful supervision of all off-level registration to promote individual student adjustment and institutional articulation, with the keeping of as high a percentage of higher-level student enrollment in higher-level courses as possible, the prevention of mediocre or poor students advancing too easily into upper-level courses where their presence would pull down the level of scholarship, and policy of flexible adjustments upward, particularly for the capable or especially well prepared. The optimum education of teachers would demand flexibility with careful supervision of every off-level registration that is allowed. Wide-open off-level registrations would indicate careless supervision and low standards.

*Extension.*—The value of extension work is an open question. A large number of institutions have no definite rulings about the amount that can be accredited toward a degree. Of the institutions which replied to an inquiry about policies, 65 percent stated that they accept no credit for extension class work toward the bachelor's degree, 61 percent similarly accept no credit earned by correspondence, and 44 percent accept no credit for any form of extension work. Of the institutions reporting acceptance of extension credits, the range extends from less than 10 semester-hours to no limit. The median practice of those institutions which accept extension credit is to allow for correspondence work not more than 18 semester-hours, for group extension work not more than 25 semester-hours, and for any type of extension work a total of not more than 25 semester-hours.

In general, universities are more liberal in their policies regarding the acceptance of extension classes than are liberal arts colleges or junior colleges. The total amount allowed is usually less than one-fourth of a student's undergraduate program.

*Work taken in extension classes.*—In the analysis of work actually taken by 1,771 students from 24 representative institutions a sampling of 360 cards was made to ascertain the proportion of all credits earned that were taken by correspondence and in group extension classes. The proportion was small, constituting only nine-tenths of 1 percent of the work of prospective academic and special subject teachers, respectively, and 5.5 percent of the work of those majoring in education. Persons completing work with majors in education no doubt are often 2-year normal school graduates who have attempted to shorten the time required to complete their preparation through the utilization of extension services offered them in the cities. About 40 percent more work was taken in group extension classes than by correspondence.

*Opinions concerning extension work.*—To a proposal to instructors in 24 institutions that there be limited acceptance of correspondence or extension credit in curricula for the education of teachers, various faculty groups responded as follows:

Faculty group	Number	Percent					Total, yes	Total, no
		Yes	Yes, with reservation	No, with reservation	No	Total, no		
	1	2	3	4	5	6	7	8
Academic instructors.....	259	67	24	6	3	91	0	
Special subject instructors.....	153	63	25	7	5	98	12	
Education instructors.....	143	54	35	10	1	89	11	

The median portion of the 125 undergraduate credits that was judged to be acceptable by those who would accept such work was as follows:

Faculty group	Number	Correspondence work		Group extension classes		Both types	
		Percent	Credits	Percent	Credits	Percent	Credits
1	2	3	4	5	6	7	8
Academic instructors.....	204	9	11	11	14	18	23
Special subject instructors.....	126	8	10	12	15	13	16
Education instructors.....	134	11	14	15	19	21	27

Instructors who were personally interviewed regarding their attitudes on extension work reflected the points of view just set forth. In general, those not favoring extension work believed that the quality of extension work was not equal to campus work due to lack of library and laboratory facilities and, in the case of correspondence work, to the absence of the instructor's personal contact to a reduced competition in classes in remote centers, and to the selection of less competent persons to do the extension teaching in case of group extension classes. The acceptance of extension credits toward graduate work was generally opposed. Those who strongly favored the use of extension work saw in it an extension of college and university service to many who cannot otherwise avail themselves of higher-education facilities.

It seems obvious that under present conditions the amount of credit for extension work allowed to teachers should be conditioned by the qualifications of the instructors giving the work, by the degree to which the quality of work covered is equal to that done on the campus, and by availability of ample library and laboratory (when needed) facilities. Where all conditions are favorable, policies toward the accreditation of extension work can be more liberal. For the present, faculties are skeptical and favor restriction.

*Diplomas and certificates.*—The kinds of degrees granted at the end of the fifth year of education for teaching by 285 institutions reporting were, in order of frequency, M.A., M.S., and M.Ed. About 3 percent of all institutions and 10 percent of the universities reporting have recently begun to grant the M.Ed. or Ed.M. degree at the end of the fifth year.

In order of frequency, various degrees awarded to teachers at the close of the 4-year curricula are B.A., B.S., Ph.B., and B.Ed. The last-named is awarded in only two institutions. The B.S. degree is awarded much more often in universities than it is in the colleges.

*Residence.*—Some work in residence is required by all institutions for graduation: Colleges and junior colleges tend to require longer residence periods than do the universities. One year or more is com-

monly prescribed, the percentages by types of institutions being as follows:

Type of institution	Number	Percent		
		One year	More than 1 year	Less than 1 year
	2	3	4	5
Universities.....	52	92	8	0
Colleges.....	172	77	20	3
Junior colleges.....	52	62	21	17
Total.....	276	78	17	5

*Sessions of the academic school year.*—The semester is by far the most typical session. It prevailed in 72 percent of the universities, in 84 percent of the liberal arts colleges, and in 83 percent of the junior colleges. Of the 277 institutions of all types which supplied information, 82 percent had semester sessions and 18 percent had quarter sessions.

Of the 227 institutions which used the semester plan, 81 percent had an 18-week term, 11 percent had a 17-week term, and 5 percent a 16-week term, 2 percent had extended the session to 19 weeks, and 1 percent had only 15 weeks. Among the 50 institutions which used the quarter plan, the typical session extended through 12 weeks; 92 percent reported that practice. However, 4 percent of the institutions used 11 weeks and 4 percent 10 weeks.

*Summer sessions.*—Nine-tenths of the universities, 58 percent of the colleges, and 54 percent of the junior colleges which reported offered summer schools.

The most frequent length of a summer session was 6 weeks—in 38 percent of the institutions. The next most frequently used period was 12 weeks—in 22 percent of the institutions. The 9-week plan was followed by 18 percent. The 6-, the 9-, or the 12-week plans were reported altogether in more than three-fourths of the institutions, but 10- and 8-week sessions were also prevalent. Few institutions used a 5- or 7-week summer session.

The length of the summer session has importance to teachers from two angles. The long sessions permit them to earn a larger number of credits per year toward their up-grading. On the other hand, the long session is often unendurable because the work is usually strenuous, institutions are often located where the climate is hot, and little time is left for rest or vacation purposes before or after the school year.

*Financing instruction.*—Certainly the instruction of teachers within institutions is affected by no other factors as significantly as the quality of library work and the quality of instruction given by the

faculty. For this reason institutions were asked to indicate the percentage of the total college budget for current expenses that is devoted to salaries of faculty and to the purchase of library books.

The median percentage of budget which went for faculty salaries in universities, colleges, and junior colleges was 56, 50, and 63, respectively, with the middle half of all these institutions spending from 43 to 63 percent for that purpose. The median salary budget ranged from 55 percent on the Pacific coast to 44 percent in the New England section.

The median proportion of budget given to the purchase of library books was 2.3 percent in a range which extended from 0 to more than 9 percent. It was surprising to note that in the year 1930-31, one-sixth of the 184 institutions that reported spent nothing for the purchase of library books.

*The library.*—One observation frequently made during the visits to institutional libraries was the large variation of the library resources available on matters of education. The library is universally regarded as one of the most important units of an institution of higher education. If excellent quarters are not already provided there are usually plans under way for early building. It is usually one of the outstanding buildings in the college or university group. Practically all the instructors said they were dependent upon the library for reference reading in their courses, and in general, the librarians reported increasing use of reference methods.

One criticism which may be made is that sometimes the selection in educational and psychological books and periodicals for teachers is limited, and often the reference books used should be replaced with the best of more recent publications. The universities usually have what would appear to be an adequate selection.

At Stephens College the new library policy provides for a direct over-night library service to dormitory and rooms. Each student will be encouraged to develop the habit of wide reading for recreation as well as reference work. The man chosen to have charge of this service was given a year to prepare plans and to equip himself for the service. This is a promising innovation.

It was found that sometimes teachers of academic subjects like English or history are not systematically prepared to supervise supplementary reference work in their teaching fields. This phase of the professionalization of their courses for teachers in secondary schools is not stressed but is left to develop incidentally. It is highly probable that the students of such teachers will not possess the necessary orientation and may, as secondary teachers, make the error of not using references at all or of using those which they had at the college level.

The wider use of the library is a promising feature of recent developments in higher education.

*Extracurricular activities.*—The percentages of 281 institutions making provisions for certain types of extracurricular activities are shown in table 22, volume V, part IV, 25 types. The most common form was dramatics and the least common was intercollegiate athletics for women. Provisions were most extensive in universities and least extensive in junior colleges, the average percentage of institutions providing each was universities 84, colleges 68, and junior colleges 49.

The significance of extracurricular activities for prospective teachers lies in its alleged development of personality, character, and readiness to assume direction of similar activities in future jobs particularly at the secondary level. Social poise and pleasing personalities are among the first qualifications to be demanded by employing superintendents, and these qualifications are likewise among the first to get recognition on the job. The importance of this development by those who are in close touch with education is reflected in the social and dormitory program of New College at Columbia University which is an experimental and demonstration college for the education of teachers. The whole faculty enters actively into the life of the students in a program which grows spontaneously with the student-faculty group. Students live in dormitory halls provided with dining rooms and lounges. At some meals the men and women eat together. The faculty, too, frequently dines with the students. An endeavor is made to foster a home atmosphere at dinner with encouragement to establish the habit of more leisurely dining. A summer camp in North Carolina, week-end trips into the country, exchange of students with other institutions are features of the program designed wholly or in part to develop the students' social life.

Excellent new dormitory facilities with beautiful appointments and fine services have recently been inaugurated at many institutions such as Grinnell, Carleton, Pomona, Harvard, Minnesota; in others they have long been established. The deans of men and women usually emphasize the fact that their purpose is to promote character and personality education and to provide a wholesome social life. Both can be promoted best in a college environment by the extracurricular program.

In this connection it should be emphasized that actual experience with the extracurricular activities of the training school in the off-campus schools for practice teaching by prospective teachers is a valuable feature of student teaching. Such experience was systematically provided in few institutions visited but the need for it was often stressed by placement officers. This feature of teacher education needs much more emphasis. Academic courses about extracurricular

activities may be helpful but actual experience at college and with students at lower levels will probably be of more avail.

Particularly suggestive is the policy at the University of California where all high-school teachers are given actual practice in extra-curricular activities at the secondary level in the laboratory schools. It is a part of the education just as practice teaching is in other schools.

Placement officers stated again and again that general personality and ability to assist in extracurricular activities are two qualifications stressed more often than any other by employing superintendents.

The opinion of presidents regarding the extent of student participation in specified activities in terms of the proportion of the total numbers who ought to participate gave varying amounts. In summary it appeared that 29 percent believed more than three-eighths of those who should participate actually did participate, that 30 percent believed that from one-fourth to three-fourths of those who should participate actually did so, while 41 percent of the presidents estimated that less than one-fourth of those who should, actually did take part. The 5 ranking activities among 25 in point of general participation were general association, class organization, dances and parties, intramural athletics for men, and intramural athletics for women. The five lowest activities in point of the proportion participating were debate, intercollegiate athletics for women, orchestra, dramatics, magazine, and band. The relative position of the others are shown in table 22, volume V, part IV.

The types of activities ranked in the following order by college presidents for their estimated value to prospective teachers:

- |                                  |  |
|----------------------------------|--|
| 1. Religious organizations.      | 14. Honorary societies.                |
| 2. Intramural athletics (men).   | 15. Literary societies.                |
| 3. Intramural athletics (women). | 16. Subject-matter clubs.              |
| 4. Assemblies.                   | 17. General association.               |
| 5. Dramatics.                    | 18. Dances, parties.                   |
| 6. Paper.                        | 19. Annual.                            |
| 7. Debate.                       | 20. Intercollegiate athletics (men).   |
| 8. Student council.              | 21. Sororities.                        |
| 9. Chorus.                       | 22. Fraternities.                      |
| 10. Glee clubs.                  | 23. Social clubs.                      |
| 11. Magazine.                    | 24. Class organizations.               |
| 12. Band.                        | 25. Intercollegiate athletics (women). |
| 13. Orchestra.                   |  |

*Curriculum research in higher education.*—Research in higher education has been largely a quest for facts, principles, processes, and techniques to extend knowledge. Such research is particularly extensive in the universities and is a legitimate objective of these institutions. However, a related type of research which seeks to determine the optimum content of academic courses and curricula with reference to hypothetical criteria of what is most worth while

for the education of teachers is not frequently found. Course content, course prescriptions, curriculum practices tend to follow past and current practices in a general way but are the selections of instructors without much other thought too often than its contribution to a mastery of facts and principles which are subjectively thought to be necessary. The setting up of criteria for the selection of content that will contribute to a general education and the determination of such content through research has not made much progress. A good example of such research was found a feature of the curriculum studies being made at Stephens College. A faculty conference precedes the opening of school. Completed research is presented and new curriculum projects are started. Dr. W. W. Charters is present as adviser and has conferences with members of the faculty individually. Three faculty conferences are held with Dr. Charters during the year. The reports of the completed studies are bound and made available to the faculty through the bureau of research. The following projects are typical: Women's education, a functional study, citizenship, expressional English, clothing management, health, scientific eating, mental hygiene, 10 college ideals, orientation courses, and survey units. The completion of each study may require several years but as soon as results are obtained they are published and introduced into the curriculum. A functional attitude rather than an academic attitude toward the curriculum was very apparent in interviews held with the faculty members at the time the college was visited.

Important curriculum research was found to be inaugurated at the University of Chicago in connection with the curriculum under the new plan; at Ohio State University where an extensive program of curriculum research to extend through a period of years has been set up in the school of education and in departments of the science, literature and the arts college; at New College of Teachers College, Columbia University where an undergraduate college has been started in order to experiment with the education of teachers and to provide practice teaching in higher education; at the University of Minnesota where a new type of junior college is being inaugurated with attendant research, and where duplication in education is being ascertained preparatory to a reorganization of courses, and where qualifying examinations in the teaching field are being devised; at Joliet Junior College where studies in economy of higher education through elimination of parallel high school and junior college courses are being carried on; and at Teachers College, Columbia University, which has for a long time been a center for the stimulation of all sorts of curriculum research.

PROPOSALS

The considerations of this chapter would lead to the following proposals:

1. Limited use of extension work until its quality is ascertained to be equal to that of regular campus work with its libraries and trained personnel.
2. Wider participation of the whole college or of representatives in matters pertaining to the curriculum and courses of study.
3. Increase of class size. Possibly greater use of the plan of alternating courses.
4. Close supervision of and provisions for off-level registration to adapt instruction to individual differences without sacrifice of standards.
5. Greater emphasis upon extracurricular activities of the teacher.

## CHAPTER III

# THE GENERAL CURRICULUM PATTERNS

### PROBLEMS AND ISSUES

The curriculum is the heart of the problem of the education of teachers because the pattern set up expresses the aims and objectives of an institution with respect to the teachers whom it wishes to graduate. Regarding this pattern there are many issues and problems.

In broad perspective, the education of a teacher by a liberal arts college or university may be thought of as consisting of three closely related parts:

1. The general background of culture.
2. Special subject-matter preparation in contemplated teaching fields.
3. Specific professional training—
  - (a) In education.
  - (b) In the teaching fields.

From this more or less typical pattern of practice, the teacher is expected to emerge as an educated person with reasonable initial proficiency in teaching the first class, as master of his subject matter, with power of growth as a teacher, the possessor of a general culture that will supply ample teaching reserve, mark him as a member of a learned profession, and make him sensitive to contemporary problems of today, both as a citizen and as a teacher. This is the ideal. However, in its realization there are many issues and unsolved problems. These relate to such fundamental matters as the amount of differentiation, if any, that is necessary for teachers of different levels or subjects, the extent of specialization and the proper balance between specialized fields that is desirable or practicable, the proper balance between specialization and general education, the elements that should enter into general cultural education, whether or not the pattern of a teacher's education should differ much from that of the future citizen interested only in acquiring a general college education, the amount and nature of the work in professional courses in education, and whether or not the professional treatment of content should be taught in separate courses or incorporated into most or all subject-matter courses.

*Involved nature of problems.*—Each of such major problems involves a group of interrelated major and minor issues with complex ramifications. The problem of the proper content of the principal teaching field, for example, is complicated by the amount of specialization that

is possible versus the modicum of penetration that is really necessary; the practical necessity of secondary teachers' instructing in 2 and 3 broad fields, rather than in only 1 specialized subject; the breadth of high-school teaching fields versus the narrower and specialized nature of college and university departments; the problem of economy with reference to close articulation of higher education with secondary preparation; the kinds of courses that should constitute the major sequence; whether prescription or election should predominate in the major; whether or not there should be any major at all for the elementary teacher or for the junior high school teacher or whether each is best served with many broad contacts; whether or not the extent of preparation needed in various fields can be adequately defined for every individual with a stated uniform number of required hours; whether or not traditional major requirements are best or whether a fundamental reorganization is necessary for an alleged new age and a rapidly changing society in which new backgrounds may have to be substituted for outworn old ones; whether or not some fields of learning are not being overemphasized in secondary education with a need for recasting the secondary pattern as well. Thus each one of the major problems, and in turn many of the minor problems, constitute an array of challenging issues. None of these is trivial because the education of the teacher is not a trivial matter. He is one of the representatives of a complex and changing society, and is engaged in an important social work for approximately one-fourth of the whole population at any time, in which his activity with the youth of today should color the events of tomorrow by giving a desirable trend to social change.

It is the purpose of this chapter and succeeding chapters to present the pattern of practice, to discuss the issues involved, and, where possible, to make proposals that seem justified by the Survey findings.

Curriculum patterns may be studied from two closely related angles, the pattern of prescription by the institutions and the pattern of work actually completed by students. The source of data for the first are institutional catalogs; the source of data for the latter are transcripts of students' record cards. Both have been utilized in the Survey. In addition, the reactions of instructors in junior colleges, colleges, and universities, to curriculum issues, will be introduced.

#### THE GENERAL PATTERN OF PRESCRIBED CURRICULA

*Catalogs of selected institutions.*—For a perspective of what preparation is required of teachers, bulletins setting forth the practices of 29 selected universities and 28 colleges were studied. To secure institutions that could serve as representatives of the best of their type and that would also be at least representative or outstanding in the education of teachers, selection was made by a battery of criteria based upon statistical information on file in the Office of Education,

supplemented by the vote of 40 persons judged most familiar with the colleges and universities of the country. The 57 selected institutions represent practically every State of the Union and the various types of public and private colleges and universities.

In a separate study of colleges and universities it was discovered that most of the differences in the curriculum patterns were not great. The tabulations on bulletin prescription were therefore thrown together in a composite which is presented in detail for each of 23 representative fields in table C1, appendix.

Space will not permit calling attention to each field represented in the master table. The table should have its greatest use if it is studied by instructors and administrators interested in specific fields. The pattern for each kind of teacher is found on four consecutive pages. Not all major fields are represented, since an exceedingly high number of majors exist, but one or more subjects representative of the general fields have been included in the 23 presented to show for comparative study the general status of practice. Repeated reference to table C1, appendix, will be made in subsequent sections.

A perspective of the data prescribed in table C1, appendix, may be best gained from a derived summary supplied in table 8 for all academic curricula as a group, all special-subject curricula, and for all education curricula, respectively.

*Academic majors.*—The teacher of academic subjects was required to have a major of 25 semester-hours (median). In 51 percent of the prescriptions he was required to have a first minor of 15 semester-hours (median) in a second teaching field, while in 18 percent of the prescriptions he was required to have 12 semester-hours (median) in a third field of concentration. He was required to take 18 semester-hours in education; of this amount, in the case of 81 percent of the students, 6 semester-hours were in courses devoted to special methods, observation, and student teaching. About one-fifth, or 24 semester-hours, of the total prescription for graduation was open to unrestricted free election, and for 15 credits more of his work he had restricted elective privileges. By arbitrary decision these restricted electives did not include those elective privileges granted within any one field in which a specified total is required, as was the case in most major, minor, education, or specific-field prescriptions, but it covered only those elective privileges permitted among a restricted number of fields or groups of subjects. His total free and restricted electives as just defined comprised 32 percent of his work and constituted that portion of his program in which individual choices by a student affected the broad pattern of his work.

The prescribed contacts with the principal subject fields supplemented the pattern of majors, minors, education, and electives already presented about as follows: All institutions required a median

TABLE 8.—The pattern of prescription in curricula for teachers in 57 selected colleges and universities. Summary for academic, special-subject, and education fields

Subject	Percent requiring work in all—			Median prescription in semester hours				Range of prescription			
	Academic curricula	Vocational subjects curricula	Education curricula	Academic majors	Special vocational subjects	Education majors	Academic majors	Special subject majors	Education majors		
										3	4
Major.....	100	100	100	25	31.8	23.5	15	14.3-70	18	-59	
First minor, if any.....	51	30	56	15	16.3	12.6	9	6-30	9	-20	
Second minor, if any.....	18	12	20	12	12	12	9	6-20	9	-20	
All education.....	97	100	100	15	18	23.5	9	3-35	18	-59	
Special methods, observation, or student teaching only.....	81	95	80	6	6	8.3	3	2-24	3	3-27.9	
English.....	95	97	93	8	9.8	9	3	2-20	3	-29	
Fine arts.....	16	14	24	6	3	6	3	2-8	6	-9.9	
Foreign language.....	90	56	86	12	12	12	6	6-24	6	-24	
General psychology.....	63	59	59	3	3	6	2	2-6	3	-8.6	
Mathematics.....	34	19	20	6	6	6	3	3-39.8	2	-13.2	
Philosophy.....	16	5	15	6	3	3	3	1-15	2	-12	
Physical education.....	100	100	100	4	4	3.5	3	1.3-10.6	2	-8	
Religion.....	18	4	12	6	4	3.5	3	3-10	2	-10	
Science.....	80	87	81	9	17.3	8	3	3-64	6	-15	
Social science.....	75	69	83	6.6	7	9	2	2-64	2	-23	
Special vocational subjects.....	99	96	100	4.5	37.5	51	4	1-8	3	-6.6	
All electives.....	99	96	100	40.5	23.3	39.7	4	4-78	3	-74	
(a) Free.....	69	94	100	24	22	39.7	1	1-57	3	-50.6	
(b) Restricted.....	69	47	59	15	13.3	15.5	6	6-70	3	-64	
Total credit of academic work required.....	100	100	100	78	47.5	51.8	35	112	12	-78	
Total academic credits, excluding the major.....	100	100	61	45.5	47.5	51.8	10	-53	24	-78	

of 4 semester-hours of physical education during the 4 years. Not quite all specified 8 semester-hours of English. Nine-tenths of them included 12 hours of foreign language. In four-fifths of the institutions a median of 9 hours of science was specified. Only three-fourths of the prescriptions required 7 semester-hours of social studies, usually specified in history. For 63 percent of the institutions, 3 semester-hours was the median prescription in general, not educational, psychology.

In the remainder of the fields—fine arts, mathematics, philosophy, religion, and miscellaneous vocational subjects—less than one-half of the institutions had a requirement. Slightly more than one-third required a median of 6 semester-hours of mathematics. Eighteen percent, a majority of the colleges and no university, required 6 credits of religion; only 16 percent prescribed a median of 6 credits in the fine arts, and 16 percent required a median of 6 credits in philosophy. Here and there, to the extent of 7 percent of the prescriptions, institutions required contacts with courses classified in the Survey as special or vocational subject departments—agriculture, industrial arts, commercial education, home economics, or library science. The total of academic work required outside of education and vocational subjects, but including restricted electives when confined to academic subjects, was 78 semester-hours, including the major, or 48 semester-hours of academic work outside of the major. These are the main facts in the composite pattern of prescriptions for academic teachers as presented by the entries of table 8.

*Special-subject majors.*—Table 8 presents also the prescribed composite curriculum pattern for 6 special vocational fields, namely, agriculture, commercial education, home economics, industrial arts, physical education for men, and physical education for women. Here the pattern in each field, as may be seen from the entries of table C1, appendix, varied more from the composite of all of them than did the academic fields from their composite pattern. The principal value of the composite pattern is to point out decided differences between academic requirements and special-subject requirements.

The median special-subject major was 40 percent larger than the median academic major. A smaller proportion, only 30 percent, required a first minor but it was 1 credit larger; a smaller percentage also required a third minor of 12 credits. The requirements in education were the same as were also the electives. The total number of academic credits presented outside the major was about the same. The trend of prescribed contacts with various academic fields was much the same in special-subject curricula as in academic curricula except that foreign language was required less often, as was also philosophy and religion; but nearly twice as much science, 17 credits, was specified.

The requirements of other special or vocational subjects outside of the major field itself were present in almost two-thirds of the curricula, which is more than nine times as often as it was made in academic curricula. Social studies was about the same. In general, there was more specialization and consequently less general education in special-subject curricula than in academic curricula.

*Education majors.*—The composite curricular pattern for majors in education was much like the one for academic majors. The chief deviations were: (1) The larger percentage requiring a first minor but it was smaller in amount (13 semester-hours); (2) the larger amount of special methods, observation, and student teaching by more than 2 semester-hours; (3) the larger percentage requiring fine arts; (4) the smaller percentage requiring mathematics; (5) a larger prescription in social studies by 2 semester-hours; and a much larger total elective privilege which ran up to 43 percent of the curriculum, of which 39.7 semester-hours were free and 15.5 were restricted. The total number of semester-hours in academic subjects outside of the major was larger by only a few semester-hours.

*Institutional variations.*—The most striking finding in this table is the evidence of institutional variation among curriculum patterns. Most ranges were wide; for example, so important a matter as a major which varied all the way from 14 semester-hours in 1 subject in 1 institution to 80 semester-hours in another subject in another institution; the free elective privilege ranged from 0 to as much as two-thirds of the entire curriculum. Total free and restricted elective requirements were found as low as 0 and up to as many as 94 semester-hours.

When explanations of wide ranges are sought, interesting policies are discovered. One institution will give no credit for practical music, even of a very advanced type, but requires a large amount of it without credit to balance theoretic courses in music for which credits are awarded. Another institution gives credit for practical music of a very elementary type, and offers a major in music extending far beyond one half of the entire curriculum. Some majors are built upon previous high-school work, while others include beginning courses at the college level that are comparable to secondary school content. Some majors are confined to narrow subjects; others include much related work from other departments. Some majors are relatively small in fields in which majors are usually large, sometimes so because an institution has a uniform credit requirement for all majors. Whether or not such variability in the institutional patterns for the education of teachers is deplorable is an open question. Until there is evidence of the superiority of a particular plan there can be no solution. However, there exists the possibility of overprescriptions and under prescriptions, of the undue potency of traditional require-

ments, and of warped specifications. It seems reasonable to assume that variability in the individual student's program, however, is more defensible than variability in institutional requirements that are more or less fixed in each institution for all students.

#### THE PATTERN OF WORK TAKEN BY STUDENTS

What is prescribed is important because it controls; what is actually completed is of even more significance because it presents the exact pattern taken. In the previous section the pattern of prescribed work for 23 representative fields was presented; this section presents the pattern of work actually taken in 21 fields. Table C appendix, is a summary of work completed by 21 groups of about 50 or 100 students each, who majored in English, French, Latin, mathematics, general social science, history, general biology, botany, chemistry, general science, physics, zoology, agriculture, art, commercial education, home economics, music, physical education for men and physical education for women, elementary education or general education, respectively. It was found that the transcripts of 50 students usually gave the pattern rather closely, but whenever possible 100 transcripts were obtained. For each group of major students the contacts with the major fields of knowledge are given in terms of the percentages taking courses, the median number of credits taken by all who take any, and the range of credits taken by individual students. The whole analysis included nearly 1,800 permanent record cards from 24 universities and colleges selected for intensive study and probably representing better practices in the education of teachers. Reading a line across the entire table (C appendix) through the several pages will give the undergraduate pattern of work taken by students majoring in a field in all education; special methods, observation, and student teaching; general psychology; English; foreign language; mathematics; science; social science; philosophy; religion; fine arts; and special subjects. Reading columns down from the top will show the tendencies prevalent for any one subject or field through all major prescriptions.

Again the limitation of space will not permit a full discussion of this table for the specialized interest of each reader. The most important use that can be made of it and the principal purpose for which it is presented is for instructors in the various departments or related departments to study what students actually take after they have followed the catalog prescriptions, and have received the advice that was available to them. A brief summary of table C, appendix is included at this point (table 9).

The general pattern so far as the percentage of students taking the work, and the medians and range of credits reveal it, can be briefly summarized as follows:

TABLE 9.—Number of semester-hours of work actually taken by 1,671 students in major fields of concentration in 24 selected colleges and universities, and the increase or decrease over prescriptions in 57 institutions

Major field	Number of students records used	Credits taken in major		Increase or decrease over prescriptions of 57 institutions
		Median	Range	
1	2	3	4	5
Agriculture.....	50	60	42-78	+11
Music.....	100	54	16-117	+9
General social studies.....	100	47	18-85	+12
Home economics.....	100	43	25-72	+6
Art.....	100	42	21-100	+18
Elementary education.....	100	42	16-87	+12
English.....	100	37	22-67	+7
Physical education:				
Women.....	100	36	20-69	+3
Men.....	100	34	18-75	-4
Biology.....	50	32	20-61	+8
French.....	100	31	15-54	+3
Chemistry.....	100	31	19-56	+6
General education.....	87	30	20-62	+4
History.....	100	30	18-50	+6
Commercial education.....	50	29	6-67	-1
Mathematics.....	100	29	21-60	+1
Botany.....	50	29	18-46	+5
Latin.....	100	28	17-41	+3
Zoology.....	50	27	18-46	+3
Physics.....	34	24	15-34	+0

1. More than 120 semester-hours were typically completed for a bachelor's degree. (Col. 4, table C, appendix.) The range of total credits completed for the degree was wide, although the extremes were cases for which special explanations could be made.

2. The median number of credits completed by any group for its major varied widely from subject to subject (col. 6, table C, appendix) and within each major group individuals have taken widely different amounts of work. (Col. 5, table C, appendix.)

3. All students who prepared to teach took courses in education. (Col. 7, table C, appendix.) The number of hours taken by individual students varied from only 3 in one case to as many as 94 in another, with medians for the respective major groups usually falling between 17 and 23 semester hours. (Col. 8, table C, appendix.)

4. Not all students, but usually more than 90 percent, had special methods, observation, or student teaching or combinations of these, the modal median being 7 semester-hours in rather wide ranges starting as low as 1 credit and running as high as 42 credits. (Cols. 9, 10, 11, table C, appendix.)

5. General psychology was taken by most students, but the percentage taking it varied with each field. Typical medians ran from 4 to 6, inclusive, and individual students who took any had as little as 1 or 2 credits or as much as 17. (Cols. 12, 13, 14, table C2, appendix.)

6. Approximately all students did work in English, the median amounts characteristic of major groups running from 11 to 20 semester-hours. Individuals not majoring in English took from 3 to 51 credits. (Cols. 15, 16, 17, table C, appendix.)

7. Foreign language was included by most academic majors and by fewer special-subject majors. The median number of credits completed by nonmajors varied from field to field, extending from only 5 in agriculture to 20 semester-hours for English majors. While one person taking any foreign language work had only 1 credit of it, another nonmajoring student actually completed 55 semester-hours. (Cols. 18, 19, 20, table C, appendix.)

8. Mathematics was usually found in the transcripts of less than one half of those who majored in any field. The modal median was 7 credits, among medians which varied from 4 for several groups to 20 for the physics majors. The variability was large. (Cols. 21, 22, 23, table C, appendix.)

9. *Science*.—Nearly all students in most fields had science. The median amount varied greatly for the different groups because of the intimacy with which science relates itself to other subject matter. Students majoring in language, English, social science, and art tended to take less. (Cols. 24, 25, 26, table C, appendix.)

10. Social studies were commonly taken. The medians ran from 8 to 25 credits, but most usually from 10 to 15 credits. (Cols. 27, 28, 29, table C, appendix.)

11. *Others*.—Most students did not choose to take philosophy, religion, fine arts, or special subjects which, it will be recalled, were less frequently prescribed. The modal amounts completed by those who took any were 4 credits in philosophy, 6 credits in religion, 4 credits in fine arts, and 8 credits in special vocational subjects. (Cols. 30-41, table C, appendix.)

#### SUMMARY

In this chapter, two important tabulations for general reference are offered for those interested in curricula who want to know the broad outlines of the pattern of institutional requirement and of the pattern of work taken by students in representative curricula. A summarization of current practice without implications has been presented for general review. The chief contribution of the rather long and detailed tables lies in the opportunity they offer to study in summary the pattern for more than 20 representative major field curricula, to make comparisons with other fields, and to study the differences in amounts prescribed and the amounts taken. This comparison will have to be made by instructors themselves since space did not permit detailed presentations for the fields covered. The more specific issues arising out of current practice will be developed in subsequent sections.

## CHAPTER IV

# GENERAL EDUCATIONAL BACKGROUND OF THE TEACHER

### IMPORTANCE OF GENERAL EDUCATION TO THE TEACHER

The cultivation of wide interest in the principal fields of human activity and the ability to think on vital problems are objectives of the best high schools, colleges, and universities. A teacher needs to be broadly educated because he directs the general education of childhood and youth. Regardless of his position, he cannot teach well unless his own level of education and thought is beyond the level required in his teaching and is matured and coordinated. Important also is his position as the representative of society in the school in which his social function as a teacher can only be clear if he knows society from the standpoints of its evolution, its current status, and its probable future problems. Furthermore, he is a citizen as well as a member of one of the learned professions. Teachers constitute nearly one-half of the output of all institutions of higher education, one of the functions of which is to train citizens for leadership. A group of 1,000,000 teachers, capable of clear thinking, with a broad concept of affairs, a clear notion of their function and potentialities, with specific social objectives, would be a powerful factor for social progress. Breadth of training is therefore essential to the teacher's education. The problem of providing this basic education is in part if not largely identical with the problem of the liberal education for all college students, but in the case of the teacher the problem is more crucial because of the important role which public and private elementary, secondary, and higher education must play in the destiny of the Nation.

There is direct and indirect evidence in the reactions of about 1,600 instructors and administrators of colleges and universities to 63 proposals bearing upon curricular issues as shown in table 23 that they consider a broad, general education for teachers of first importance.

*Attitude toward general education.*—To the basic proposition that a considerable portion of any curriculum for the education of teachers should consist of general, nonspecialized courses in various fields of knowledge, the faculty groups registered strong approval as follows:

Faculty group	Percent replying —						
	Number	Yes	Yes with reservations	No with reservations	No	Total	
						Yes	No
1	2	3	4	5	6	7	8
College and university presidents .....	293	68	23	4	2	94	6
Academic instructors .....	283	72	23	4	1	95	5
Special-subject instructors .....	161	57	29	8	6	86	14
Education instructors .....	144	64	31	3	2	95	5
Teachers-college instructors (all types) .....	690	61	29	7	3	90	10

Closely related to the concept of a broad, general education but not necessarily included by some in their definition of a liberal education, so often limited to intellectual learning only, is the concept of a balanced development of the physical, social, and esthetic capacities of students, with the further implication of the adjustment of the curriculum to individual needs in order to develop latent abilities and to remedy individual deficiencies. There is also implied in this broader concept the development of the creative ability of students beyond the encouragement of passive learning only. This matter of general education may be thought of as a function of the college to develop the whole personality so far as is possible with college students. It involves not only the formal curriculum but college life as a whole including dormitory life and all student activities. Because so many teachers come from homes with limited social and economic background, this broader concept of the function of a liberal education applies particularly to them. Some of these phases of college life are developed fully in other sections of the report on student welfare, extraclass activities, electives, differentiation, and specialization. A strong trend, however, in the direction of general approval of this broadest concept of the meaning of a liberal or general education is indicated in the responses of various groups to certain curricular proposals touching upon these matters. There was general, usually very strong, approval by them of the following statements:

1. The program for the education of teachers should provide for the development of desirable social and individual traits of personality in prospective teachers.
2. The inclination and ability to guide and direct the development of personal and social traits in pupils is as important in teachers as mastery of subject matter and teaching skill. Institutions should eliminate students found unfit in these particulars.
3. Any adequate program for the education of teachers should provide in proper proportion for the cultivation of physical, social, and esthetic experiences as well as for the intellectual experiences.
4. Each curriculum designed to educate teachers should provide for the development of their latent abilities and aptitudes, in addition to giving them the essential professional equipment of their field of teaching specialization.

5. The techniques for guiding the creative abilities and activities of children should be as greatly stressed in the preparation of prospective teachers as the techniques of teaching the "tool" and "content" subjects.

The extent of approval or disapproval of these proposals may be seen in figure 2, appendix A, which presents the attitude of faculty groups to 63 proposals on curriculum issues.

#### NUMBER OF FIELDS

*Prescriptions.*—The extent of prescribed contact with the major fields of knowledge and culture based upon a catalog analysis of prescription for academic, special subject, and education majors is summarized in tables 8 and C1, appendix.

These tables do not show the differences between college and university patterns, the most important of which was that colleges tend to prescribe more contacts than do the universities. Of the 11 fields represented in the tabulations below, not counting education, the median college prescription was in 6.9 fields; the corresponding university median was 5.9 fields. The percentages of curricula in 57 institutions which required contacts with each field were:

Curricula	Percent in—		
	28 univer- sities	29 colleges	57 institu- tions
1. Physical education.....	100	100	100
2. English.....	95	96	95
3. Foreign language.....	78	94	85
4. Science.....	79	83	81
5. Social sciences.....	82	71	77
6. Psychology.....	61	63	62
7. Mathematics.....	27	36	31
8. Fine arts.....	15	19	17
9. Special vocational subjects.....	15	18	17
10. Religion.....	2	34	15
11. Philosophy.....	3	10	7

Physical education and the language arts led. They were followed by natural science and the social sciences. Mathematics was relatively low. Fine arts, special vocational subjects, religion, and philosophy showed relatively low percentages. These percentages show that the agreement among colleges and universities in subjects required or not required was greater than the disagreement, but it follows also from the scatter of percentages in the master tables, previously presented, that differences prevailed in the prescriptions of practically every institution. It is apparent that the proverbial general education is not comprehensive; in fact, most of the teachers do not orient themselves at the college level in philosophy, religion, fine arts, mathematics, and special vocational subjects. However, in certain fields, particularly natural science, the social sciences, or fine arts, there are many departments with frequent limitation of students

by prescription to one or two of the narrower departments so that contacts with such divisions of knowledge really represents enrollment in only one or two of several departments of science. The student may have some chemistry, but he will be without physics, botany, zoology, physiology, astronomy, and geology. His contact with science is therefore a segmentary one unless the high school has supplemented it, which is one reason why prescription at the college level should be flexible so that a teacher's education can be planned in terms of previous contacts.

*What was taken?*—The true picture of the general education of the teacher at the close of the undergraduate curriculum necessarily includes both secondary and higher education. An attempt was made to ascertain just what the general education of the typical teacher who graduated from 24 selected colleges and universities was like by including in the Survey a special analysis of 1,000 transcripts representing 18 fields of specialization. From this 8-year picture only the courses taken in the major field in college are excluded. Everything else is represented. The transcripts selected to represent each field were a random selection in proportion to the total number graduated from all these institutions.

The composite high-school and college patterns are presented for comparative study in figure 1 in terms of the percentage of students who took each subject, and also in terms of the percentage of all work of all students that was taken in each field. The extent of secondary contacts appears at the left, and the extent of college contacts appears at the right of a list of subject-matter fields, which constituted the basis for analysis of the permanent record card transcripts. One unit of high-school work was arbitrarily equated equal in time emphasis to 8 semester-credits of college work since the secondary program of 16 units and the college program of 125 units each cover 4 years of work.

*The secondary pattern of general education.*—The proportion of graduates who had made contacts with fields at the secondary level varied from 100 percent in English, mathematics, and history, respectively, to practically 0 percent in philosophy or psychology—not secondary subjects. Eighty-two percent of the students had had high-school courses in classical languages; only 56 percent had had work in modern languages. Percentages in the sciences were 45, 46, and 68, respectively, for biological, general, and physical sciences. The number who had completed courses in art, only 8 percent, and in music, also only 8 percent, was small. The objective of esthetic development in secondary education was not revealed significantly in the number of prospective teachers who had had high-school courses in the fine arts, although it is conceivable and probable that some incidental contacts with the fine arts took place in other types of

courses. The number of prospective teachers who had had specific courses in sociology, economics, and political science was small.

The chief significance of these findings for persons who continue in higher educational institutions to prepare themselves to teach is that

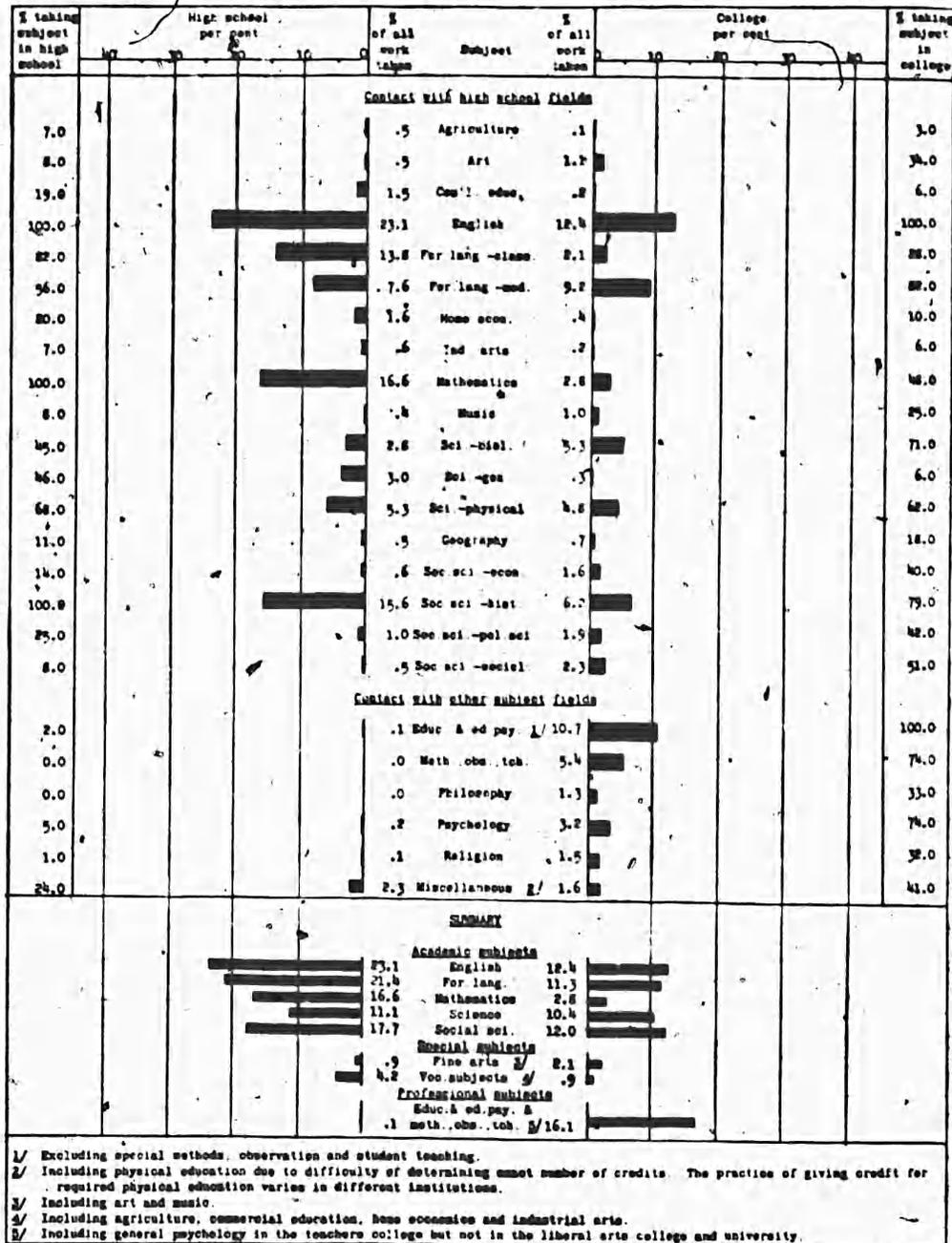


FIGURE 1.—The extent of nonspecialized contacts with the principal fields of knowledge made by 1,000 prospective teachers from 24 universities and colleges.

many, perhaps all, leave the secondary level with gaps of preparation in important areas because the unit and not the orientation course predominates in the high school. This throws upon the college the responsibility to provide flexible plans of articulation which recognize

part preparation or nonpreparation at the secondary level, a responsibility not always reflected in catalog discussions. This is a definite issue to be met in the general education of teachers.

The bars to the left in figure 1 present objectively the pattern of all work completed by the entire group of 1,000 teachers at the secondary level. In the order of total amount of work completed from greatest to least, the ranking subjects are: (1) English, 23.1 percent of all high-school work taken; (2) foreign languages, 21.4 percent—with classical languages at 13.8 percent, outranking almost 2 to 1 modern languages at 7.6 percent; (3) mathematics, 16.6 percent; (4) history, trailing mathematics, at 15.6 percent; (5) total science, trailing all these fields at 11.1 percent for any, with 5.3 percent in physical, 3 percent in general, and 2.8 percent in biological sciences. Striking are the small portions of all work that occurred in art, music, economics, sociology, and political science, due not only to the small number of students who took the courses, but also to the limited amount of work taken by these students. The potency of college-entrance requirements and of traditional and current practice gives stronger emphasis to English, foreign language, mathematics, history, and science, but not to certain courses closely related to contemporary life like the social studies other than history, to art, or to biology. Entrance requirements result in placing foreign language and mathematics above history, science, and art in the secondary schools. This peculiar balance in content is not serious, however, for the prospective teacher who goes on, if the college work, also analyzed in figure 1, supplements the secondary education received.

*The college pattern of general education.*—The parallel analysis on the college side of figure 1 differs in one respect. In order to present here a picture of general education only, the college credits taken by students for major concentration are omitted in the totals, which include only work taken for general education.

The distribution of college percentages differed from the high-school percentages. More students completed work at high school than at college in classical languages; all languages, mathematics, physical sciences, all science, history, and most vocational subjects; these are outstandingly high-school fields in which apparently many did not again take college courses. On the other hand, larger percentages took the remainder of the subjects in college than did in high school. These are:

Art	Geography	Education
Modern languages	Economics	Philosophy
Music	Political science	Psychology
Biological science	Sociology	Religion

The fundamental place of secondary education in all education as well as the supplementary function of the college or university and of

the high school in providing a general education is revealed in figure 1, as is also the need for careful institutional guidance and student self-guidance to secure the optimum distribution of work among the fields.

The number of teachers who took work in college was 100 percent only in English and in education. The number was above 75 percent only in modern languages and in history; it was above 50 percent and below 75 percent in biological sciences, physical sciences, sociology, special methods, observation or student teaching, and general psychology. Classical languages and mathematics, so heavily emphasized at the secondary level, were elected in college by relatively few. Art was represented by 34 percent; music, by 25; philosophy, by 33; religion, by 32; economics, by 40; and political science, by 42.

The bars setting forth the college pattern of all work completed by 1,000 students outside of their major field of concentration reveal that the largest block of college work outside of the major was taken in education, special methods, and student teaching combined, which comprised 16.1 percent of college work. The position of those who would postpone all professional work for teachers beyond the undergraduate level because it is alleged to crowd out much general education has therefore a basis in fact; certainly the educationist should not press unduly his claim for more hours in education in a 4-year program until there is proof of the relative superiority of more work in education over more general education. If the present selection of content is the optimum selection for general culture in its best sense, then the data also support those who would adopt a general 5-year curriculum, so that teachers may not neglect their major teaching fields or their general background in order to take necessary courses in education; or that, on the other hand, their needed general education may not crowd out the training in technical knowledge and skills demanded by the teaching craft. The teachers college traditionally has emphasized in its 2-year preparation of elementary teachers skill in the art of teaching. In this respect it has been successful to the extent that it is often said the best teaching today is found more often in elementary than in secondary schools.

On the whole, the percentages of total college work outside of the major that was devoted to the respective fields by 1,000 prospective teachers were greater, but never much greater, than the corresponding percentages for the high-school level in—

Art	Economics	Philosophy
Modern language	Political science	General psychology
Biological sciences	Sociology	Religion
Geography	Music	

On the other hand, the volume of work was relatively much smaller on the college level than on the high-school level in—

English	Mathematics	Total languages
Classical languages	History	Vocational subjects

The only fields in which the time emphasis was decidedly greater in college than it was in high school were the major and education.

A most significant fact revealed by figure 1 is the need of articulating the work of the college and of the high school for the general education of the teacher to provide supplementation and continuation, and also, it might be added, to prevent uneconomical duplication. Duplication often occurs in the general survey of English literature courses of the senior-high-school and the junior-college-levels, the parallel courses in modern and in European history, the introductory courses in chemistry or other sciences, and in the college orientation courses frequently required of all without reference to previous work completed.

*Combined secondary and college pattern of general education.*—The extent of the total nonspecialized contacts with principal fields of knowledge made by these 1,000 prospective teachers at the high-school and college levels combined is given in table 10. This table summarizes all work taken by these students except the college work in the major teaching field to provide a composite picture of a teacher's general education during the entire 8 years of secondary and undergraduate college or university education. Since the time involved in each of the two levels is 4 years, the total picture is arbitrarily presented in terms of approximately 256 semester-hours or percentages thereof.

The fourth column in table 10 lists the percentages of students who took work in each subject during the 8-year period. For example, only 37 percent of 1,000 prospective teachers had courses in art, which means that 63 percent had had no art except that which was incidental to other courses or to extraclass activities. With only 26 percent of all students taking any home economics, perhaps most girls did not contact that subject which should and actually does contain much of general education of high cultural information and practical value to women either as teachers or future home makers. Seventy percent have not had music; 67 percent have not had philosophy, a subject which at its best might integrate all education by provoking thought on fundamental relative life values. Fifty-six percent have not had economics, 43 percent have not had political science, 46 percent have not had sociology; yet the teacher is a social worker, a representative of society to childhood and youth on its road to maturity. During these times of the preponderance of civic-social-economic problems, those who direct teacher preparation should consider this as a serious oversight. They have permitted large

masses of teachers to graduate as uninformed citizens at the college level of thinking, in these subjects.

TABLE 10.—Extent of nonspecialized contacts with the principal fields of knowledge made by 1,000 prospective teachers from 24 universities and colleges<sup>1</sup>

(High school and college combined (equivalent of 256 semester-hours))

Field	Number of graduates out of 1,000 who did not major in field	Extent of contact of nonmajor graduates				
		Number who took courses	Percent who took courses	Average number of credits taken by those who contacted the field	Range in number of credits taken by those who contacted the field	Percent which work taken in field is of all work taken
1	2	3	4	5	6	7
Agriculture.....	984	87	9	9.5	1.0-32.0	0.3
Art.....	965	357	37	5.3	1.0-37.0	.8
Commercial education.....	975	248	25	8.9	1.0-40.0	.9
English.....	780	780	100	45.7	28.0-70.7	17.8
Classical languages.....	966	818	85	24.1	6.0-60.0	8.0
Modern languages.....	953	890	92	23.3	2.0-95.0	8.4
Home economics.....	937	239	26	10.3	2.0-33.0	1.0
Industrial arts.....	1,000	116	12	9.4	1.0-36.0	.4
Library science.....	1,000	42	4	3.3	1.0-13.0	.1
Mathematics.....	932	928	100	25.3	6.0-64.9	9.8
Music.....	942	262	30	5.9	1.0-46.0	.7
Philosophy.....	1,000	331	33	6.0	1.7-23.0	.6
General psychology.....	1,000	741	74	5.8	1.6-30.0	1.7
Religion.....	1,000	320	32	6.1	1.0-32.0	.8
Biological science.....	967	797	82	12.5	1.0-39.0	4.0
General science.....	927	665	80	8.5	2.0-61.0	1.7
Physical science.....	960	844	88	14.7	1.0-40.0	5.0
Geography.....	961	244	25	6.3	1.0-27.8	.6
History.....	825	823	100	29.1	4.0-75.9	10.9
Economics.....	936	409	44	6.3	1.5-29.3	1.1
Political science.....	961	550	57	6.3	2.0-36.0	1.4
Sociology.....	961	518	54	6.7	1.5-24.0	1.4
Education and educational psychology.....	888	886	100	13.7	1.5-49.0	5.3
Special methods.....	888	658	74	4.9	.8-29.0	1.4
Student teaching.....	888	657	74	4.5	1.0-12.0	1.3
Miscellaneous.....	1,000	327	33	9.4	1.0-50.7	1.9

<sup>1</sup> Each high-school unit was assumed to represent the equivalent time emphasis of 3 college semester-credits. In each field the complete high-school and college credits of the students who had majored in that field were omitted.

NOTE.—The table should be read as follows: Of 1,000 students whose permanent record cards were analyzed, 984 did not major in agriculture in college. Of these 984 students only 87, or 9 percent, took courses in agriculture either in high school or in college ranging in amount from 1 to 32 semester-credits with a mean of 9.5 credits. The work taken in agriculture by 984 students is 0.3 percent of all work taken by them.

Chart 1 is based upon the last column of table 10 to show more objectively the combined secondary-college pattern of education in terms of the percentage of all work that is given to each subject.

Note that for general education contact, 17.8 percent of all work covered during the 8-year period was in English; 16.4 percent of it was in foreign language, divided almost equally between classical and modern languages. The social sciences followed with 14.8 percent of the curriculum, about three-fourths of it being in history and one-fourth of it divided among political science, sociology, and economics courses. The college major, not counting high-school work taken in the major field, constituted 12.7 percent of all work. Science took nearly one-ninth. Mathematics had one-tenth; education courses,

including special methods and student teaching, constituted about one-thirteenth. Special subjects, largely vocational, accounted for 2.7 percent, and psychology for 1.7 percent. Fine arts, about equally divided between art and music, got 1.5 percent of the 8-year program. Religion, geography, and philosophy were relatively little recognized.

Field	Per cent of all work	Relative amount of work in divisions of each field					
		Fine arts		Psychology		Special subjects	
Fine arts	1.5	50 : 50					
Psychology	1.7	State					
Special subjects	2.7	Home economics 1.0		Commercial education .9		Ind. arts .8 Agric. .3	
Other subjects	1.9	Religion .8		Geog. .6		Philos. .6 Miscellaneous 1.9	
Education	6.0	General education and educational psychology 5.3				Special methods 1.2 Student teaching 1.3	
Mathematics	9.8						
Science	10.7	Physical 5.0		Biological 4.0		General science 1.7	
Major	12.7						
Social studies	10.8	History 10.9				Political science 1.4 Sociology 1.6 Economics 1.1	
Foreign languages	16.4	Others 6.0		Classical 6.0			
English	17.6						

CHART 1.—The general education pattern of high-school and college work of 1,000 prospective teachers from 24 universities and colleges.

*Total academic content and a liberal education.*—The median total prescription of academic work amounted to 78 semester credits for academic majors; in special-subjects curricula it was 47.5 credits, and in education curricula it was 51.8. The amounts actually completed by students, according to transcripts of their work, were significantly

higher than the amounts prescribed, being according to table C, appendix, between 101 and 107 credits for academic groups, between 45 and 99.2 credits for special-subject groups, and between 72 and 86.5 credits in the two types of education curricula. The aim of this academic content is to provide a liberal education which is the teacher's background to draw upon as an instructor. It is the educational culture that permits teachers (and other educated people) to think, talk, and act in dealing with the vital social, civic, cultural, and industrial problems of present-day life. This education should stimulate an active interest in every field of human knowledge, an interest which above all other things the teacher should aim to pass on to his pupils.

Chart 1 and the preceding tables show in perspective what is probably an accurate composite picture of general trends in the education of the American secondary teacher who is educated in the better liberal arts colleges and universities. In the absence of absolutely objective criteria for the evaluation of a curriculum pattern it is difficult to describe it either as a desirable or an undesirable pattern.

A series of basic challenges, however, can be made as follows:

(1) Is the more than one-fourth of general education devoted to mathematics and foreign language justifiable when such slight attention is still given to political science, sociology, economics, art, music, or philosophy? Mathematics is a subject often almost completely forgotten because of nonuse and according to many it has left a very small residue of insights and appreciation. One or two years of language in the case of nonmajors often arrives nowhere so far as speaking, writing, reading the language, or knowing its cultural and literary contributions is concerned.

Conference with many college instructors gave the impression that the mathematics taken now in high schools is largely a traditional requirement for college entrance from a time when the disciplinary value of subjects to alleged faculties of the mind held sway and that its amount is unnecessarily large and its content unrelated for many teachers of subjects not closely related to mathematics. A smaller amount and a content of a different sort, selected to show the social contributions of mathematics to civilization might make a greater contribution.

The language objectives are too general and varied to contribute much to the general education of the average student who has but little work in a language field. If reading of a language were concentrated upon and more direct methods of attack used, it is likely that more cultural value of a specific sort would accrue from its study and general inclusion as a requirement. This might be true also if a study of the evolution of languages and of the evolution of English were included. In general, instructors in these fields defended the

present amount of requirements, though many were critical of current practices. The matter needs thorough study from the standpoint of the comparative value of other available subject matter for the general education of high-school and elementary-school teachers.

(2) Certainly the fifth of the curriculum devoted to English and to English literature should result in positive contributions to the use of English as an instrument of thought and of expression and to the use of literature as an active constituent of a broader cultural life. The English used in the oral and written speech of many teachers is frequently criticized as inadequate. One of the chief objectives of English in the preparation of teachers should be to build up the powers of expression, as a teaching tool and as an example for pupils. To accomplish this it is frequently pointed out that college objectives need to be specific, the work more intensively related to these objectives and more closely articulated with the high-school program. In this way it would be possible to present a continuous and planned development in speech as the mind grows in its need for better, more varied, and more accurate methods of expression. Persons of slovenly speech habits should be barred from most teaching positions.

(3) It seems appropriate at the present time to point out that music and fine art are apparently neglected and that there is need of more emphasis on these subjects in the preparation of all teachers as an urgent next step to its greater place in the education of all pupils. The quality of the leisure activities to which art can contribute significantly and the enrichment of all life situations demand for art a larger place in education. Certainly, fundamental courses in the appreciation of music, art, sculpture, architecture, interior decoration, and landscaping are so important to the elevation of standards of life and culture that courses covering parts of this field should be required.

(4) All teachers need contacts with sociology, political science, and economics at the secondary or college levels or both to give them background for more intelligent citizenship, for critical participation in the social-civic life of today and for ability to interest pupils in the duties of citizens and in the problems facing social groups and agencies. The creation of ability to act in socially desirable ways is a paramount objective of all education.

On the proposal that "any curriculum for prospective teachers should equip them to teach not only the implications of the social heritage, but it should equip them to teach also contemporary modes of living and should inform them thoroughly on contemporary problems", the administrators and instructors in junior colleges, colleges, and universities voted as follows; (For comparison the reactions of similar groups in teacher colleges are included).

Faculty group	Num- ber	Percent replying—					
		Yes	Yes with reserva- tion	No with reserva- tion	No	Total	
						Yes	No
1	2	3	4	5	6	7	8
College, junior college, and university presi- dents.....	289	65	32	2	1	97	3
Academic instructors.....	238	38	42	13	7	80	20
Special-subject instructors.....	138	48	38	10	4	86	14
Education instructors.....	144	70	30	0	0	100	0
Teachers college instructors and administrators.....	684	58	36	5	1	94	6

(5) The division of learning into so many college departments for specialization now calls for wider use of broad foundation courses at the secondary and college levels in major divisions of human knowledge and activity and also for a final synthesis of learning toward the development of a working philosophy of life in teachers. An examination of bulletins, of bulletin requirements, and of transcripts leads inevitably to the conclusion that there is need for orientation and integration survey courses. The introduction of broad foundation courses at the junior-college level—that is, just beyond the middle of the 8-year period rather than earlier in the secondary program—was frequently criticized in the conferences with college instructors, as was also the failure to provide synthesizing courses at the close of the college curriculum. In this connection the neglect of contact by many students with courses in philosophy of the right sort should be given more thought. The very purpose of philosophy should be to study values, to coordinate thinking, and thus to synthesize learning.

(6) For the teacher general education is a first consideration; then specialization can and should follow. In the education of elementary teachers today more general education is a first essential.

(7) The program of general education is so wide that beyond the use of broader courses there is apparently a need of either extending the period of education so that specialization and technical perfection in education and in teaching be not neglected, or reorganizing the present content. In the opinion of many, for the secondary teacher this situation points to the early adoption of the 5-year college program; for the elementary teacher the 4-year program is suggested as the immediate objective, with its later extension to the 5-year period as well. This point of view is defended on the basis that a teacher needs the equivalent of the usual 4-year period for a general higher education, and that the additional specialization and technical preparation needed for teaching requires not merely an additional year, but an integrated 5-year program.

## NEW PLANS FOR GENERAL EDUCATION

The ideal of a liberal general education for teachers, however it is held, is not the product of merely "taking in" for a given period of time; it is rather a process of learning to "get for himself", to give out, to create, and to do, which is a problem of method rather than content. The following factors have hitherto prevented the full realization of the ideal of educated teachers: The short periods of preparation during which essential professional matters contributing to the theory and practice of teaching had to take precedence over general education beyond high school; the growing volume of knowledge which has a tendency to promote specialization and departmentalization; the pressures of vested departmental interests; technical introductory courses with no other provisions for general educational contacts; the "take and leave plan" of unit courses; credit standards in majors rather than tests of competency in majors; credit standards for graduation rather than attainment standards; misuse of elective privileges; the neglect of creative education in college; traditional subject requirements which do not fit the present age; failure to identify the most useful content for general culture; neglect of art, philosophy, and social studies; and the conservative tendencies of college groups. These and other causes were alleged in conferences to be preventing a truly liberal education. The importance of these criticisms lies in the fact that they show that many are now thinking about the college curriculum. This thinking has resulted in innovations and experiments to test out new ideas and plans.<sup>1</sup> Some of these are plans for honors courses, orientation courses, the comprehensive examination, the tutorial plan, and ability grouping, involving student initiative, and the wider use of the library. Each of these will be briefly considered.

*Orientation courses.*—The orientation course which cuts across departments is an administrative device designed to procure a balanced exposure to an entire division of knowledge rather than a segment of it. It has recently had increased vogue. Returns from an inquiry to the presidents revealed that 45 percent of 301 institutions had introduced one or more orientation courses.

To a proposal made to instructors of representative courses and to the presidents that all curricula should provide for a certain minimum number of orientation courses in order that every prospective teacher might be given a broad view on the college level of the socially valuable aspects of the major fields of knowledge, the reactions were:

The preponderance of "yes" over "no" totals indicates an attitude that is generally favorable to the use of orientation courses.

<sup>1</sup> For a recent overview of some of these movements the reader is referred to the Thirty-first Yearbook of the National Society for the Study of Education, 1932, pt. II, Changes and experiments in liberal arts education, Bloomington, Ill., Public School Publishing Co., and also to Report of the Committee on College and University Teaching, Bulletin of the American Association of University Professors, 1932-33, 98-102, sec. II.

Faculty group	Number	Percent replying—					
		Yes	Yes with reservation	No with reservation	No	Total—	
						Yes	No
1	2	3	4	5	6	7	8
Presidents.....	295	50	37	2	11	87	13
Academic instructors.....	259	49	32	8	11	81	19
Special-subject instructors.....	152	62	31	3	4	94	7
Education instructors.....	145	55	37	1	7	92	8
Teachers-college instructors—all types.....	682	59	32	3	6	91	9

Instructors were also asked to specify what percentage of a curriculum for the education of teachers they would allot to orientation courses. Of 519 college and university instructors responding to the inquiry, 10 percent would have none. The median judgment, however, called for only 13 percent, or 16 semester-hours, not a large part of the curriculum. The range in judgment, however, extends from 0 percent to 50 plus percent.

More than 700 instructors of representative courses expressed themselves in response to a request to designate the subjects which might be included in orientation courses. In practically all cases the percentage of instructors in a given department that believed that the subject matter of the department ought to be represented in an orientation course was larger, usually much larger, than the percentages of the instructors in other departments.

In order of the number of instructors who favored each type of content for orientation courses, subjects rank as follows:

Subject	Percent	Subject	Percent
History.....	81	Principles of education.....	36
English literature.....	75	Educational methods.....	36
Composition.....	70	Educational sociology.....	32
Sociology.....	63	Geology.....	29
Economics.....	61	Physical education activity courses.....	27
General literature.....	60	Educational tests and measurements.....	27
Speech.....	59	Anthropology.....	26
Philosophy.....	53	Educational management and discipline.....	23
General psychology.....	52	Astronomy.....	22
Art.....	51	Religion.....	22
Chemistry.....	49	Classical language.....	19
Political science.....	49	Educational administration.....	17
Health and hygiene.....	49	Agriculture.....	15
Zoology.....	45	Elementary education.....	11
Botany.....	44	Home economics.....	10
Physics.....	42	Secondary education.....	9
Geography.....	42	Industrial arts.....	9
Educational psychology.....	39	Educational supervision.....	7
Modern language.....	38	Rural education.....	6
History of education.....	37		
Music.....	36		

Possible orientation courses which would include some of the above-related subjects most favored by one-half or more of the instructors would be English (composition and speech); literature (English and general); social studies, including history, sociology, economics, and political science, or possibly social studies only which then would call for a separate orientation course in history; and art. Just under 50 percent favored a number of subjects for orientation courses which would be grouped as science, or separately as two orientation courses in biological sciences and physical sciences, respectively. Such groupings as these are more or less arbitrary though quite logical.

A definite proposal of a number of such courses now offered here or there and organized to cut across two or more departments was made to ascertain further the attitude of instructors. The percentages of 419 respondents from colleges and universities and of 694 teachers-college instructors favoring each turned out to be the following:

Type of orientation course	Percent of 417 college and university instructors favoring	Percent of 694 teachers college and normal school instructors favoring
Contemporary civilization.....	78	67
Community and public relations.....	63	57
Fine arts.....	54	55
Home and family relationships.....	50	51
Human behavior.....	55	50
Science.....	68	47
The creative arts.....	40	42

The University of Chicago under its new plan offers as a consecutive series (1) a general orientation course and (2) an advanced orientation course in each of four divisions, which are designed to cover nearly all of 2 years of junior-college work. The four series are: The humanities (literature, language, art), social sciences (including history), physical sciences, and the biological sciences. Of these the student takes three in the first or general series with the option of taking in his field of special interest either a fourth general orientation course or a sequence of three one-quarter unit courses in narrower departments. When these are completed the student has an option of either continuing an advanced orientation course in each of two of the divisions or of taking instead one or both of these two sequences of three-quarter courses in 1, 2, or 3 departments of each division. The complete plan is described in detail in the University of Chicago Survey.<sup>2</sup>

Features of the plan are flexible provisions for advanced unit courses to fill gaps when secondary work has already been extensive in the

<sup>2</sup> Reeves F. W., Palk, W. E., and Russell, John Dale. The University of Chicago Survey, vol. IV, Instructional problems in the university, pt. II; The university curriculum and instruction under the new plan. University of Chicago Press, 1933. p. 119-125.

division, the long comprehensive examination at the close of junior college work in each division, a unifying theme for each course, much more time to each course than most other colleges have permitted thus far, the flexible combination of orientation and unit courses, reduction of formal recitation, increase of work periods, and no compulsory class attendance. All of these are fundamental features of a plan to promote integration and wide range of learning, student responsibility and initiative and a quality of attainment standard rather than a credit completion standard for the termination of the period of general education, which is thought of as extending through the secondary and junior-college periods.

Orientation courses at Stephens College are organized in four divisions at the junior and senior year of the high-school levels and represent an effort to introduce them earlier than at the junior-college level. Two orientation courses are offered in each of the divisions of the humanities, the social studies, science, and skills and techniques (vocations).

Grinnell College is proposing a plan involving the adoption of the tutorial plan and one or two orientation courses for each year as follows:

	Orientation course by year	Hours
Freshman year:		
1. The physical universe .....		3
2. The making of modern civilization .....		3
Sophomore year:		
4. Problems of citizenship .....		2
3. Studies of great books .....		3
Junior year:		
5. World relations .....		2
6. Art appreciation .....		1
Senior year:		
7. Problems of philosophy and religion .....		3

New College at Teachers College, Columbia University, an experimental unit in teacher preparation, has made a general conference or seminar extending through the curriculum a means of securing the integration of all work of the curriculum.

Orientation plans were found in other schools visited. It was characteristic, in most situations to find both strong approval and strong opposition to the plans proposed. The opposition to orientation courses as gathered in conference with more than 300 instructors, to many of whom the matter was broached, may be summarized in the language of a number of the opponents about as follows:

Students do not have foundation for rapid sweep and because of the rapid sweep they do not get a foundation. The course is superficial—looking through a keyhole on each subject.

Big topics have to be covered too rapidly.

The courses may look good on paper in outline, but the results are poor.

Only an ideal—too big an order.

Difficult to find a person who can cover all fields, and the vaudeville type of course conducted by representatives from each department are failures because the course lacks the very integration it hopes to attain. No one knows sciences well enough to know all sciences well.

No texts are available.

The high school is the place to give general courses.

College freshmen present too much variety in the preparation of a given field to take care of all of them in an orientation course.

Methods and men count most in college. You get them at their best in unit-service courses.

Those who favored the orientation type of course, including some who are said to have notable success with them, say in summary:

It is the only solution in the face of a multiplicity of departments to maintain the ideal of a liberal education.

Present introductory courses in departments are often technical foundations necessary only for those who specialize. The general education needs of those who contact departments to the extent of 1 or 2 courses are overlooked and are not identical with the initial needs of the major who needs to get his technical foundations.

It is a choice between accidental but concentrated contact with a few of many topics selected according to the accidents attending course selection versus the required thoroughgoing contacts with only those topics from all fields of value to all. It is a choice between the integration of knowledge and interest versus isolated and accidental information.

Suitable texts are developing with research back of them, and in the meantime, suitable bibliographies can be built.

Competent instructors will develop with the need for them and many can be found now. The orientation movement is itself a protection against the "knowing more about less" teaching preparation in higher education so characteristic of many instructors.

Orientation course plans at the college level must provide for articulation with work presented from the high school and does not preclude that possibility.

The Chicago plan assigns purposely so much of the total student's junior-college program to each orientation course that depth of scholarship can be maintained while integration of the whole and contacts with essential content of all important fields are made. Articulation with the high-school program is provided by the two-articulated series of orientation courses and the additional possibility of supplementing them or substituting for them a series of unit courses in certain departments. Some of the best available instructors are assigned to the orientation classes, and content which should eventuate in texts is being developed.

Stephens College has given certain instructors a year of special preparation on assigned orientation courses and is likewise doing intensive curriculum research.

The philosophy of orientation courses is one that should be thoroughly tested through experimentation and research. In it may lie an important contribution to the general education of elementary and secondary teachers.

*Honors courses.*—Honors courses are of various types. Usually superior students are excused from the routine of class attendance and specific assignments and are permitted to plan their own procedures under the general supervision of an adviser along special lines of interest. The meeting with advisers may be individual or in groups. The purpose is to develop self-help and initiative. Altogether 38 percent of 242 institutions reporting on the matter provide honors courses in one or more departments. More than one-fifth of those reporting honors courses stated that honors work was provided in all departments educating teachers; nearly one-fourth reported that they were established in a few departments. They occur most often at the senior-college level. They were found to be more common in universities than in colleges, least prevalent in the South, most prevalent on the Pacific coast and in New England.

According to Dr. R. C. Brooks<sup>3</sup> of Swarthmore, the origin of honors courses is to be attributed to the fact that the average student in most college classes is the pacemaker and that the gifted student is actually retarded in his potential education in such classes. Another cause for the innovation is the realization that student initiative and study habits suffer when spoon-feeding methods of education are employed. Honors courses in some form or other were found in many institutions and apparently were attended with varying degrees of success. The idea is essentially a part of the new plan at the University of Chicago for all students. Reed College selects and eliminates students but offers honors-course methods to all. In most institutions, however, the honors-course option is limited to the superior students who may desire it, in certain departments only. The plan seemed eminently successful at Reed College, at Swarthmore, and other institutions where the faculty favored the idea and worked intensively at the plan. The Chicago plan involving other features as well is likewise succeeding. The writer was impressed with the wide preparation, the critical attitude, the open-mindedness, fairness and frankness of discussion, which he found in an honors group visited at Swarthmore. He was told that the secret of success beyond the ability of instructors to use the plan lay in the requirement that students write their reactions in formal papers to be read to groups for criticism. In some other institutions the honors idea was not always pronounced a success by instructors themselves. Some reasons for nonsuccess seemed apparent: Older men with prestige

<sup>3</sup>Brooks, R. C. *Reading for Honors at Swarthmore*, New York, N.Y. Oxford University Press, 1927, p. 2.

delegated this work to younger men; many wished to avoid this time-consuming innovation as much as possible; students' past habits in "in-take" education had habituated them to dependent methods of education and produced a distaste for independent effort.

It would seem that the honors courses idea successfully carried through should offer training of a very superior type to those students, particularly superior students, who should be developed in the independent scholastic activities that characterize a master teacher.

There is general agreement that the plan results in higher unit costs especially if applied to all classes. When it is limited to upper-classmen where classes are often small under any plan or to a selected portion of a student body, some believe that the difference in cost may be slight, although Brooks of Swarthmore points out that the essential consideration should not be an economic one but rather the contribution to the learning of students.

*Tutorial plans.*—Tutorial plans also aim for a new motivation of scholarly work for student independence in scholarship and for more individualized instruction. They provide instructors as tutors of the individual students, whose work they supervise for the purpose of promoting scholarship and effective habits of study.

The tutorial plan is exemplified by the practices at Harvard University. Here it is offered not only to honor students, but as a part of the program of all men. Each tutor may handle as many as 20 or 30 students. There are weekly conferences, and the preparation consists of following a reading course. The courses terminate in general examinations. "Honors" are reserved for those who attain real distinction—about 30 percent. Under the tutorial plan a student is probably a little more supervised than under the honors plan, although the two as interpreted by various institutions appear to have much in common. Twenty-two percent of 297 institutions reporting on the matter, made up of 17 percent of the universities, 21 percent of the colleges, and 31 percent of the junior colleges, used more or less some form of tutorial instruction. About one-half of these reported that the plan is used in a few or more departments during the entire undergraduate period, 42 percent at the freshman level, and 20 percent at the graduate level.

Tutorial plans vary more or less, but the objectives are the same: (1) To give more attention to the undergraduate as an individual; (2) to treat him as a whole being; (3) to make him self-educating; and (4) to get him initiated into habits that will provide further self-education beyond college.

Typical criticisms are current where it is used. More believe in it than are willing to participate in it. In many cases it becomes very formal. Some believe it costs too much. Work is often done by men of lower ranks with no teaching experience, some of whom let

students shift too much for themselves. Some expressed themselves as frankly doubtful of its ultimate success. Others pointed to its need at all odds because college should not continue the easy spoon-feeding method of typical high schools. In general, much support for it was found where it is being used. The plan has been on the increase for some time. There can be no doubt that on the whole it would result in greater unit costs. Its advocates often deny this but actually end by saying that if it results in the objectives held for it the educational value transcends economic considerations.

*Comprehensive tests and examinations.*—The colleges and universities have recently shown an increased interest in both oral and written comprehensive examinations. The movement for the integration of the liberal education and attempts to expose the idler have emphasized the comprehensive examination at the close of the junior-college level and again at the close of the major sequence of concentration at the senior-college level. The movement for better articulation between high school and college is emphasizing comprehensive placement tests at entrance. There is an increase in the number of schools, as for example the University of Minnesota, the University of Michigan, and others which give qualifying examinations to prospective teachers in the major teaching subject before admission to courses in special methods and practice teaching is permitted. The value of "the take-and-leave-it courses" is being attacked by these comprehensive examination set-ups which challenge the student to review, to retain, and to integrate what he has had for a final check-up independent of the type and time of courses taken.

The comprehensive examination movement has its critics too. A sampling of objections raised by instructors who were interviewed is worth recording as presenting certain difficulties: "Some students regard them as clear additions to already heavy requirements"; "Senior courses lose morale as the senior comprehensive examinations approach"; "Courses are elected with reference to the general examination"; "It is difficult to vary questions"; "The senior year becomes a cramming year"; "The examinations become supervising controls of the narrowest sort"; "The tests test facts, not power"; "In some tests the superior student cannot show his power"; "Require too much and expect too little"; "You can't bottle 3 years into 3 hours."

The sponsors of the movement are introducing such innovations as the preparation of examinations by a central board (Chicago), the outside examiner (Swarthmore), longer comprehensive examination (Chicago), qualifying examinations to enter certain education courses (Minnesota and Michigan), and examinations set up in terms of objectives to test competency (Ohio State).

Two-thirds of the universities that reported, 30 percent of the colleges, and 11 percent of the junior colleges provided comprehensive examinations in some form. Altogether 98, or 32.7 percent, of 300 institutions reported the use of the comprehensive examination. Of those 98 the percentages having comprehensive examinations specified times are as follows:

Time	Percent	Time	Percent
End of fourth year.....	53	End of second year.....	11
Close of M.A. work.....	36	End of third year.....	6
Close of doctorate.....	19	Beginning of graduate work.....	3
At entrance.....	13		

There is no doubt that the philosophy of placement, integration, high standards, the attainment of specific objectives, the test of competency, and the improvement of marking reliability which underlie the testing movement are most acceptable in the teacher-education program. The practical difficulties in the way of achieving these aims present a challenging problem worthy of the best talent on test construction and curriculum construction.

An extensive study of the examination movement has been made recently by Edward S. Jones to which the reader is referred.<sup>4</sup>

*Plans to develop student initiative in colleges and universities.*— Honors courses, the comprehensive examinations, tutorial plans, or modifications of all these are on the increase in American colleges. They are administrative set-ups which have back of them a philosophy which approves high standards of work, opportunity for the gifted, integration of knowledge, emphasis upon wide and independent reading, and consequently an increased use of the library, but particularly, student initiative in acquiring an education in contrast to being given an education. The ultimate success of these plans will depend upon going beyond the mere administrative set-up, which may become formalized, by doing much-needed curriculum research on what knowledge and what habits of study contribute most to general culture and how the results attained by the new plans compare with other procedures. Attempts should be made to attain a high quality of scholarship and these scholarly habits of work and thought which must largely be concomitants of the method used for obtaining the scholarship and which are still difficult of accurate measurement or evaluation. If the ideals of the plans are realized they provide promising improvements or suggestions for improvements in the method of educating teachers to become the scholars they should be.

<sup>4</sup> Jones, Edward S., *Comprehensive Examinations in American Colleges*, New York, N.Y. The Macmillan Co. 1933. 436 p.

## CHAPTER V SPECIALIZATION AND DIFFERENTIATION FOR TEACHING

### GENERAL CONSIDERATIONS

It has already been pointed out in the chapter on curriculum practices that teachers are prepared for many types of positions in elementary, secondary, and higher education. Any observer of trends has noted during recent years a tendency to limit the certification of teachers more and more to specific levels and to subjects for which definite preparation has been made and to eliminate blanket certification. It is probably true that, as one goes from elementary teaching to college teaching, the amount of required specialization in subject matter to be taught increases; that is, the subject-matter resources to be tapped in elementary teaching are broad but not as specialized and technical, while the subject-matter resources to be tapped in college teaching are specialized and often technical. The high-school teacher occupies an intermediate position. This does not mean necessarily differences in amount of total preparation for elementary and secondary teachers so much as a possible difference in emphasis upon general and specialized education. To compensate for specialization, the elementary teacher has to learn about teaching not in one or two but in many fields.

There is also one concept quite generally held in college and university circles, which requires specialization in at least one field as a major or principal sequence for anyone who would be liberally educated. It is held that anyone who would appreciate the volume of human knowledge must have not only breadth obtained through a general education, but also at least a sample of the depth of human knowledge, an insight into and appreciation of the methods by which knowledge is discovered and a conception of the complexity of the types of problems at the outer edge of research together with a fuller grasp of the known facts of one field. Practically all institutions require a major of all who would attain a liberal education. To the teacher, at least of secondary subjects, the required specialization for teaching is prescribed in the field of major study for a liberal education and the two purposes are thus served together. For both purposes a second or even a third related field is often prescribed to buttress the major and also to give insight into the interrelationships of knowledge.

There are those who do not hold this view regarding the necessity of specialization for secondary teaching. Their contention is that heavy concentration in only one high-school teaching field or even a narrower college-subject department is essential for the appreciation of the depth of all knowledge, but that the breadth and depth of subject matter in high schools is not so great but that a selected person with good habits of study can carry on efficiently in those fields related to his major in which he has had introductory courses. They also hold that contact with the kind of instructors who teach advanced courses and who are working on the frontiers of research is more valuable if carried on far into one narrow major than the attempt to cover two or three broad fields without great penetration of any. However, the complaint in college circles against lack of scholarship in American high-school teaching is general. The complaint of insufficient grounding of the young teacher is sometimes made also by superintendents of schools. It would therefore seem to be safe practice, until more evidence is obtained on the issue, to require thorough preparation in the subjects to be taught in high school. This clearly calls for preparation in at least 2 of the 15 broad fields. Intensive specialization in one department to appreciate the depth of knowledge is not necessarily thereby precluded.

A very practical argument in favor of fuller preservice specialization in all subjects to be taught also lies in the fact that the heavy extra-class activities of the average high-school teacher consumes so much additional time and energy that his resources for teaching must be at his immediate command with a minimum of daily preparation.

#### NUMBER OF TEACHING FIELDS

The typical high-school teacher usually gives instruction not in one subject corresponding to a college department like chemistry, or zoology, economics, English literature, English composition, nor usually in one broad high-school teaching field like science or social studies, but rather in two or more such broad high-school teaching fields. A classification of these high-school teaching fields that was based upon current programs of study resulted in the following list of 15:

- |  |  |
|--|--|
| 1. Agriculture.  | 9. Health and physical education.            |
| 2. Art and drawing.                                    | 10. Home economics and household arts.       |
| 3. Biological science.                                 | 11. Physical sciences.                       |
| 4. Business and commerce.                              | 12. Mathematics.                             |
| 5. Education and teacher training (rapidly going out). | 13. Music.                                   |
| 6. English — literature, composition, and speech.      | 14. History, sociology, and economics.       |
| 7. Classical languages.                                | 15. Trades, industries, and industrial arts. |
| 8. Modern languages.                                   |  |

Corresponding elementary teaching fields are usually differentiated by levels rather than by subjects and are commonly held to be

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Kindergarten.</li> <li>2. Primary or Kindergarten and primary.</li> </ol> | <ol style="list-style-type: none"> <li>3. Intermediate grades</li> <li>4. Upper grades.</li> </ol> |
|---|--|

Related to these elementary and secondary teaching fields are general supervisory and administrative positions like principalships, superintendencies, supervision, and certain types of special work such as teaching of subnormal or physically handicapped, guidance, school librarianships, and the like.

These teaching fields do not parallel the usual college departments of study as listed in catalogs. Some, like mathematics or a foreign language, are identical; but others of them, like English, science, or social studies, are necessarily broader in scope, covering the subject matter of a group of related college departments.

On a classification as broad as the above for secondary education, the responses of 82,626 senior high school teachers from all States and from every type of school revealed that 66 percent gave instruction in 2 or more of the 15 secondary teaching fields and that 34 percent of them gave instruction in only 1 of the fields. Of 34,257 junior high school teachers, 63 percent taught in 2 or more and 37 percent in only 1 of these fields. Many who reported present teaching in only 1 field have previously taught in 2 or more, so that the proportion of all teachers who have taught in 2 or more fields is still greater.

*Major prescriptions.*—The actual prescriptions of the 57 colleges and universities selected for intensive study indicate that this apparent need of secondary teachers in second and even third fields was not always recognized, as the following distribution of the number of fields prescribed in addition to the major will show:

Group	Number of prescriptions studied	Requiring a first minor		Requiring a second minor	
		Number	Percent	Number	Percent
1	2	3	4	5	6
Academic subject majors.....	577	290	50	108	19
Special-subject majors.....	122	37	30	14	13
Education majors.....	41	23	56	8	19
All.....	740	350	47	130	18

Of all the prescriptions, only 47 percent required a first minor, while 18 percent required a second minor. The frequent lag of curriculum requirements behind the opinions held by instructors is well illustrated in the fact that only 5 percent of 641 college and university instructors of all types in a special inquiry stated belief in the adequacy of a



major in science and another in social studies as required for the 5-year curriculum for secondary teachers at the University of Minnesota:

Science major:

1. One principal science—20 credits.
2. A second science—10 credits.
3. Introductory courses in three other sciences, usually a total of 10-15 credits.

NOTE: Six or seven credits in chemistry to be included above.

4. Mathematics (3 courses).

Social science major with emphasis in history:

1. History 30 semester-credits as specified.
2. Political sciences (3 courses as directed).
3. Economics (1 course).
4. Sociology (3 courses).
5. Geography—recommended, not required (2 courses). (A minimum of 10 semester-credits in 1 and 6-7 credits in 2 of the social studies outside of history is required.)

An alternative plan to the broad major with more specialization in one subject is approximately equal preparation in several subjects. A larger assignment of credits to a broad teaching major than to a narrow study major is probably inevitable and is one argument for 5 years of preparation for secondary teaching.

*The blanket certificate.*—Although progress in specialized certification has been made, most State departments of education have not defined the number of fields of concentration for secondary teaching nor restricted certification specifically to elementary levels or to secondary levels. At the time this study was made, 3 States specified at least one major; 8 additional States required a minimum varying from 8 to 18 semester-hours of preparation in one subject or teaching subject; 1 State required two majors, another asked for a preparation of 12 hours in each of two teaching fields or subjects; another, 10, 12, and 16 semester-hours in three subjects or teaching fields; 3 required one major and a minor; while 1 State prescribed one major and two minors. Altogether 20 States had some sort of limiting requirement. Twenty-eight States did not specify anything and in practically every case they accepted institutional requirements for graduation. At the present time 20 States restrict high-school teachers to subjects specifically named on their certificates; in 24 States a certificate to teach is a blanket certificate, giving license to teach in any secondary subject, and often at the elementary school level as well, without preparation for elementary teaching. This practice should be discontinued.

Regional accrediting associations have only recently begun to exercise some influence in assuring preparation in the teaching fields. For example, the North Central Association requires, by a recent standard, that teaching be limited to those fields in which not less than 15 hours of preparation have been received. The academic fields are broadly defined as English, a foreign language, science, and

social studies. The North Central Association limits teaching to the college major and minor. The Northwest Association specifies preparation of 12 semester-credits for teaching in accredited high schools, and also limits teaching to the major and minor fields of specialization. The other three accrediting associations make no such requirement.

TABLE 11.—Course work taken by 92 English majors in 27 subject fields

Subject field	Percentage of English majors with specified number of credits in subject fields										
	0	0+ to 2	3 to 5	6 to 8	9 to 11	12 to 14	15 to 17	18 to 20	21 to 23	24 to 26	26+
1	2	3	4	5	6	7	8	9	10	11	12
<b>High-school teaching subjects:</b>											
1. Agriculture.....	97	2									1
2. Art.....	61	10	17	9		2	1				
3. Commercial education.....	93	7									
4. English.....											
5. Foreign language—classical.....	58	1	3	16	2	11	1	7	1	6	9
6. Foreign language—modern.....	7		1	7	7	31	12	12	4	7	12
7. Home economics.....	96	1	2	1							
8. Industrial arts.....	97	1	1		1						
9. Mathematics.....	39	2	8	45	4	2					
10. Music.....	69	14	9	3	1	1					
11. Physical education.....	39	14	35	10	2				1		2
12. Science—biological.....	33	7	10	26	11	13					
13. Science—general.....	97		1	2							
14. Science—physical.....	48	2	6	30	3	10		1			
15. Geography.....	83	3	3	10		1					
16. History.....	11	1	10	26	3	15	13	11	10		
17. Economics.....	81	1	9	9							
18. Political science.....	68	6	6	17	1						
19. Sociology.....	50	2	13	24	7	3	1	1			
20. Library science.....	94	4		2				1			
<b>Nonhigh-school teaching subjects:</b>											
21. Philosophy.....	52	3	20	21	4						
22. Psychology—general.....	28		27	32	8	4					
23. Religion.....	55	8	13	16	4	3		1			
24. Education and educational psychology.....			1	12	26	21	19	8	4	4	5
25. Special methods.....	31	13	39	11	3	2	1				
26. Student teaching.....	25	8	50	16	1						
27. Miscellaneous.....	61	19	9	4	2	1	2	1	1		

The prevalence of more or less loose practice regarding the regulation of teaching in fields for which there has been little or no preparation is a larger issue than merely teaching combinations in senior high school or 4-year high school subjects. Data collected by Dr. Gamble in the personnel study of this survey show that only the following percentages of each type of elementary teacher received most preparation in the field taught: Rural, 63 percent; upper grade, from 58 to 70 percent, the percentage increasing with the size of town; intermediate grades, from 70 to 79 percent, the percentage increasing with the size of town; and kindergarten-primary, from 80 to 85 percent, the lowest percentage being in the largest cities. This leaves from about one-fifth to two-fifths of the elementary teachers teaching at elementary levels for which they had not given first preference in preparation, a somewhat better situation than might have resulted from the loose certification standards that are prevalent.

It is time that certificates be more restricted and based upon preparation for specific levels and specific subjects. Certainly the minimum restriction to elementary education and to secondary education is needed, the elementary certificate to state specifically rural, kindergarten-primary, intermediate, or upper grades, or combinations of these, and the secondary certificate to specify the fields satisfied with specific preparation.

*Chance concentrations.*—It is quite possible, however, that teachers graduating from institutions which have no formal minor requirement may still through chance or by choice have sufficient credits to teach in more fields than the major. To ascertain the extent that this may be happening, the records of 92 students who had majored in English were examined, with the results shown in table 11.

If the average minor of 18 hours be taken as a standard for qualification, it will be seen that outside of the major these 92 students had 18 or more hours 71 different times in the 20 high-school teaching subjects listed; if 15 hours (the North Central Association standard) be made the standard, the students had 15 or more hours 99 times; and if 12 hours (the Northwest Association standard and the median for second minors) be taken as a minimum, these students equalled or exceeded it 188 times.

*Contacts made with different high-school teaching subjects.*—A further study of the extent to which prospective teachers actually did make contact with high-school teaching subjects was possible with the analysis of the 1,671 transcripts collected from 24 representative colleges and universities. The classification of subjects was made for another purpose, hence it does not correspond to the classification of teaching fields recommended in this section. It included the following subjects:

- |                                |                         |
|--------------------------------|-------------------------|
| 1. Agriculture.                | 11. Industrial arts.    |
| 2. Art.                        | 12. Library science.    |
| 3. Commercial education.       | 13. Mathematics.        |
| 4. English.                    | 14. Music.              |
| 5. Economics.                  | 15. Physical education. |
| 6. Foreign language—classical. | 16. Science—biology.    |
| 7. Foreign language—modern.    | 17. Science—general.    |
| 8. Geography.                  | 18. Science—physical.   |
| 9. History.                    | 19. Political science.  |
| 10. Home economics.            | 20. Sociology.          |

If 15 semester-credits, i.e., half of a full year's work, be considered adequate preparation to teach in a field, particularly if related to a major, it was found that the distribution of students according to the number of fields or subjects, including the major, in which they had completed 15 or more credits was the following:

Number of subjects	Percent	Number of subjects	Percent
None.....	1	3.....	26
1.....	20	4 or more.....	3
2.....	50		

It is evident then that a large majority of graduates have had some concentration in at least a second subject. Under these circumstances it would appear that the North Central Association standard is not too high and that, if necessary, the requirement might be placed at 18 credits without serious embarrassment. However, it should be kept in mind that just any 12, 15, or 18 hours in a subject or field taken by chance might and probably would not represent a preparation equal in value for teaching to a series of courses of equivalent credit selected with special reference to future teaching needs. It is for this reason that formal minor requirements for teachers have their place and that attainment of preparation in a second field ought not be left to chance.

Unquestionably superintendents and principals in the selection of teachers have often failed to study closely their preparation. College and university placement officers interviewed during the Survey often criticized the careless ways that students with personality are picked up by some superintendents without check on the preparation in the second or third subjects they are asked to teach. The combined effect of better certification laws, better institutional prescriptions, and more careful selection and assignment of teachers by superintendents will improve the situation.

A further help might be a wider adoption of the 6-year secondary school (junior-senior high school plan) in smaller situations, which would narrow the number of fields of teaching by increasing the range of the level. This plan has its value for such schools; however, college and university prescriptions do not yet make suitable preparation, since in the professional treatment of content and method and in observation and student teaching for prospective secondary teachers the first two junior high school years are generally overlooked, according to information gathered from bulletins and during conferences. The reason for this neglect is that the major portion of seventh- and eighth-year pupils are still being educated under upper-grade organization plans rather than under junior high school plans, and consequently they are taught by teachers prepared for elementary education in upper grades. The demand for junior high school teachers as such is limited. There is a strong tendency among employing officials to regard the teacher prepared for and experienced in elementary teaching a more successful type in junior high school work than the teacher prepared for secondary education without elementary school preparation or experience. Better understanding of the adolescent as he emerges from childhood, better insight into his actual achievement in elementary work with its limitations and need of further perfecting, and consequently an alleged better success in handling the work are usually offered as the reasons. It may be that when secondary teachers are prepared for these levels, as well as

for senior or 4-year high schools, the secondary teacher's preparation may prove adequate. The junior high school age is perhaps the most difficult to handle of any period. Both the importance and the difficulty of this period demand some specific preparation of anyone asked to do the work.

*Teaching field combinations.*—The selection of teaching field combinations is best based upon related subject matter but it may also be based upon the combinations which most often occur in practice. Home economics and science, two foreign languages, English and a language, mathematics and science are often chosen because related. Studies on actual teaching combinations show in table 12 that there is some observance of the principle of close relationship, but every conceivable combination does actually occur. No doubt a definite knowledge of what combinations actually occur would have some value to prospective teachers in planning programs and to those who guide students in program making. To this end information was gathered from 52,768 senior high school or 4-year high-school teachers in every State by Doctor Gamble, whose findings are presented in another section of the Survey report. Part of the results are shown in table 12, which is an adaptation from more extensive tabulations to show only the four subject fields most frequently taught in combination with the respective majors and the percentage of teachers teaching all other possible combinations.

As tabulated, there were no possible combinations for subjects listed which did not occur among 52,768 senior high school teachers except agriculture and classical languages or foreign languages. The varied sizes and organizations of schools, the limitations of faculty size and preparation, and continual turnover call for every sort of adjustment. Furthermore, as just noted, unrestricted blanket certification in many States makes it possible under local pressures for persons to teach subjects in which they have had little or no preparation.

Table 12 shows that for most major teaching fields there is another, often a logical, combination which in practice occurs in from 20 to 45 percent of the combinations, with an average for these first combinations of 33 percent. The second rank of most frequent combinations extends from 10 percent to 30 percent, with an average of 20 percent. More than half of the combinations occur with only two other fields. The average of third-rank combination subjects is 13 percent; and of fourth-rank combinations, 9 percent. Beyond this point it can be said that every other sort of combination occurs with each major. These constitute one fourth of all cases.

TABLE 12.—Major and highest 4 minor teaching combinations if taught by 5 percent or more of senior high school teachers instructing in 3 or more fields

Major teaching field and number of cases	Four highest minor teaching fields in combination with majors				All other per-cent teach-ing
	First	Second	Third	Fourth	
	Subject	Subject	Subject	Subject	Per-cent teach-ing
1					9
Agriculture and forestry (1,260)	Biological science.....	Physical science.....			7
Art and drawing (754)	Trades and industries.....	English.....	Trades and industries.....	History, sociology, eco-nomics.....	8
Biological sciences (3,443)	Physical science.....	History, sociology, eco-nomics.....	Mathematics.....	Home economics.....	7
Business and commerce (4,180)	History, sociology, eco-nomics.....	English.....	do.....	English.....	11
Education and teacher training (281)	do.....	do.....	do.....	Modern languages.....	6
English (11,190)	English.....	do.....	do.....	Classical languages.....	8
Classical languages (3,470)	do.....	Modern languages.....	Classical languages.....	Mathematics.....	7
Modern languages (3,419)	do.....	do.....	History, sociology, eco-nomics.....	do.....	11
Health and physical education (3,012)	History, sociology, eco-nomics.....	Classical languages.....	History, sociology, eco-nomics.....	do.....	8
Home economics or household arts (3,117)	Biological science.....	Biological science.....	English.....	do.....	10
Physical sciences (3,357)	Mathematics.....	English.....	Physical sciences.....	do.....	23
Mathematics (9,941)	Physical science.....	Biological science.....	Physical sciences.....	History, sociology, eco-nomics.....	20
Music (740)	Physical science.....	History, sociology, eco-nomics.....	History, sociology, eco-nomics.....	do.....	21
History, sociology, and economics (6,594)	English.....	History, sociology, eco-nomics.....	English.....	Mathematics.....	18
Trades and industries (1,700)	do.....	do.....	do.....	do.....	6
Mathematics.....	Mathematics.....	Mathematics.....	Art and drawing.....	Modern languages.....	7
History, sociology, eco-nomics.....	History, sociology, eco-nomics.....	Art and drawing.....	Physical science.....	Classical languages.....	7
Total percents (total, 82,768)	20	18	14	11	11
	20	15	11	10	41

History and social sciences occur in combination in 20 percent of all cases; English in 18 percent; mathematics in 11; physical sciences in 10; modern languages in 9; biological sciences in 9; and classical languages in 8 percent. These are the ranking subjects, the other 9 occurring in only 4 percent or less of the cases and constituting only 15 percent of all combinations. A strong effort should be made to promote, in fact require, a logical relationship in these combinations. It would appear from the data presented that all institutions purporting to prepare secondary teachers should define the fields of concentration offered to teachers to correspond to the types of teaching jobs into which they will go. They should require preparation in at least two of these fields.

Likewise, all State departments which still permit teaching in fields of little or no preparation should do away as soon as possible with the blanket certificate. They should insist upon minimum preparation in at least two, preferably related, high-school teaching fields to meet the needs of conditions as they now exist in secondary education.

#### AMOUNT OF PREPARATION IN A TEACHING FIELD

Assuming a general education as discussed in a previous section, the amount of specialization necessary as optimum preparation in a teaching field is a controversial point. Some maintain that high concentration will guarantee best teaching results; others emphasize a program of general education without much further specialization in teaching or study subjects for teachers as the best professional education. Both groups would theoretically assert that sound scholarship and the command of instructional content in teaching fields is necessary and basic to good teaching but they differ in the method of attaining it. The one group not large in numbers emphasizing general education asserts that beyond a modicum of college preparation above what has already been covered in high school, there is no demonstrated superiority of the teacher with specialized advanced courses over the teacher who does not have them. So generally has specialization been assumed as necessary for secondary teaching efficiency, that specific studies of acceptable scientific value have not been made to prove or disprove the contention that specialization in some departments like mathematics, chemistry, physics, etc., not only carries teachers far afield from the secondary level but also limits too much the general education, and that what is needed to insure accuracy of scholarship at the secondary level rather than numerous advanced courses in a major is a more careful selection of candidates for teaching from those who do a high quality of work in all that they do. On the other hand, those who believe in much

concentration in a major or minor frequently blame an alleged weakness in secondary preparation of college students to unprepared teachers in subject matter.

*The amount prescribed.*—Present practice in 57 institutions probably representative of better policies among colleges and universities are presented in table 13 and may be briefly described as follows: In academic subjects the median major calls for 27 semester-credits; in the special and vocational subjects, 36 semester-credits; and in education majors 26 semester-credits. The range of prescriptions among individual institutions extends from 14 to 80 credits.

The median first minor, required in less than one half of the prescriptions, is 16 semester-hours; the median second minor is 13 semester-hours.

With respect to the size of majors, however, subjects have characteristic central tendencies within usually wide variations. These tendencies are shown in table 13, which gives data on 23 of the more representative subjects selected from a large number listed in bulletins to illustrate the trends.

TABLE 13.—*The size and range of majors in 57 selected colleges and universities probably representing better practices*

Department	Institutions offering major		Median number of semester-credits prescribed for a major	Range of institutional prescriptions for a major
	Number	Percent		
1	2	3	4	5
Agriculture.....	14	25	49	20-70
Music.....	57	65	45	18-80
Physical education—men.....	27	47	38	21-60
Home economics.....	28	49	37	20-51
General science.....	12	21	37	18-48
Social studies.....	18	32	35	20-54
Physical education—women.....	27	47	33	14-55
English.....	57	100	30	18-41
Commercial education.....	15	26	30	18-64
Educational administration and supervision.....	11	19	30	24-59
French.....	57	100	28	18-53
Mathematics.....	57	100	28	17-40
General education.....	14	25	26	18-34
Elementary education.....	16	28	29	18-47
Chemistry.....	56	98	25	18-38
Latin.....	54	95	25	18-38
Industrial education.....	11	19	24	16-47
Biology.....	37	65	24	15-65
Botany.....	33	58	24	18-30
Physics.....	52	91	24	17-40
Zoology.....	33	58	24	18-37
History.....	53	93	24	18-36
Art.....	34	60	24	18-60

This table should be read as follows: Of 57 institutions, whose catalogs were studied, 14 or 25 percent offered a major in agriculture. The median major consisted of 49 semester-credits in a range of institutional variations which extended from 20 to 70 semester-credits.

According to the entries of table 13, highest prescriptions occurred in special subjects like agriculture, music, physical education, or home economics, which require the development of practical skills and the

mastery of a broad technical content for which, unlike the older academic subjects, high-school preparation has often been limited. There is thus a reasonable basis for these larger majors. Near the top in the size of majors were also the broader teaching field majors like the social sciences or general science which represent a combination of courses from several college departments. The median academic-subject prescription is 25, about 10 semester-hours less than for the special subjects. Departmental majors in academic fields show a strong tendency toward a smaller prescription if judged by central tendencies; yet there is enough variation among institutions to give each subject a wide range. The size of majors by subjects may be studied in column 4.

*Comparison with prescriptions in teachers colleges.*—A comparison of the size of majors with those of teachers colleges may be made by those interested by consulting table 13, part II, on page 70. One essential difference in the practices regarding the content of majors should be kept in mind when comparisons are made, namely, that courses called special methods in a subject in the case of colleges and universities were usually found classified as education, because State departments count it so in certification practice, while in teachers colleges where State certification is often on a basis of curricula completed, special methods courses are more often classified as part of the subject-matter major itself.

TABLE 14.—Comparison of major prescriptions in 17 subjects between colleges and universities and teachers colleges

Field	Prescription in semester-hours			Field	Prescription in semester-hours		
	Colleges and universities	Teachers colleges	Teachers colleges less special methods		Colleges and universities	Teachers colleges	Teachers colleges less special methods
1	2	3	4	1	2	3	4
English.....	30	30	27	Art.....	24	26	20
French.....	28	24	22	Commercial education.....	30	31	28
Mathematics.....	28	26	24	Home economics.....	27	24	11
General social studies.....	35	35	34	Industrial arts.....	24	32	28
History.....	24	26	24	Music.....	45	34	17
Biology.....	24	25	24	Physical education:			
Chemistry.....	25	25	23	Men.....	28	28	20
General science.....	37	35	33	Women.....	23	30	25
Physics.....	24	26	25	Average.....	31.5	29.1	25.0
Agriculture.....	40	28	26				

For example, a course entitled "the teaching of history" is classified as a part of the history major in teachers colleges, but it is classified as a part of education in colleges and universities. "The teaching of reading" is classified as a part of English in teachers colleges, but

as education in universities and colleges. With this in mind it can be said with certainty that the size of majors in general is larger in pure subject matter in colleges and universities than it is in teachers colleges. It is larger first of all in average total number of credits, as can be seen from the preceding prescription in 17 common fields in which the Survey assembled comparable data, table 14.

Since the university and college major does not include special methods, the majors of the teachers college need to be corrected for comparison. The correction is only approximate, being based upon the median size of the special-methods course in each field and the percentage of institutions prescribing special methods. The college and university majors are then larger by an average of 6 credits in 13 fields, the same in 2, and smaller in 2 by an average of 2.5 credits. For all fields the colleges and universities require an average of 5.6 more credits in subject matter than do the teachers colleges.

*Uniform prescriptions.*—A considerable number of institutions have a uniform prescription for all majors. Such a practice is probably not defensible in the light of actual teaching needs, the variation in secondary-school emphasis on different subjects, individual differences, and present conditions. The future teacher of mathematics, of English, of history, or of language comes to college with from 1 to 3 years of secondary preparation, while the future teacher of art, of physical education or of agriculture has had little formal precollege background. There are no data that can be presented here, but the general opinion prevailing in language departments in the institutions visited during the Survey was that without a strong previous high-school preparation or a speaking knowledge on the part of the prospective teacher, the usual college major requirements result in the graduation of language teachers who are weak in such necessary qualifications as ability to read or write the language easily and to speak it fluently and with correct accent, knowledge of the literature, and appreciation of the culture of the peoples using the language. Again, the teaching of social science or of natural science is broad and represented in college by many departments. Other fields like mathematics are single departmental majors and the path of progress is specific and well defined. Under these conditions the blanket major requirement of the same number of hours (say, for example, 24), in all majors is hardly justified.

Another important consideration to be recognized in a uniform credit requirement of all students in the same field for a major is the variation in the number of entrance units presented. A study of science units presented from high school by students in a class at the University of Chicago in an orientation course, *The Nature of the World and Man*, for example, revealed that of 116 students in the course,

Twenty had one subject only and that was either chemistry, physics, biology, or introductory science; Forty-four students presented 2 high-school sciences in a variety of 7 different combinations, 28 offered 3 science subjects in 8 different combinations, and 23 offered 4 science subjects in 5 different combinations. One student offered 5 subjects, including chemistry, physics, biology, physiography, and introductory science.<sup>1</sup>

Since the University of Chicago attracts students from many high schools it is safe to say that this problem of unequal quantity as well as the additional consideration of unequal quality of preparation at the time of entrance is general and hardly justifies the prescription of the same number of credits of work for all students who may choose to major in a given field irrespective of previous work completed. It raises not only the question of prescribing equal number of credits for concentration but also involves high-school and college articulation, in general. It is an argument against fixed college-credit requirements for a major which does not recognize previous preparation at the time of entrance or of final competency at its conclusion.

Thus, there is a strong case (1) against the same number of credits for any major, and (2) also against the requirements of the same number of credits of all students in the same major field.

The median number of semester credits which 601 instructors of typical fields thought should be divided among the subjects of all teaching fields in which preparation is made, was 42 out of 125. The judgment of the middle 50 percent, specified from 35 to 48 semester-credits in a range which extended from none to more than 50 percent of the curriculum.

*The amount of actual specialization.*—Prescriptions control the minimum amounts taken but students may actually tend to exceed these prescriptions in majors through use of their elective privileges. What 1,671 students took in 24 institutions selected for special study and how it compares with the prescription of 57 institutions is shown in table 9.

The median number of credits taken extended from 24 for physics to 60 for agriculture. Representative major fields, according to column 4, arrayed themselves in the following rank order of the median semester-credits taken: Agriculture, music, general social studies, home economics, art, elementary education, English, physical education—men, women—biology, French, chemistry, general education, history, commercial education, mathematics, botany, Latin, zoology, physics.

A few generalizations can be made. As in the prescriptions, the work completed in majors was largest in certain special subjects like agriculture, music, home economics, art, and physical education. Majors were heavier also in divisional majors like general social

<sup>1</sup> Reeves, F. W., Peik, W. B., and Russell, John Dale. *Instructional Problems in the University. The University of Chicago Survey*, vol. IV, Chicago, Ill., University of Chicago Press, 1932. p. 43-44.

studies or general science. They were smallest as a rule in academic subjects.

The average increase in median number of credits taken over the average median number of credits prescribed was 5 semester-credits for the 20 fields studied. While a general trend was probably reliably indicated, the increases or decreases listed should be considered in terms of the number of institutions represented, which in some cases was small. The correlation between median number of credits taken by students and the number prescribed by 57 institutions is +0.74.

*The test of competency.*—Whatever the theory of the extent of specialization or the type of content covered, all would agree that a prospective teacher must be competent in his field at the secondary level at the time of teaching, and must have a background of knowledge and habits of study which will be positive factors toward good instruction. The very theory back of specialization is posited on such competency. Since the State in most cases no longer gives subject-matter examinations for certificates, but has placed this responsibility upon the institution, it behooves institutions, so far as they are able, to place a guarantee of competency at least in subject-matter mastery upon its graduates. There is wide disparity in the range of accomplishment among those who pass courses. It is logical to maintain also that at least the secondary teacher must have a standard above that of barely passing. For all these reasons the practice of requiring a qualifying examination in the major field of specialization, a practice that is increasing, is to be commended at least for its purpose even if the practical realization of the purpose is difficult. In the College of Education at the University of Minnesota a candidate for the combined final course in special methods, observation, and student teaching during the senior year must pass a qualifying examination of competency in his field at the end of the junior year. This consists of two parts: Part I is a thorough examination of subject matter in a teaching field, based upon secondary level material. Part II is an examination on the same field in college-level subject matter. If deficient in either, the student is asked to make special preparation and has the privilege upon his return the following fall to take a second examination; failing that, he is barred from the course which is necessary in Minnesota to be certificated for teaching. In many institutions the increasing use of comprehensive examinations in the major serve in part the same purpose.

Another related problem is the distinction between major and minor field preparation when preparation is prescribed in two fields. If major preparation is necessary for competency in teaching, quite apart from its purpose to give a sampling of the depth of learning and of research methods, then minor field preparation may be inadequate. A child is entitled to equally good preparation by his teacher in any

field he may study. Before specialization for teaching purposes in 1 field is carried far, the problem of adequate preparation in 2 fields must first be settled. If the second teaching field is related to the first, the amount of concentration needed may conceivably be less. These considerations of adequate preparation contribute much to the growing demand for a fifth year and are in opposition to the practice of devoting that fifth year entirely to one teaching field or to education courses alone. The whole problem needs much study.

In conclusion of this section it can be said there is no criterion except the concept of competency in the subject matter of a field by which to judge the amount of work to be required in a major or minor. The average number of credits required in a major should vary from field to field, and within each field it should vary from student to student. A minimum standard which is high enough to be safe should be rigorously upheld for all students recommended for certification. High-school work should be supplemented with carefully articulated courses to economize the students' time. Duplicates should be omitted. The question of the size of the major is therefore not a matter of credits entirely, but a matter of meeting a high standard of final attainment and of functioning scholarship.

#### CONTENT OF MAJOR SEQUENCES

*The prescribed content.*—This is the question of what college courses should be prescribed in a major teaching field to persons planning to teach in public schools. An analysis of present practice, so far as it is actually specified in the catalogs of 57 universities, colleges, and junior colleges, may be seen in table 15, which lists those courses for each of 18 representative fields that are prescribed by 10 or more percent of those of 57 institutions which actually offered a major in the field.

TABLE 15.—*The courses prescribed for major students by 10 or more percent of 57 colleges and universities offering specified majors according to an analysis of catalogs*

Course	Per- cent	Course	Per- cent
<b>Biology (36 prescriptions):</b>		<b>Economics (48 prescriptions):</b>	
1. General biology.....	36	1. Principles of economics.....	90
2. Zoology.....	36	2. Finance.....	20
3. Botany.....	28	3. Labor problems.....	18
4. Heredity.....	14	<b>English (57 prescriptions):</b>	
5. Human physiology and anatomy.....	11	1. Composition and grammar.....	91
<b>Botany (36 prescriptions):</b>		2. English literature.....	67
1. General botany.....	55	3. American literature.....	18
2. Plant physiology.....	29	4. Language.....	14
3. Morphology.....	21	5. Speech—debate.....	12
4. Ecology.....	13	6. Literary types.....	12
5. State, local, and regional botany.....	11	7. General literature.....	11
6. Plant classification.....	11	8. General survey.....	11
<b>Chemistry (56 prescriptions):</b>		<b>French (57 prescriptions):</b>	
1. General survey.....	100	1. Elementary French.....	89
2. Qualitative chemistry.....	71	2. Intermediate French.....	77
3. Quantitative chemistry.....	71	3. Literature courses.....	65
4. Organic chemistry.....	59	4. Advanced French.....	51
5. Physical chemistry.....	23	5. Phonetics.....	12
6. Inorganic chemistry.....	14		

TABLE 15.—The courses prescribed for major students by 10 or more percent of 57 colleges and universities offering specified majors according to an analysis of catalogs—Continued

Course	Per- cent	Course	Per- cent
<b>History (57 prescriptions):</b>		<b>Home economics—Continued.</b>	
1. European history.....	49	10. Home sanitation.....	19
2. United States history.....	26	11. Budget and consumer problems.....	19
3. American history (United States or Latin-American history not specified).....	16	12. Selection and care of clothing.....	11
<b>Latin (43 prescriptions):</b>		<b>Industrial arts (10 prescriptions):</b>	
1. Literary readings.....	80	1. Drawing.....	50
2. Elementary Latin.....	55	2. History of industrial arts.....	40
3. Advanced Latin.....	46	3. Woodworking.....	40
<b>Mathematics (57 prescriptions):</b>		4. General shop.....	30
1. Calculus.....	77	5. General shop management.....	30
2. Geometry.....	77	6. Survey.....	30
3. Trigonometry.....	61	7. Machine shop.....	20
4. Advanced algebra.....	60	8. Applied ornament.....	10
5. Analysis.....	21	9. Printing.....	10
6. Algebra and trigonometry.....	16	<b>Music (44 prescriptions):</b>	
<b>Physics (52 prescriptions):</b>		1. Appreciation.....	77
1. General survey.....	92	2. Harmony.....	75
2. Electricity.....	37	3. Music education.....	59
3. Mechanics.....	33	4. Ear training and sight singing.....	50
4. Light.....	23	5. Technique—vocal.....	34
5. Heat.....	21	6. Elementary theory.....	27
6. General experimental.....	12	7. Analysis and form.....	27
<b>Political science (39 prescriptions):</b>		8. Technique—conducting.....	25
1. American government.....	49	9. Counterpoint and fugue.....	23
2. Comparative government.....	41	10. Instrumentation and orchestration.....	21
3. State government.....	21	11. Technique—piano.....	18
4. National government.....	18	12. Programs and recitals.....	16
5. Survey.....	15	<b>Physical education—men (26 prescriptions):</b>	
6. Municipal and county government.....	10	1. Examination and diagnosis.....	89
7. International affairs.....	10	2. Methods and coaching.....	77
<b>Agriculture (14 prescriptions):</b>		3. Administration.....	73
1. Crops and crop management.....	43	4. Theory course.....	69
2. Dairy husbandry.....	43	5. Leadership.....	65
3. Agricultural economics.....	36	6. Physiology and anatomy.....	62
4. Agronomy—soils.....	36	7. Health and hygiene.....	58
5. Animal husbandry.....	36	8. Survey (required).....	58
6. Horticulture.....	36	9. First aid.....	50
7. Agricultural sciences.....	29	10. Gymnastics.....	42
8. Farm management.....	29	11. Track.....	39
9. Farm mechanics.....	29	12. Football.....	35
10. Poultry.....	29	13. Baseball.....	30
11. Veterinary science.....	14	14. Basket ball.....	30
<b>Commercial education (13 prescriptions):</b>		15. Military science.....	30
1. Auditing, accounting, and bookkeeping.....	69	16. Swimming and diving.....	30
2. Commercial law.....	62	17. Plays and games.....	12
3. Shorthand.....	46	18. Programs and recitals.....	12
4. Typewriting.....	46	19. Wrestling.....	12
5. Business arithmetic.....	31	<b>Physical education—women (23 prescriptions):</b>	
6. Secretarial practice.....	31	1. Examination and diagnosis.....	91
7. Business English.....	23	2. Theory course.....	87
8. Office management.....	15	3. Survey (required).....	78
<b>Home economics (27 prescriptions):</b>		4. Physiology and anatomy.....	74
1. Food and nutrition.....	93	5. Methods and coaching.....	70
2. Home planning and management.....	82	6. Administration.....	70
3. Textiles.....	74	7. Health and hygiene.....	65
4. Costume and design.....	52	8. Leadership.....	65
5. Parental education and child care.....	52	9. Dancing.....	44
6. Home furnishings, equipment, and building.....	44	10. First aid.....	30
7. Garment construction.....	41	11. Gymnastics.....	30
8. Home care of sick.....	37	12. Plays and games.....	22
9. Survey course.....	22	13. Programs and festivals.....	17
		14. Rhythmics.....	17
		15. Swimming and diving.....	13

The table shows a surprising lack of consistency among institutions in the courses which they require for a major sequence. In four fields—agriculture, biology, history, and political science—no type of course was required by as many as 50 percent of the institutions offering the major. In 4 others—botany, economics, industrial arts, and physics—there was 1 course title and in 3 others—commercial

education, English, and Latin—there were only 2 course titles which were consistently found in the requirement for a major in half or more of the institutions. The greatest amount of agreement was found in physical education for men and for women (as many as 9 and 8 courses, respectively, were offered by 50 or more percent of the institutions) and in home economics (5 courses common to half or more of the prescriptions); chemistry, French, mathematics, and music each had 4 courses required by more than 50 percent of the institutions.

A bulletin study of this type is attended with many difficulties in attempting to sample or classify courses by their titles, but a picture descriptive of practices is probably given in most of the major fields. The exact rank order of the items is subject to limitations of sampling, and of subjective classification, particularly in the case of courses offered by only a few of the 57 institutions.

*Courses most often completed in representative majors.*—For representative major fields there was also made from transcripts a classification of the courses actually taken by students in the principal sequence. This list showing (1) the results of conformity by students with prescriptions as made in bulletins and (2) their exercise of elective privileges, presents a truer picture of actual preparation than does the prescription. The courses taken most frequently in the major are presented in table 16 for the 20 representative fields. The courses are listed in the order of the percentages of major students who took them. The distribution of the number of fields having specified number of courses which one half or more of the students majoring in the department took is as follows:

Number of courses taken by 50 percent or more major students:	<i>Number of subjects</i>	Number of courses taken by 50 percent or more major students—Contd.	<i>Number of subjects</i>
2.....	1	7.....	3
3.....	1	8.....	2
4.....	6	9.....	1
5.....	5	17.....	1
6.....	1		

The modal tendencies are for 50 percent or more of the teachers who majored in a field to have had 4 or 5 courses of similar description. The least agreement was found in biology and the greatest in agriculture. Table 16 is supplied so that persons interested in specific teaching fields may study the preparation of representative major students. Courses most commonly taken by teachers majoring in each field are discussed in chapter VIII, relating to innovations and trends in teaching fields.

TABLE 16.—Subject-matter courses in majors most frequently taken by 1,671 prospective teachers

Course	Per- cent	Course	Per- cent
<b>Botany (50 students):</b>		<b>Art—Continued.</b>	
1. General botany.....	80	4. Drawing and painting.....	54
2. Plant physiology.....	70	5. History of art.....	45
3. Plant ecology.....	64	6. Modeling.....	42
4. Plant classification.....	54	7. Art education.....	39
5. Morphology.....	52	8. Art appreciation.....	38
6. Histology.....	26	9. Lettering.....	37
7. Plant pathology.....	32	10. Mechanical drawing.....	36
8. Bacteriology.....	28	11. Ceramics.....	28
9. Evolution, heredity, and eugenics.....	20	12. Composition.....	26
10. Gymnosperms.....	20	13. Miscellaneous.....	25
(25 other courses.)	20	14. Applied design.....	21
<b>Chemistry (82 students):</b>		15. Art structure.....	18
1. General survey.....	100	16. Handicrafts.....	18
2. Organic chemistry.....	98	17. Freehand techniques.....	15
3. Qualitative analysis.....	90	18. Color harmony.....	13
4. Quantitative analysis.....	80	19. Art survey.....	12
5. Physical chemistry.....	49	20. Costume design.....	12
6. Inorganic chemistry.....	34	(4 other courses.)	12
7. Industrial chemistry.....	17	<b>English (100 students):</b>	
(3 other courses.)	17	1. Composition and grammar.....	99
<b>Commercial education (46 students):</b>		2. Shakespeare.....	73
1. Commercial law.....	80	3. English survey.....	70
2. Accounting.....	70	4. English period.....	61
3. Typewriting.....	70	5. American survey.....	60
4. Shorthand.....	67	6. Drama.....	52
5. Business English.....	48	7. Literature (general).....	51
6. Office management.....	39	8. Authors (e.g., Chaucer and Milton).....	42
7. Business organization and adminis- tration.....	35	9. Language.....	33
8. Secretarial training.....	28	10. Poetry.....	35
9. Salesmanship.....	28	11. Advanced composition.....	35
10. Geography of commercial produc- tion.....	24	12. Chaucer.....	34
11. Statistics.....	24	13. Dramatics.....	21
(4 other courses.)	24	14. English novel.....	20
<b>French (96 students):</b>		15. Speech.....	19
1. Literature.....	92	16. Periods (undif.).....	18
2. Composition.....	80	17. Narration.....	11
3. Conversation.....	70	18. Milton.....	10
4. Intermediate French.....	64	(27 other courses.)	10
5. French drama.....	46	<b>General education (84 students):</b>	
6. French novel.....	36	1. Student teaching.....	86
7. Elementary French.....	29	2. Educational psychology.....	81
8. Pronunciation and diction.....	26	3. Principles of education.....	68
9. Grammar and syntax.....	25	4. History of education.....	57
10. Phonetics.....	20	5. Secondary school methods.....	56
11. Romantic movement.....	17	6. Tests and measurements (general).....	56
(17 other courses.)	17	7. Elementary school methods.....	56
<b>History (100 students):</b>		8. Principles of secondary education.....	37
1. American history (general).....	91	9. Elementary school supervision.....	27
2. Modern history.....	83	10. Elementary school administration.....	27
3. English history.....	62	11. Secondary school administration.....	24
4. Medieval history.....	48	12. Educational sociology.....	19
5. Ancient history (Rome).....	36	13. Secondary school supervision.....	16
6. Ancient history (Greece).....	35	14. Elementary school curriculum.....	15
7. Recent United States history (since 1865).....	20	15. Principles of elementary education.....	13
8. Economic history of United States.....	14	16. Secondary school psychology.....	12
9. American government.....	12	17. Principles of junior high school edu- cation.....	12
10. International relations.....	12	18. Junior high school methods.....	12
11. Renaissance and Reformation.....	11	(30 other courses.)	12
(5 other courses.)	11	<b>General science (100 students):</b>	
<b>Physics (33 students):</b>		1. General physics.....	81
1. General physics.....	79	2. Inorganic chemistry.....	76
2. Electricity.....	64	3. General zoology.....	74
3. Light.....	61	4. General botany.....	73
4. Heat.....	58	5. General geology.....	61
5. Mechanics.....	52	6. Astronomy.....	27
6. Acoustics.....	36	7. Human geography.....	25
7. Magnetism.....	30	8. Organic chemistry.....	25
8. Radio.....	30	9. Industrial and commercial geogra- phy.....	24
9. Modern phenomena.....	27	10. Qualitative analysis (chemistry).....	23
10. Advanced laboratory.....	24	11. Physiology.....	22
(19 other courses.)	24	12. General chemistry.....	18
<b>Art (78 students):</b>		13. Biology.....	16
1. Drawing.....	78	14. Genetics and evolution.....	15
2. Design.....	65	15. Quantitative analysis (chemistry).....	14
3. Painting.....	62	16. Bacteriology.....	13
		(64 other courses.)	13

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TABLE 16.—Subject-matter courses in majors most frequently taken by 1,671 prospective teachers—Continued

Course	Per- cent	Course	Per- cent
<b>Latin (100 students):</b>		<b>Physical education—Continued.</b>	
1. Horace.....	83	7. Basketball.....	59
2. Composition.....	77	8. Gymnastics.....	51
3. Cicero.....	72	9. History of physical education.....	46
4. Pliny.....	52	10. Principles and programs.....	45
5. Livy.....	45	11. Anatomy.....	42
6. Catullus.....	45	12. Track.....	40
7. Virgil.....	39	13. Administration and organization.....	37
8. Tacitus.....	37	14. Leadership.....	36
9. Latin literature.....	36	15. Baseball.....	36
10. Terence.....	35	16. Physiology.....	36
11. Roman comedy.....	27	17. Health.....	29
12. Latin poetry.....	26	18. Playground.....	29
13. Martial.....	25	(21 other courses.)	
14. Plautus.....	18	<b>Physical education (women) (100 students):</b>	
15. Juvenal.....	18	1. General physical education.....	100
16. Ovid.....	18	2. Advanced athletics.....	100
17. Lucretius.....	16	3. Examination, diagnostics, and cor- rectives.....	74
18. Elegy.....	16	4. Hygiene.....	57
19. Roman drama.....	16	5. Gymnastics.....	55
(37 other courses.)		6. Dancing.....	51
<b>Music (98 students):</b>		7. History of physical education.....	47
1. Harmony.....	92	8. Anatomy.....	46
2. History of music.....	84	9. Health.....	43
3. Vocal technique.....	83	10. Swimming, diving, and life saving.....	42
4. Piano technique.....	78	11. Administration and organization.....	41
5. Conducting.....	70	12. First aid.....	41
6. Analysis.....	52	13. Physiology.....	37
7. Appreciation.....	52	14. Principles and programs.....	36
8. Chorus and glee club.....	51	15. Play and games.....	33
9. Ear training.....	51	16. Kinesiology.....	28
10. Orchestration.....	47	17. Leadership.....	27
11. Sight singing.....	42	18. Rhythmics.....	26
12. Violin technique.....	31	19. Playground procedure.....	26
13. Composition.....	30	(27 other subjects.)	
14. Counterpoint.....	30	<b>Social sciences (100 students):</b>	
15. Dictation.....	29	1. Principles of economics.....	65
16. Orchestral instruments.....	28	2. Sociology (introductory).....	63
(39 other courses.)		3. American government.....	60
<b>Biology (50 students):</b>		4. American history.....	58
1. General botany.....	64	5. History and government of Europe.....	57
2. General zoology.....	60	6. History of England.....	30
3. Human physiology.....	38	7. History (general).....	22
4. Biology.....	36	8. Social aspects of crime.....	20
5. Animal ecology.....	32	9. Municipal government and admin- istration.....	19
6. Genetics and eugenics.....	30	10. World history.....	19
7. Vertebrate anatomy.....	30	11. State government and history.....	18
8. Nature study.....	28	12. Social pathology.....	17
9. Plant ecology.....	28	13. The family.....	15
10. Bacteriology.....	26	14. Politics.....	13
11. Histology (zoology).....	26	(70 other courses.)	
12. Hygiene and sanitation.....	24	<b>Home economics (100 students):</b>	
13. Morphology of plant.....	24	1. Nutrition.....	80
14. Plant physiology.....	24	2. Household management.....	73
15. Taxonomy.....	24	3. Child care.....	69
(43 other courses.)		4. Clothing construction.....	61
<b>Mathematics (100 students):</b>		5. Textiles.....	61
1. Calculus.....	97	6. Costume history and design.....	56
2. Analytic geometry.....	82	7. Foods and cooking, general.....	54
3. College algebra.....	66	8. Household furnishing.....	48
4. Trigonometry.....	60	9. Related art.....	46
5. Theory of equations.....	40	10. Social problems.....	45
6. Elementary analysis.....	33	11. Clothing and textiles.....	34
7. Advanced calculus.....	32	12. Home management, house.....	31
8. Differential equations.....	31	13. Budget and consumer problems.....	29
9. College geometry.....	26	14. Foods, planning and serving.....	27
10. Projective geometry.....	20	15. Food marketing.....	26
11. Advanced algebra.....	20	16. Research and seminar.....	26
12. Advanced analytic geometry.....	18	17. Home care of sick.....	25
13. Mathematics of finance.....	15	18. Food and nutrition.....	25
14. History of mathematics.....	13	19. Experimental cookery.....	25
15. Advanced survey.....	10	20. Nutrition and dietetics.....	23
(16 other courses.)		21. Millinery.....	17
<b>Physical education (men) (100 students):</b>		22. Survey.....	16
1. General physical education.....	100	23. Abnormal nutrition.....	14
2. Advanced athletics.....	100	24. Household equipment.....	11
3. Examination, diagnosis, and cor- rectives.....	68	25. Household sanitation.....	11
4. Hygiene.....	62	(10 other courses.)	
5. Kinesiology.....	61		
6. Football.....	59		

TABLE 16.—Subject-matter courses in majors most frequently taken by 1,671 prospective teachers—Continued

Course	Per- cent	Course	Per- cent
<b>Agriculture (50 students):</b>		<b>Elementary education—Continued.</b>	
1. Principles of dairy husbandry.....	100	17. Diagnostic and remedial teaching (general).....	29
2. Supervision and experience.....	98	18. Special methods—health education (general).....	27
3. Agricultural economics—marketing of farm products.....	96	19. Mental tests (general).....	27
4. Animal husbandry—breeds and types of livestock.....	96	20. Special methods—arithmetic (elementary).....	27
5. Agronomy—farm crops.....	94	21. Special methods—art (elementary).....	27
6. Soils—fertility and types.....	94	22. Survey and introductory courses (general).....	26
7. Horticulture (general).....	94	23. Curriculum (elementary).....	26
8. Animal husbandry—types and market classes of livestock.....	92	24. Psychology of school subjects (elementary).....	24
9. Agricultural engineering—mechanics.....	92	25. Supervised study (elementary).....	24
10. Principles of vocational education.....	92	26. Child psychology (elementary).....	23
11. Agricultural economics—farm management.....	90	27. General methods (primary).....	21
12. Animal husbandry—feeding and management of livestock.....	88	28. Special methods—music (kindergarten and primary).....	21
13. Veterinary studies.....	84	29. Special methods—all elementary subjects (identity impossible).....	19
14. General poultry husbandry.....	80	30. Special methods—English (general).....	19
15. Principles of economics.....	74	31. Special methods—all subjects (primary).....	18
16. Educational psychology.....	70	32. Tests and measures (elementary).....	18
17. Agronomy—genetics.....	64	33. General methods—kindergarten.....	18
<b>Elementary education (109 students):</b>		34. Education sociology (general).....	17
1. Practice teaching (elementary).....	91	35. Special methods—industrial (elementary).....	14
2. Observation (elementary).....	91	36. Survey and introductory courses (secondary).....	13
3. History of education (general).....	77	37. Special methods—sociology studies (primary).....	12
4. Educational psychology (general).....	77	38. Miscellaneous (general).....	12
5. General methods (elementary).....	58	39. Statistical methods—general.....	11
6. Classroom management (elementary).....	54	40. Special methods—sociology studies (elementary).....	11
7. Principles of education (general).....	51	41. Special methods—children's literature (kindergarten and primary).....	11
8. Industrial arts (kindergarten and primary).....	45	42. Special methods—nature study (primary).....	11
9. Geography methods (elementary).....	39	43. History of education in United States (general).....	11
10. Survey and introductory courses (elementary).....	30	44. Supervision (general).....	10
11. Special methods—children's literature (elementary).....	36	45. Special methods—science (elementary).....	10
12. Special methods—physical education (general).....	36	(75 other courses)	
13. Special methods—reading (elementary).....	36		
14. Administration (general).....	36		
15. Special methods—music (general).....	35		
16. Education tests (general).....	35		

*The determination of content in major sequences.*—One specification for successful teaching, which no one would challenge, is that the teacher in a specific field must be able to develop pupils in the attainment of the specific objectives and aims of education that are assigned to that teaching field. These aims are much broader than only subject-matter aims; they involve knowledge and skills, to be sure, but also attitudes and appreciations which are in part emotional; few, if any, persons would challenge the specification that the teacher's background must be so adequate that he is accurate and scholarly in his statements and interpretations and he must be able to direct the learning of students so that, so far as his own influence on them can reach, they, too, are learning accurately what they should know. This requires background that goes beyond the texts and reference books which students themselves study, because the teacher not only must know a stage or period of development for which he is responsible,

but he should know what lies beyond. No matter how attained, whether in elementary, secondary, or college courses or through his own subsequent effort in preparation on the job, he must be ready for the teaching situations. It is a logical assumption, however, that he may need guidance and direction by responsible experienced instructors through this advanced level of higher education to put him into ready competency for all phases of his job, particularly in view of the fact that he will teach 4 to 7 classes daily in addition to having other duties. This is the argument not only for specialization but as well for paralleling in specialized preparation beyond the teaching level those phases of a field which are to be taught. To this end college instructors must know the range of responsibilities in a given future teaching field of their students; and majors and minors for teachers should be planned, at least in part, accordingly. On these assumptions there is no scientific evidence to approve or to disprove them; heretofore they have been almost axiomatic in their acceptance in theory.

In this connection an actual study of work prescribed and of work taken reveals in practice a nonconformity to the assumption. Individual students' records of secondary and college work completed for future teaching fields often reveal large gaps in preparation. For this there are two explanations: (1) College instructors in many cases do not clearly know the future needs of the teacher at lower levels, (2) the narrow range of college departments and the desire to keep up enrollments in their own departments. To remedy the first deficiency there are needed more studies and more attention to the studies of the kind made by Counts, entitled "The Senior High School Curriculum."<sup>2</sup> In this study he shows, for example, that in English, in terms of the units included during the four years of the average high school, a teacher might well be expected to instruct: Ninth-grade, tenth-grade, eleventh-grade, and twelfth-grade English, consisting of 45 percent composition and 55 percent literature. The total English composition time is devoted to written composition, oral composition, technical composition exercises, formal grammar, correct speech drills and games, spelling, vocabulary building, use of dictionary, encyclopedias, etc. The composition topics are drawn from personal experience, literature, current events, recreational interests, life of school, science and invention, vocations, civics, and ethics. Seventy-one selections listed that are used in high-school literature rank from "Silas Marner" used in 11 of the 15 institutions to 28 that are used in only 1 institution.

Besides these regular 4-year classes, Counts shows that the English curriculum includes public speaking, business English, journalism,

<sup>2</sup> Counts, George S. *The Senior High School Curriculum*. Chicago, Ill. The University of Chicago Press, 1928.

drama and dramatics, survey of literature, and debate, all of which were found in the curricula of from 4 to 11 of the 15 cities studied. Other special courses taught by the teachers of English offered by relatively fewer cities were debate, special English, short story, industrial English, grammar, advanced composition, Shakespeare, modern prose and poetry, modern poetry, modern books, normal and English.

In spite of these broad needs one finds institution after institution outlining majors, and transcript after transcript in which some of the major lines of an English teacher's work have been entirely ignored. Counts also points out that for English teachers there are new objectives which require ability to secure a more functional development of "reading interests" and "reading power" and also the need for a knowledge of new materials "to be selected because of their human rather than their narrowly literary appeal."

The need for a broad education in the entire teaching field as well as the need of a broad general education is clearly indicated. In smaller schools many of the above elements are packed into relatively few English courses which one person must teach.

A study of the English major requirements of table 15 shows that only two general courses are required by more than 18 percent of the 57 institutions which offer majors in English; these are English literature and composition and grammar. Speech or debate is required in only 12 percent of the prescriptions.

A study of courses actually taken in the English field by 100 majors in English shows that 7 courses were actually taken by more than 50 percent of the majors; these were composition and grammar, Shakespeare, English survey, English periods, American survey, drama, and general literature. Speech required in 12 percent of the institutions was taken by 19 percent of the English majors.

Similar studies were made by Counts in other fields and the reader is directed to the work cited. Its limitation for the present is that it is based upon practices in 1925 and is limited to offerings in 15 larger cities, but it is a type of study that should be carried out periodically and more extensively to keep higher institutions sensitive to the needs of teachers. Several studies of this type made by the National Survey of Secondary Education will do much to bring such needed information up to date. Particular attention is called to the following monographs issued by the Survey on instruction in the high-school fields of study.

Serial number	Title	Authors	Cost
1	2	3	4
1	Summary .....	Leonard V. Koss and staff .....	\$0 15
19	The Program of Studies .....	A. K. Loomis, Edwin S. Lida, and B. Lamar Johnson .....	15
20	Instruction in English .....	Dora V. Smith .....	10
21	Instruction in the Social Subjects .....	William O. Kimmel .....	10
22	Instruction in Science .....	Wilbur L. Beauchamp .....	10
23	Instruction in Mathematics .....	Edwin S. Lida .....	10
24	Instruction in Foreign Languages .....	Helen M. Eddy .....	10
25	Instruction in Music and Art .....	Anne E. Pierre and Robert S. Hilpert .....	10
26	Nonathletic Extracurriculum Activities .....	William C. Reavis and George E. Van Pyke .....	15
27	Intramural and Interscholastic Athletics .....	P. Roy Brammell .....	10
28	Health and Physical Education .....	do .....	10

<sup>1</sup> Available from Superintendent of Documents, Government Printing Office, Washington, D. C., at the price stated.

### FURTHER DIFFERENTIATION OF CURRICULA FOR SPECIFIC TYPES OF TEACHING POSITIONS

Thus far this section has been concerned with major and minor specialization for teaching positions but not with further curricular differentiations which are often advocated. These take place in a requirement of education courses, with further differentiation among these education courses for the respective levels and subjects of teaching, such as the psychology of elementary school subjects or the psychology of secondary school subjects, the teaching of science, or the teaching of primary reading. It may take place in specific subject requirements outside the major, such as rural sociology or rural economics for the rural teacher, introductory library science, courses in children's literature, book selection, or adolescent book selection for the English teacher, courses in sociology and economics for the superintendent, etc. Finally, to those who believe in the professional treatment of the content of all subject-matter courses, it may mean adding an elementary, secondary, or higher education flavor to many or practically all subjects.

*Attitude toward specialization.*—The attitude of groups of college and university instructors in these matters was ascertained through their reactions to a number of proposals bearing more or less definitely on differentiated curricular requirements for specific teaching jobs.

The reactions were somewhat varied and characteristic of groups, though generally in approval of specialization and differentiation. Specialization has been in demand from the public-school field; it has been stressed by teachers of education; and as a result practices in an increasing number of institutions have been emphasizing more and more special education for each general type of job.

To the proposal that—

The program of teacher education should be general rather than specialized; teachers should be trained with but slight attention to specific positions or levels—

In other words, we should educate teachers, not specialists, such as primary teachers, physical education teachers, or mathematics teachers, the various college and university groups reacted as shown below; for comparison the teachers college faculty reactions as a whole are added:

Faculty group	Number	Percent replying—					
		Yes	Yes with reservations	No with reservations	No	Total yes	Total no
		3	4	5	6	7	8
Presidents.....	291	6	10	48	37	25	73
Academic instructors.....	257	23	28	39	30	51	49
Special-subject instructors.....	181	14	24	37	25	38	62
Education instructors.....	148	3	18	50	30	30	70
Teachers college instructors (all types).....	675	7	25	42	26	32	68

It will be seen that the entire teachers-college group, the education instructors, special-subject instructors, and the presidents of junior colleges, colleges, and universities as a whole favored the proposal, while academic instructors were about equally divided. To a larger extent all groups agreed to a more specific proposition that—

Curricula designed to educate teachers for rural schools should differ in some courses from those designed to prepare teachers for urban communities.

Both proposals covered any kind of specialization including the major and education courses. Another proposition which stated more specifically that—

Further differentiation of curricula beyond the required teaching major and the special methods, observation, and practice teaching which are included in the usual prescriptions in psychology and education is necessary for secondary teachers of academic subjects.

met with about the same type of opinion:

Faculty group	Number replying	Percent replying—				Total yes	Total no
		Yes	Yes with reservation	No with reservation	No		
		3	4	5	6		
Junior college, college, and university presidents.....	294	56	37	5	2	98	7
Academic instructors.....	227	26	22	37	25	48	52
Special-subject instructors.....	125	30	36	20	14	66	34
Education instructors.....	139	35	34	22	9	69	31
Teachers-college instructors (all groups).....	667	36	35	17	12	71	29

Most of the presidents were strongly in favor of it; so were about two-thirds of the special-subject, education, and teachers-college

groups. Academic instructors again were divided about equally with a slight majority against such further differentiation.

To a specific request on a problem involving the amount of differentiation or specialization which might characterize the education of rural teachers, the median number of semester-credits designated by 432 instructors of all types was 14 in a range which extended from 0 to 24. In this matter group differences were small. The courses on which a majority agreed were: Rural sociology (68 percent), problems of rural life (68 percent), rural economics (63 percent), nature study (58 percent), boys' and girls' club work (57 percent), and rural-school management. These courses were in the field of education and outside of a major.

It thus appears that a majority of all instructors but particularly the presidents, education instructors, and special-subject instructors, favor differentiation in the major and in education; they would include other courses for differentiation which they believe contribute to the education of teachers for a specific job.

In conferences it frequently developed that opposition to much differentiated preparation of teachers for specific fields or subjects was opposition not to differentiation as such but to its occurrence at the undergraduate level; many would reserve the undergraduate level for general education purposes only.

No doubt the movement has often appeared to go further than in reality it has; for example, some institutions set up separate curricula for elementary, intermediate, and upper-grade teachers, when as a matter of fact the differences involved are not more than 10 to 20 credits. Instead of three curricula—for primary, elementary, and upper-grade teaching, respectively—one general curriculum in elementary education might have been set up with suitable options for specialization. On the other hand, the opposition of instructors to any differentiation for teaching levels certainly was based upon a failure to recognize definite teaching needs because of a lack of experiential evidence of the amount of help there exists in the content of elementary education today on such matters as diagnosis and remedial teaching at each level and for each subject, the reading interests of children, the teaching of phonics, words most commonly used in children's writing, most common errors of speech and their elimination, the development of teaching units, the preparation of suitable tests, minimum essentials of content, most popular outside reading books at each level, objectives of subjects at each level, etc., content which in amount is large and continually increasing. It is seldom that those in contact with the problems of teaching oppose a minimum of necessary differentiation.

*Over- and under-specialization.*—The study of student transcripts emphasized the obvious finding that when unusual specialization

occurs, at the undergraduate level, it takes place always at the expense of a general education. Either the number of fields of knowledge with which a contact was had or the number of credits taken in each field is reduced. In this respect the special subjects and certain curricula with majors in education were found to err much more than other subjects but no subject was exempt. The kind of thing found is illustrated in figure 2, which gives the pattern of two art students, one

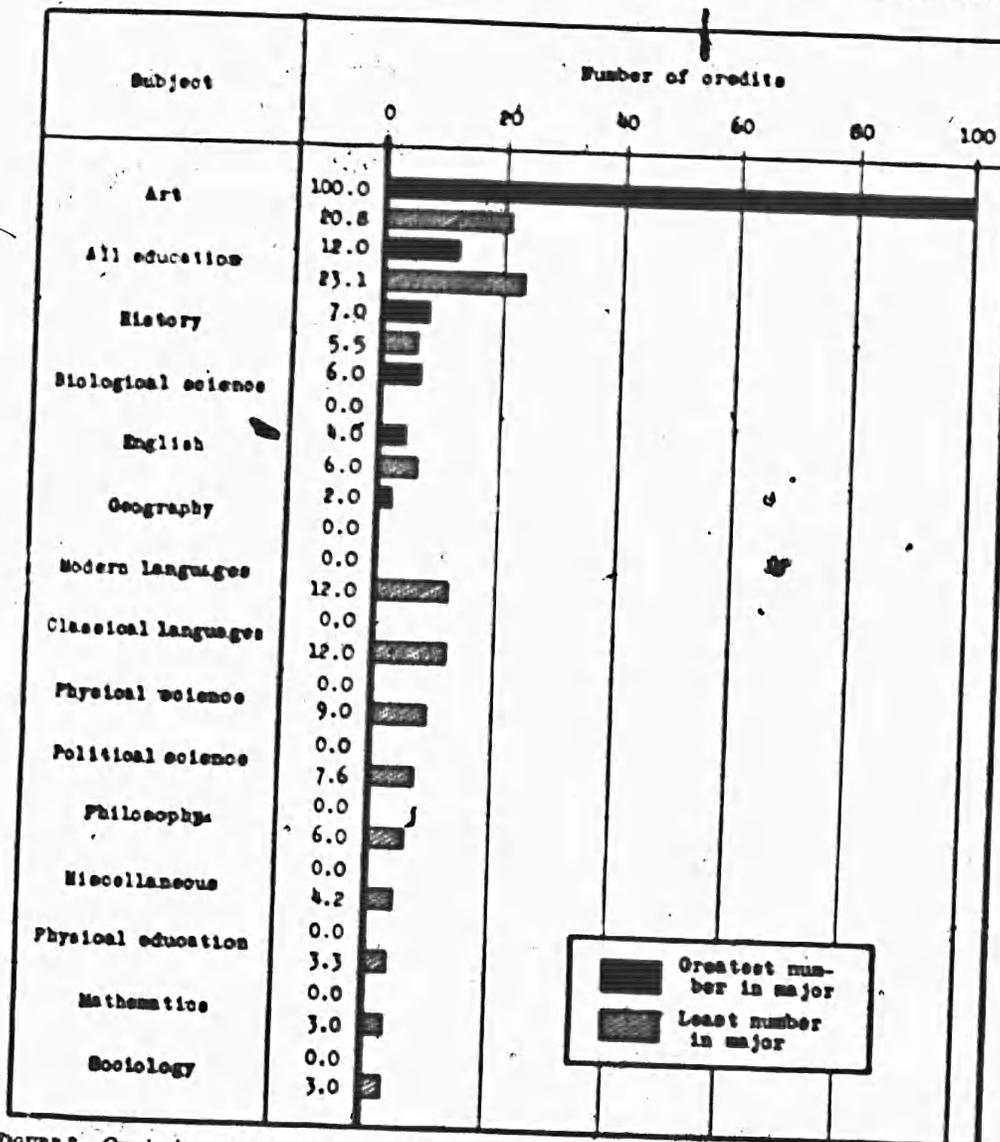


FIGURE 2.—Curricula pattern of the two individuals with B. A. degrees who have had the least and the greatest number of credits in their art majors.

with the least, or 21 credits, and one with the most, or 100 credits, completed in an art major. The student with a major of 100 semester-credits out of 131 completed had courses in only four fields if education and work taken for specialization be excluded. Four credits in English, 6 in biological sciences, 2 in geography, and 7 in history was the extent of his general education at the college level. The other student with

only 21 credits in the art major out of 115 credits of work taken—which is hardly enough unless there has been a heavy art series in high school coupled with special ability—made contact with 11 fields, outside of education and art. In this student's work quality credits for superior work reduced the number of credits of contact which it

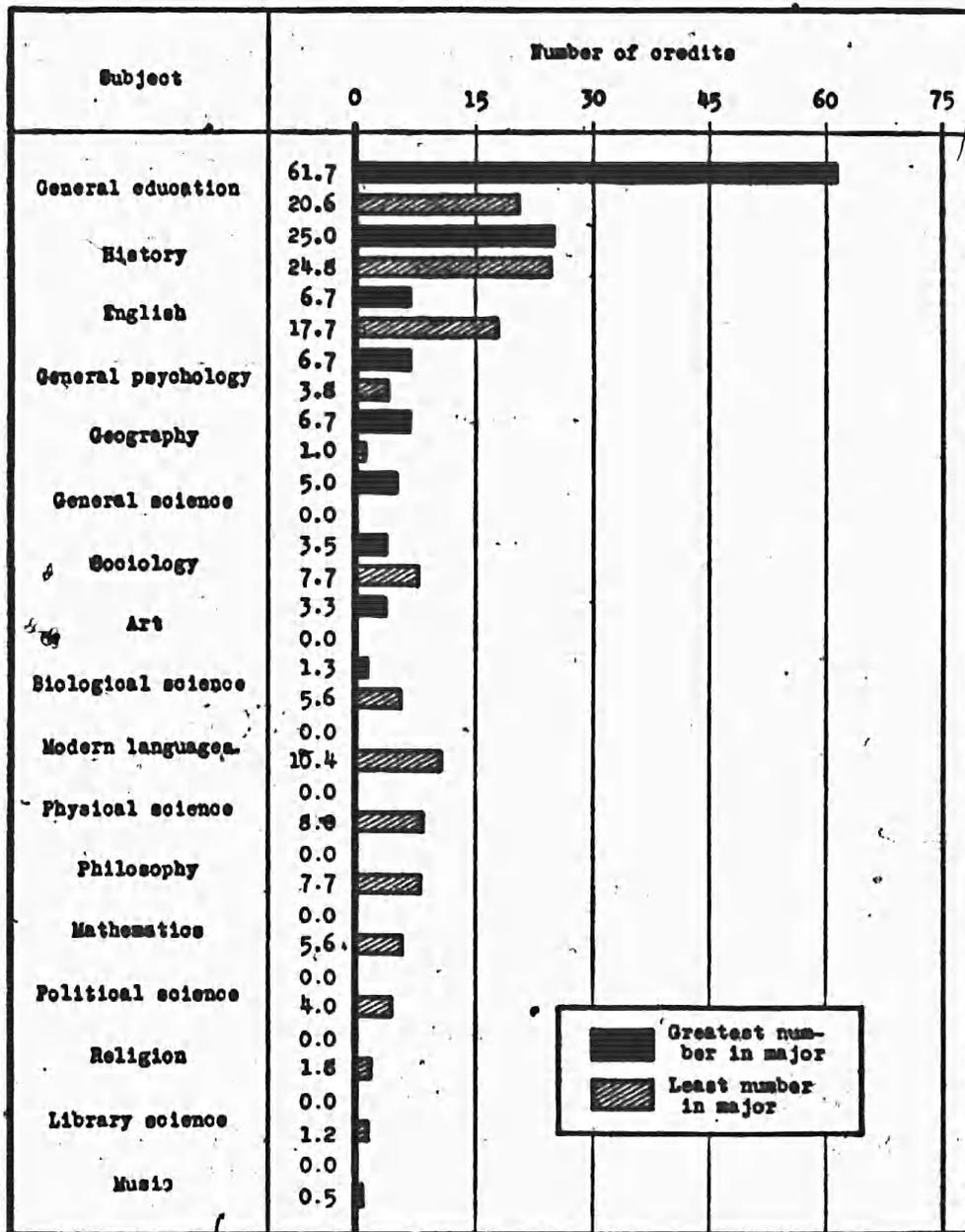


FIGURE 3.—Curricular pattern of the two individuals with B. A. degrees who have had the least and the greatest number of credits in their general education majors.

was necessary for him to make. Sometimes it appears in transcripts that this practice of honor credits penalizes the superior student.

Certainly the extremes of under- and over-specialization must be avoided in the education of teachers. Figure 2 is but a sample of many cases found among the transcripts of 1,671 students.

A similar example, without further comment, is inserted of two students, with the least work and the most work, in an education major (fig. 3).

*The elementary teacher.*—Most, but not all, of what has been said in the last two sections related particularly to the preparation of secondary teachers. Special consideration of the elementary teacher in these matters is in order. In the case of the elementary teacher any argument for any specialization in a teaching field for teaching purposes falls down. On the other hand, the broader array of teaching subjects comprising industrial and fine arts, arithmetic, reading, children's literature, history, civics, geography, elementary science, music, and English, as well as the newer socialized discussion and activity procedures with longer teaching units and differentiated instruction for the slow, the average, and the bright, and the recent emphasis upon enriched content—all of these call for general breadth of education done at a high standard of quality. Furthermore, on the teaching of elementary subjects and in child psychology, the content is particularly rich and extensive, much more so than corresponding content in two or three secondary teaching fields would be. The mastery of an extensive content in child psychology as well as the professional treatment of all the common branches and special subjects, with each of which the teacher must be familiar also require special attention and more time. This leaves less time for specialization or electives or both.

The practice of setting up what purport to be highly specialized curricula for primary, intermediate, or upper-grade teaching, respectively, does not stand up under close scrutiny because the common elements of preparation loom so large that the amount of actual differentiation is relatively small. A general curriculum for elementary education with necessary differentiation toward one of the preferred levels seems therefore reasonable. In the preparation of all elementary teachers for any particular level, the general overview of all elementary education is important. Most teachers deal with achievements and ages which overlap two or three or more grades or years below or above the normal achievement of the grade.

However, a general curriculum for elementary education must not be a smoke screen behind which to hide failure to provide for special education of teachers for these respective levels. For example, the primary teacher has highly specialized content to master in such matters as the teaching of beginning reading, introducing number concepts, knowing the primary curriculum, knowing and understanding children in a scientific way, the proper introduction to writing and spelling, telling stories to children, directing activities for wholesome childhood, developing and preserving children's singing voices, knowing their general outside reading interests, familiarity with suitable library books, doing diagnostic and remedial teaching,

and the like; so that no mere passing attention to these matters will produce a teacher who is in full possession of the content which best practice and research now provides. The failure of some institutions which prepare elementary teachers to put their graduates into actual command of this content through failure to provide for it, together with the loose sort of preparation which often takes place in poorly supervised student teaching, and the inadequate contact with current practice and research is a serious indictment that must be made of much of what is being done not only in short-term curricula but also in 4-year curricula in many institutions. The education specialist whose field is secondary education is often not in command and not in touch with recent developments in these fields and can only offer very loose generalities and rationalizations in trying to educate elementary teachers. The product is a person who has to get such orientation as he will get without expert guidance and at the expense of children, without the background, even so, to attain the highest possible development in the art of elementary teaching, which is well developed and in the important science of elementary education, which is developing. The extent to which elementary teachers are prepared in universities, colleges, and junior colleges is shown in table 17.

TABLE 17.—The percent of a selected number of universities, colleges, and junior colleges preparing elementary teachers in curricula of specified lengths

44 UNIVERSITIES								
Type of teacher	Less than 1 year	1 year	2 years	3 years	4 years	5 years	7 years	Any
1	2	3	4	5	6	7	8	9
General elementary education.....			2		32	29	12	44
Intermediate grades.....			5		27	12	5	32
Kindergarten-primary grades.....				2	24	12	2	27
General supervisors.....			5		22	49	22	51
Elementary principals.....					29	56	20	59
Rural.....					12	8	5	17
Nursery preschool.....					7	5		
124 COLLEGES								
General elementary education.....	2	5	16	4	11	1	1	32
Intermediate.....	1	2	18	4	13			31
Upper grades.....			13	2	16			27
Kindergarten-primary.....	0	1	15	2	11	2		23
General supervisors.....		1			15	6		17
Elementary principals.....		1	2	2	13	3		18
Rural.....	1	4	11	1	7	1		18
Nursery preschool.....		2	2		4	3		
38 JUNIOR COLLEGES								
General elementary education.....		8	42	3				53
Intermediate.....		13	42	3				53
Upper grades.....		8	34	3				32
Kindergarten-primary.....		11	45	3				59
Elementary principal.....	3	3	11	3				16
Rural.....	3	10	37	3				53
Nursery preschool.....		3	5					7
General supervisors.....		3						

Four-year colleges with inadequate facilities for a major of work in elementary education under instructors inadequately trained in elementary education and the psychology of childhood, with inadequate practice teaching, and demonstration facilities ought not to undertake the preparation of elementary teachers. All short-term curricula for teachers should be abolished.

Junior colleges should soon give up preparing elementary or rural teachers. They should not undertake the work of preparing teachers in 2-year curricula unless the preparation of instructors in elementary education and facilities for course work and for practice teaching equal those of the teachers colleges and normal schools for such teachers. In the future they will have to limit their work to the first 2 years of a 4-year curriculum for elementary and secondary teachers alike in which the general cultural background, and not professional work and teaching field specialization, will be stressed.

## CHAPTER VI

### THE COURSES IN EDUCATION

*Attitude toward education courses.*—An examination of catalogs reveals that formal requirements of courses in education for secondary teachers educated in colleges and universities are largely the development of the last 50 years or less, although similar courses for elementary teachers had been established in normal schools and in college and university normal departments for elementary teachers before this period.<sup>1</sup> These courses are now generally made mandatory by State departments of education as prerequisites to certification and on the whole within limits are accepted by most college and university instructors of all types, as subsequent sections of this chapter will show. However, courses in education are earnestly and sincerely opposed in whole or in part by groups of faculty members in these institutions, perhaps more extensively so, if conferences with more than 300 persons reveal the status by instructors in the sciences, languages, and mathematics. The point of view of those who are skeptical has recently been set forth in a report of the committee on required courses in education of the American Association of University Professors.<sup>2</sup>

The reasons set forth as a basis for opposition in conferences held during this Survey are, briefly: (1) Courses in education are held by some to be futile. (2) Even if valuable, they crowd out necessary general education or specialization at the undergraduate level. (3) They are vocational and hence have no place in a liberal arts college below the graduate level. (4) They belong to the graduate level, where all vocational education should take place.

Factors which have brought about the introduction of courses in education at the undergraduate level are: The profession of teaching itself has generally come to demand professional education beyond mastery of subject matter, and State departments are enforcing that demand. Forty-five percent of the liberal arts college graduates want to teach, and for the most part want to teach immediately upon graduation. The general situation has not yet demanded a fifth year of preparation for teachers, and leaders in teacher education are not

<sup>1</sup> National Survey of the Education of Teachers. Washington, Government Printing Office, 1933. (U.S. Office of Education Bulletin 1933, no. 10, vol. V, part 1.)

<sup>2</sup> The report can be obtained from American Association of University Professors, 744 Jackson Place, Washington, D.C.

at all certain that a 2-3 plan or an integrated 5-year plan may not be better to secure professionalization of attitude and integration of work for teaching than the 4-1 plan with all professional education crowded into the fifth year. A realization of these circumstances in the actual situation has caused institutions to comply with the pressure of the situation although it is also true that many institutions introduced courses in education before State regulations required them.

*Comparison with teachers colleges.*—Wherever the question was raised, the reports were generally to the effect that subject-matter and education departments in colleges and universities are working together more than formerly to secure better curricula along all lines. The possibility for such cooperation is reflected clearly in the reactions of faculty groups to certain curriculum issues bearing upon the professional preparation of teachers as set forth in figure 2, appendix, relating to professional work, professional treatment, and differentiation for teaching, respectively. Nor do college and university reactions differ decidedly in most cases from those of the teachers colleges.

They were decidedly apart in very few of the 19 proposals made in these sections. It is important to note that the majority of college and university faculties accepted the proposal relative to education courses in about the same manner as did the majority of teachers college faculties. All groups as wholes accepted to about the same degree the need of introducing prospective teachers to varying current theories of school organization and control, such as creative education, adjustment to environment, or the child versus adult life standard. Both groups accepted decidedly the proposition that the pre-service education of teachers should make them critical of new philosophies of organization, curriculum construction, or methods such as are reflected in the platoon-school organization, individual instruction, general science, general social science, creative education, the project method, or similar movements. Both groups were favorable—though not without reservation—and the teachers-college group was somewhat more decidedly favorable than the university and college group, that each curriculum should give students preparing to teach the essential knowledge and skills which will enable them to meet all types of teaching situations and difficulties such as sponsorship of extracurricular activities, public relations, professional study, research, and similar fields of activities. All were strongly for the provision of practice teaching in situations typical of the surrounding region. Both groups were favorable, with reservation very frequently to the provision of separate special methods courses in the major teaching subject; the actual percentages of yes and no reactions to the

proposals by college and universities faculty groups and all teachers-college groups together were as follows:

Faculty group	Number replying	Percent replying—				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Presidents.....	290	48	35	5	13	83	17
Academic instructors.....	252	30	29	20	21	59	41
Special-subject instructors.....	139	40	27	6	26	67	33
Education instructors.....	139	48	40	2	10	88	12
Teachers college instructors (all groups).....	685	44	36	8	13	80	20

Both groups favored rather strongly, the teachers college group the more decidedly but not more so than university and college presidents, the proposition that there should be constant opportunity for students in all college courses to observe good teaching in the practice schools. The percentages for various liberal arts college and university groups and for all teachers college groups together were:

Faculty group	Number replying	Percent replying—				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Presidents.....	292	82	15	2	1	97	3
Academic instructors.....	241	49	30	9	13	79	21
Special-subject instructors.....	136	58	25	13	4	83	17
Education instructors.....	139	48	40	10	2	88	12
Teachers college instructors (all groups).....	696	76	19	1	4	95	5

On two proposals there were decided differences between the two groups. One of the proposals concerned the desirability of 90 clock-hours of student teaching which a majority of both groups accepted but the teachers college much more strongly than the college and university group; the other concerned the professionalization of practically all subject-matter courses, with which a majority of teachers college instructors (62 percent) agreed and with which a small majority of this group of universities and college instructors, and a rather large majority of the academic group disagreed. These two issues will be treated later in the sections on student teaching and professionalized subject matter.

*Control by professors of education.*—There is another proposal to which a majority of instructors in universities and colleges were opposed but which presidents, educationists, and teachers college

faculties generally approved; that is the proposition that: "The education of teachers should be under the control of the professors of education and psychology."

Faculty group	Number replying	Percent replying—				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Presidents.....	293	38	47	11	4	85	15
Academic-subject instructors.....	202	4	20	31	45	24	77
Special-subject instructors.....	147	11	34	27	28	45	55
Education instructors.....	137	38	53	10	0	90	10
Teachers college presidents.....	144	20	42	23	15	62	38
Teachers college instructors.....	1611	57	37	5	1	94	6

<sup>1</sup> Approximate.

It is clear that there is an issue here on which groups clash according to their own relationships or interests; the instructors of teachers colleges, academic, special, and education, favored the proposal decidedly, while instructors in colleges and universities disapproved, although not quite so decidedly. The presidents of both groups approved the proposal strongly, though the presidents of teachers colleges expressed much more reservation and opposition to the matter than did the presidents of the liberal arts colleges and universities.

These comparisons have been made to show (1) that the majority attitudes of college and university instructors were favorable to courses in education, to student teaching, to observation, and to special methods; and (2) that in their opinion they approved or disapproved much the same as did teachers college faculties, though usually the teachers college group was somewhat more decided in the direction of approval or disapproval toward which both tended; and (3) that the general criticism that college and university instructors have an attitude decidedly unfavorable to the development of professional work and professional attitude toward their future work on the part of prospective teachers is not revealed in these reactions.

If a proposal for close cooperation between education and academic or special-subject instructors had been inserted, there is no doubt that, in light of the similarity of group attitudes on other matters, there would have been agreement. That at least is as it should be; and in the institutions visited where best relationships were observed, there was found a cooperation of all groups concerned, in which administrators and education and academic instructors give and take in a spirit of providing the optimum curriculum for teachers; each recognizing the superiority of the other group's orientation with respect to certain basic elements of the curricula. Each deals with the other

on the basis of a common mutual interest, mutual respect, and with a final ability to compromise extreme views. The subject-matter instructors of the university in academic departments must be made to feel more strongly their close relationship to the college of education faculty and in the independent college of liberal arts the education department must be given greater opportunity to represent more effectively the needs of the profession of teachers.

Any institution in which differences relative to teacher education are unduly accentuated, especially if they are introduced into the classes, thereby really disqualifies itself as a suitable place to develop teachers, for teachers should graduate with a balanced respect toward the need of broad and specialized scholarship, breadth of interests, a professionalized attitude toward teaching, and a belief in the need of and a substantial background for developing teaching into a fine art. After all, the superintendents and supervisors will in the long run almost unconsciously settle the issue because of the increasing desire to secure teachers who possess the above characteristics and qualifications and who are able to begin a job of teaching without trial-and-error performances which so often characterize the unselected, the untried, the untrained, and unprofessionalized and which so frequently end in complete or partial failures during the initial year or two of teaching.

*Status of present prescriptions.*—The amount and character of the requirement in education courses is an important issue. In 590 prescriptions for majors in academic subjects in 57 institutions, a median of 18.4 semester-hours of education, educational psychology—excluding general psychology—methods, observation, and student teaching was the central tendency in a range which varied among institutions from as little as 6 semester-hours to as much as 35 semester-hours. In 122 prescriptions for special-subject majors the corresponding median was 18 hours within a range which extended from 3 to 35 semester-hours. In 41 prescriptions for majors in education the median number of credits required in education was 26 in a range which varied among institutions from 18 semester-hours to as much as 59 semester-hours. In general, these central tendencies are less than corresponding allotments in 4-year curricula of teachers colleges if general psychology, which in a large majority of courses is not classified as education in colleges and universities, is omitted, and about the same if general psychology, which usually is classified as education in teachers colleges, is added. Special methods which in colleges and universities are classified as education are in teachers colleges often classified as part of the major. Hence, the prescription in education for these two groups of distributions are not strictly comparable and the larger prescription usually tends to be made in teachers colleges.

Of the entire allotment to all education as described above, about one-third is special methods, observation, and practice teaching, usually in the major field; these three courses enter into many sorts of combinations.

According to the expressed judgment of faculty groups, the median number of semester-hours which they would allot to education and psychology, excluding observation and practice teaching, and to observation and practice teaching only is as follows:

Faculty group	Number relying	Number of credits in—		Total
		Education and psychology	Observation and practice teaching	
	1	2	3	4
Academic instructors.....	208	14	9	23
Special-subject instructors.....	136	12	8	20
Education instructors.....	133	14	9	23
Teachers-college instructors (all groups).....	611	6	14	20

In the above judgments general psychology was included but in the bulletin analysis it was excluded. Nevertheless, the median judgments of the faculty groups as a whole is in excess of actual bulletin prescriptions. The range in judgments is wide. About 5 percent voted for no education or psychology at all, while 2 percent would have more than 30 semester-hours.

The median total allotment by education instructors to their own field is not higher than that of academic instructors. All groups placed a higher allotment on observation and student teaching than was prescribed in practice.

Thus, institutional education prescriptions are shown to vary in much the same way as do major or minor prescriptions in subject-matter departments. In all cases the value of more or less preparation is acknowledged but the amount and the type of prescription may vary much from institution to institution. Evaluation studies in the field of these curricula are much needed, not only for the education of teachers but in the field of general education as well.

Four of five regional accrediting associations have designated minimum requirements of preparation in education courses for teachers employed in accredited schools. The North Central Association of Colleges and Secondary Schools and the Northwest Association of Secondary and Higher Schools specify 15 hours; the New England Association of Colleges and Secondary Schools and the Association of Colleges and Secondary Schools of the Southern States, specify 12 semester-hours. The New England Association of Colleges and Secondary Schools makes no specification except the indefinite

requirement of professional preparation or successful teaching experience. In general, under these specifications, any course classified as education by an institution is acceptable.

The 10 courses in education most frequently prescribed in 57 colleges, universities, and junior colleges of prospective secondary teachers of academic subjects ranked as follows:

Rank	Subject	Per- cent	Rank	Subject	Per- cent
1	2	3	1	2	3
1	Education psychology	63	8	Free electives	42
2	General psychology	56	7.5	Secondary education	37
2.5	Student teaching—separate or com- bined	56	7.5	Observation—separate or combined	37
4	General methods	54	9	History of education	28
5	Special methods	44	10	Introduction to education	28

*Education courses most frequently taken.*—The courses in education most frequently taken by students in a sampling from 1,671 individuals from 24 colleges and universities who had prepared to teach is given in table 18.

TABLE 18.—Courses in education taken in 24 selected colleges and universities by prospective secondary teachers—summary

Course in education	200 majors in academic subjects <sup>1</sup>		600 majors in special subjects <sup>2</sup>	
	Number	Percent	Number	Percent
1	2	3	4	5
Educational psychology	179	85.0	449	74.8
General psychology	152	78.0	392	65.3
Special methods	128	64.0	508	86.7
Student teaching	123	61.5	474	79.0
General methods	120	60.0	294	44.0
History of education	116	58.0	304	50.7
Principles of education	89	44.5	153	30.8
Tests and measurements	67	33.5	164	27.3
Secondary education	63	31.5	88	14.7
Introduction to education	40	20.0	68	11.5
Administration	28	14.0	106	17.7
Educational sociology	24	12.0	62	10.3
Observation	20	10.0	39	6.5
Classroom management	18	9.0	62	10.3
Extracurricular activities	18	9.0	34	5.7
Philosophy of education	16	8.0	67	11.2
Health education	11	5.5	127	21.2
Guidance, vocational education	10	5.0	78	13.0
Psychology of subjects	9	4.5	31	5.2
Study methods	9	4.5	23	3.7
Psychology of adolescence	7	3.5	31	5.2
Psychology of childhood	7	3.5	63	10.5
Curriculum	5	2.5	37	6.2
Rural education	4	2.0	10	1.7
Teachers' problems	4	2.0	16	2.7
Teacher, system, curriculum	2	1.0	10	1.7
Character education	1	.5	23	3.8
Supervision of specific subjects	1	.5	29	4.8
Visual presentation	1	.5	5	.8
High-school economy			41	6.8

<sup>1</sup> Sampling of 200 from about 1,100.

<sup>2</sup> Special fields represented are: Agriculture (50), art (100), commercial education (50), home economics (100), music (100), physical education, men (100), and physical education, women (100).

There are six courses which a majority of all academic students have had. These are educational psychology, general psychology, special methods, student teaching, general methods, and history of education. The same series with the exception of general methods holds for the group of 600 majors in agriculture, art, commercial education, home economics, music, physical education for men, and physical education for women. Of these groups of students, all had prepared for teaching by taking education subjects. However, 38.5 percent of the academic majors and 21 percent of the special-subject majors, respectively, had not had student teaching, and 36 percent and 13.3 percent of the same groups had not had special methods courses.

Percentages of courses in education most frequently taken by teachers majoring in education in representative colleges and universities were:

*One hundred majors in elementary education.*—Student teaching, 91; observation, 91; history of education (general), 77; educational psychology, 77; general methods in elementary education, 58; classroom management (elementary), 54; principles of education (general), 51; industrial arts, 45; geography methods, 39; general survey and introductory courses in education, 39; childrens' literature, 36; physical education methods, 36; teaching of reading, 36; educational administration, 36; music methods, 35; and educational tests, 35.

*Eighty-four majors in general education.*—Student teaching, 86; educational psychology, 81; principles of education, 68; history of education, 57; secondary school methods, 56; test and measurements, 56; elementary school methods, 56; and principles of secondary education (the institution), 37.

In view of standards of preparation now existing in most institutions, and the high value evidently placed upon observation and practice teaching by instructors, it would seem that all institutions purporting to educate teachers should be required to supply laboratory facilities for practice teaching and observation. Is it not now desirable to select the 5 or 6 separate courses in education which most institutions might agree upon as a tentative minimum program in education where the plan of professional treatment of all subject matter is not followed?

However, anything but a tentative answer, in this as to other related curricular problems, can probably not be made until more evaluation based upon the measurement of outcomes has been made.

*The evaluation of courses in education.*—In terms of general, all-round value of 7 courses in education, 100 alumni of the University of Minnesota evaluated courses required of them in the following order: (1) Student teaching, (2) special methods, (3) educational psychology, (4) general methods, (5) secondary education, (6) educational sociology, and (7) history of education.

At a summer school at the University of Minnesota, 111 teachers in various secondary school subject fields who had had their profes-

sional education in a large number of different institutions, although preponderantly from Minnesota and neighboring States, ranked certain educational courses, in terms of the direct value or indirect value to them in teaching. The rank order of courses for value was determined by multiplying the percent reporting direct value by 2 and the percent reporting indirect value by 1 and adding the two for an index to relative value. No courses taken by fewer than 45 of the 111 students were included in the list. As the result of this method of weighting, the courses ranked as follows: (1) Special methods, 197; (2) student teaching and observation combined, 196; (3) student teaching separate, 193; (4) educational tests and measurements, 173; (5) general methods, 169; (6) educational psychology, 153; (7) curriculum, 152; (8) general psychology, 129; (9.5) secondary education, 125; (9.5) principles of education, 125; (11) educational sociology, 121; (12) school administration, 116; (13) high-school administration, 109; and (14) history of education, 55.

The correlation ( $r$ ) between the number having had the courses and the index to their direct and indirect value computed from Pearson's rank difference  $R$  was +0.41.

A report by C. O. Davis to the North Central Association made in 1922 gives teachers' evaluations of eight types of subject matter on the basis of (a) large, (b) medium, and (c) small value. The percentages reporting each of these three levels of value were weighted, respectively, 3, 2, and 1, and yielded the following ranks for the eight types of education: (1) Psychological, (2) principles of teaching—methods, (3) sociological, (4.5) principles of education—philosophical, (4.5) administrative, (6) historical, (7) tests and measurements, and (8) vocational and industrial.<sup>3</sup>

None of these evaluations quite serve the purposes of this report, for the first two are limited in scope, the last one is more than 10 years old, and all of them are limited by factors affecting in part their validity. Comparisons are difficult to make because categories used in the classification of content vary. It is apparent, however, if teachers' judgment be used as a criterion, that student teaching, special methods and general methods, educational and general psychology rank above historical and administrative courses. Tests and measurements, apparently low in the extensive study of 1922, received a higher rating in the limited study of 1932. This may be due to the greater current use of all types of standardized and informal tests and testing techniques in current school practice.

*Suggested content in education.*—Any subject matter in a new field like education is changing. It is always dangerous to crystallize cur-

<sup>3</sup> Davis, C. O. The Training, Experiences, Salaries, and Educational Judgments of 24,313 of the High-School Teachers in North Central Accredited Schools. North Central Association of Colleges and Secondary Schools. Proceedings, pt. I, 1922-23, p. 23.

ricular subject matter, but it would seem from the general trend of evaluation studies and from courses most frequently required that it is possible to select the 5 or 6 courses in education which for a short period of years might serve as a logical core offering to prospective teachers in liberal arts colleges and universities. This content might cover these fields:

1. General psychology (as a prerequisite to education courses or combined with educational psychology).
2. Educational psychology
3. General methods
4. Special methods (possibly now better characterized as the teaching of or a professional course in \_\_\_\_\_ with balanced emphasis upon the professional treatment of content and upon the technical aspects of teaching method in the teaching field.
5. Observation and practice teaching which may be separate or integrated with 4 above.
6. Some orientation approach at the beginning including:
  - (a) Education in general (historical, sociological, philosophical, including present status, issues, problems, aims, etc.).
  - (b) The future teaching level (secondary, elementary, or higher), or
  - (c) An integration course in education at the close of the sequence.

After all, course titles in education are only standardized in part. The essential problem of the future is to evaluate in more detail all possible units which might be included for relative value to teachers in service, to discard the useless, and to include and emphasize the valuable. For a study of beginnings in evaluation which have been made, the reader is referred to a selected bibliography on the education of teachers.<sup>4</sup>

An attempt to define more specifically, but still in broad outline, the content, not so much of the courses specified above, but the content of the whole series in education, which teachers should know, the following are listed as typical for the information of those not so familiar with the field of education.

Psychology of individual differences (a broad field now)  
 Psychology of learning (a very broad field)  
 Psychology of the secondary or the elementary school period  
 Educational statistics, elements of  
 The measurement movement in education (may be included in next course)

Social function of education  
 Brief history of education—general  
 Comparative education  
 Current status of either elementary or secondary education  
 More specific history of recent elementary or secondary education  
 The American public-school system—function, general and specific, aims and objectives, organization and reorganization, the curriculum in general, the student body, problems of Federal, State, and local administration

<sup>4</sup> National Survey of the Education of Teachers. Washington, Government Printing Office, 1932. (U.S. Office of Education, Bulletin 1932, no. 10, vol. I, p. 43-55, also certain items on pp. 13-43.)

**Modern educational theories and philosophies**

Education as a profession, including also teacher problems (such as tenure, salary, upgrading, retirement, promotion, sabbatical leave, credit unions, married teachers, professional organizations, etc.)

Educational literature and publications

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1. Foundations of education method, or principles of teaching—the research basis including psychology, the philosophic basis, the best current practice
  2. Types of classroom procedure (new and old)
  3. Testing and measuring abilities and outcomes—intelligence, standardized testing, informal testing (traditional and new-type objective tests)
  4. Motivation and interest
  5. Class management
- 

**Professional treatment of content**

Intensive application of psychology and general methods to specific field. (For the elementary teacher this course becomes a very broad one or a series of courses in the common and special branches, with much available content in each of elementary education, such as the teaching of reading, the teaching of social studies, the teaching of English, the teaching of arithmetic, the teaching of industrial and fine arts, the teaching of music, the health of the child)

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**The observation of good practice**

Practice teaching in situations typical of best schools increased to an average of 90 clock-hours of actual participation and practice in teaching of a class

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*The special-methods courses.*—Results of an inquiry into the content of special-methods courses indicates that the term "special methods" is not truly descriptive of the content. The content usually includes professional treatment of the content, review of content, and methods of instruction in a given field of specialization for teaching. For example, a more suitable title than "special methods in English" would probably be "the teaching of English." It would embrace more and be freed of the "bag of tricks" which is a wrong conception of courses in education.

The special-methods course has been rated high in all evaluation studies of education courses where teachers' judgments were sought. It was taken by 64 percent of the academic students and by 87 percent of the special-subject students whose transcripts were analyzed. This leaves a substantial minority who still graduated from colleges and universities recently without this course in at least one of their teaching subjects. Everything that research shows about the course indicates that in institutions where it is offered, it is highly esteemed by teachers who had it when students.

To the proposal that if separate courses in methods of teaching a subject are given, they should be taught by the teachers in the

subject-matter departments rather than by teachers in the education department, the various faculty groups responded according to the following percentages of approval or disapproval:

Faculty group	Number replying	Percent replying--				Total percent, yes	Total percent, no
		Yes	Yes, with reservation	No, with reservation	No		
1	2	3	4	5	6	7	8
Academic instructors.....	252	52	24	18	6	76	24
Special-subject instructors.....	149	44	23	16	17	67	33
Education instructors.....	143	5	24	41	30	29	71
Teachers college instructors (all types).....	682	46	35	14	5	81	19

The majority of all groups, except education instructors in liberal arts colleges and universities, approved the teaching of special methods by subject-matter professors rather than by professors of education. Such approval, no doubt, rested on the assumption that those delegated to do this work must have background for doing it of the sort previously indicated in this discussion. Neither the subject-matter specialist without knowledge of educational research and practice nor the educationist without a knowledge of the subject-matter field is qualified to professionalize the content of any field for public-school work. There is a strong need for persons who can qualify in both respects to raise the quality of work attempted in these courses.

Inquiry in this survey revealed that of 589 academic and special-subject instructors who reported 46 percent had had preparation in educational methods, 34 percent had had orientation courses in elementary, secondary, or higher education, 43 percent had had educational psychology, 48 percent had had courses in history of education, and 18 percent had had courses on the social aspects of education. All of these may be considered as courses that are in part foundations of general or special educational method. The corresponding percentages for education instructors were about doubled. Furthermore, 42 percent of academic instructors and 39 percent of special-subject instructors had had teaching experience at the secondary school level and 11 and 19 percent, respectively, had had teaching experience at the elementary school level. These percentages show that a considerable portion of subject-matter instructors have some background and orientation for teaching special methods courses; only 30 percent of academic instructors and 46 percent of special-subject instructors had had no teaching experience below the college level. In a field in which any research has been so recent and yet so intensive as in education and educational psychology it is, of course, essential that those attempting such courses should base content upon

investigation rather than upon personal experience, personal opinion, and the subjective content of so-called pedagogy courses of two or more decades ago.

For education instructors as teachers of special methods, it can be said from the findings of the survey that only one sixth have had no teaching experience below college, that most of them have had at least an undergraduate major in a subject-matter field other than education, and that the percentages of contact with the fields of knowledge and culture show a broader than average preparation of general education. They often lack graduate work in subject-matter fields. So-called teachers of special methods in schools of education are frequently highly prepared in both subject matter and education—which is, of course, the ideal preparation.

It matters little whether teachers of these courses belong to the subject-matter department or to education, so long as their preparation in the subject matter of their field, their teaching experience, their contact with recent trends and research, and their interests in teaching in secondary or elementary schools as an art and as a developing science justify the assignment. Instructors attempting such courses without these qualifications have done much to discredit education among those not familiar with its newer content.

*Attitudes toward special methods courses.*—A majority approval of the provision for separate special-methods courses in the major teaching field is indicated by judgments as expressed in response to the statement that separate methods courses (how to teach the subject) should be provided in addition to the essential content courses in the field of the student's major. The percentages distributed as follows:

Faculty group	Percent replying—				Total percent yes	Total percent no
	Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7
Presidents.....	48	35	12	5	83	17
Academic instructors.....	30	29	21	20	59	41
Special-subject instructors.....	40	27	26	6	67	33
All teachers-college groups.....	48	40	10	2	88	12

The academic-subject group had a strong minority who did not favor separate special-methods courses, although most of their opposition was made with reservation. The other groups each had smaller minorities holding similar views. A part of this point of view is explained by the approval of another type of professional education known as the professional treatment of subject matter in all subject-matter courses and without special-methods courses. This will be

discussed in the appropriate section later. Educationists and administrative officers favor the proposition strongly.

As a separate course in education, special methods was allotted a median of 3 semester credits in a range extending from 2 to 6.7 semester credits. In the vocational subjects such as music, agriculture, and home economics there was a tendency to present more credits, and often the content was divided into more than one course. In practice, more than is prescribed in special methods was usually taken, for the average number of credits taken by those taking any, were as follows: Academic subjects, 3.8 semester credits; music, 9.6; art, 6.6; physical education for women, 6.6; commercial education, 5.9; agriculture, 4.5; physical education for men, 3.9; and home economics, 3.3. In each field the range of credits assigned was wide.

*Content of special methods courses.*—Possibly more variable than the amount of credit is the nature of the content. This was ascertained by frequent direct questioning of instructors who have charge of such courses. Variation is due as much to the orientation of the instructor as to other causes. Ideally the instructor should be a person who has had thorough preparation in his subject matter and thorough preparation in education so as to be familiar with the research and literature in his field as well as in general education, and who has had teaching experience at the level for which he is preparing teachers. Naturally these factors vary with individuals. A list of topics in special-methods courses is given as a composite list gathered from bulletins and instructors. It includes what is no doubt essential content in any such course which aims to professionalize a teaching field.

1. Objectives:
  - (a) Relation to general objectives of education.
  - (b) Specific for the entire field (e.g., social studies, science, English, etc.).
  - (c) Specific for each teaching subject of field (e. g. United States history, chemistry, composition).
2. Time allotment.
3. Textbooks in field—examination and evaluation of leading or best series, editions, content, etc.
4. Standardized tests in field—cavass and evaluation of, practice in use and interpretation of, etc.
5. Building of tests on subject matter in each subject of field, e.g., essay type; true-false; completion; matching; others.
6. Methods of marking—general schemes; those peculiar to the subjects, e.g., in composition, laboratory work, projects, shop, etc.
7. Preparation of various types of assignment units, e.g., Morrison plan, differentiated content.
8. Development of curriculum units in a subject.
9. Current reorganization trends if any.
10. Types of appropriate teaching activities.
11. Adjusting the content of each high-school subject field to individual differences.

12. Use of text and of reference material.
13. Thorough study of suitable reference material at elementary or secondary level.
14. Acquaintance with the education and subject-matter leaders in the field.
15. Periodicals of field—habituation of teachers in reading them.
16. Outstanding educational experiments in field.
17. The motivation of the students in subjects of field.
18. History of subject in education.
19. Teaching students how to think and study in the field.
20. The use of auxiliary teaching aids and devices.
21. Class management problems peculiar to the field.
22. Problems of beginning teachers in the subject.
23. Special activities, characteristic of subject, e.g., Latin, general shop, chemistry laboratories.
24. Special teaching devices, auxiliary aids, etc.

In any scheme where most subject-matter courses are professionalized, many of these topics can be absorbed, according to advocates of the plan, in appropriate subject-matter units and others in appropriate education courses. This matter will be discussed further in the next section.

*Relation of special methods to practice teaching.*—One issue on special methods courses relates to the extent of its correlation or integration with the student teaching and observation. Some institutions have a unified course in special methods, observation, and student teaching extending throughout the senior year. In response to a request to indicate which of several methods of insuring that prospective teachers are equipped in all essential skills 51 percent of the 666 instructors reporting favored the proposal of a unified course in special methods, observation, participation, and practice teaching over four other plans which provided for separate observation course (10 percent), or observation with subject-matter courses (19 percent), separate student teaching in training school (21 percent), or a unified course in observation, participation, and teaching, all separated from the special-methods courses (20 percent), some voting for two plans.

The proponents of the unified course in special methods, observation, and practice teaching plan claim these advantages:

1. The same persons can be in charge of methods courses, observation, and supervision of student teaching.
2. It makes possible the practice in student teaching of what is taught in theory.
3. It makes possible certain training as laboratory work, of those phases of teaching skill and art that are not covered in practice teaching or observation, or both.
4. It extends student teaching over a longer period of time, thus providing more maturing with the same amount of practice.
5. It permits paralleling theory with observation and practice teaching.

*Student teaching.*—Only 62 percent of academic students who prepared for teaching high-school academic subjects in 24 colleges and universities and only 79 percent of the prospective special-subject

teachers have had student teaching. In teachers colleges the corresponding percentages are 82 and 93, or 20 and 14 percent more, respectively. In all recent evaluation studies based upon the judgment of teachers in which student teaching is listed among courses evaluated, none has been found where it does not rank at or near the top. Nineteen States, notwithstanding, do not yet require it for the highest certificate for secondary teaching.

The term "student teaching" does not represent a standardized concept. In some institutions it includes only observation, in others only practice teaching, while in most institutions student teaching includes observation, participation, and practice teaching. Many types of requirement prevail. The tendency is to improve the facilities, to upgrade the personnel, and to require more practice teaching in typical situations; too often, however, there is little direct supervision and guidance of the observation and practice teaching, which are left to go as they may in off-campus situations not under the supervision of some responsible group of persons. This practice should be remedied.

Failure to subsidize public-school situations where used is one weakness; lack of continuous and direct cooperation between subject-matter departments, education departments, and training schools is another.

Brief descriptions of two situations illustrate the extremes that are found. One institution has a 15-year contract between the college and the local board. There is an excellent new building with room arrangements planned to accommodate student teaching. The college supervises, instructs, and approves all teachers, who are jointly selected with the school board. Each student has 1 hour of observation, participation, or practice teaching daily for 1 full year. The supervisors have had special training for their work and are in direct, almost daily touch with every student teacher's work. The institution pays a subsidy toward the maintenance of these conditions, and the school in return gets superior talent on its staff.

In contrast, another institution sends its prospective teachers into a poorly kept building staffed by teachers who are paid extremely low salaries by the local school board. The institution does not subsidize the board and can exercise little direct supervision of its student teachers, who merely seem to go through a series of trial-and-error performances to find themselves. The institution has no part in the selection of the supervising teachers. Equipment is poor. Instruction is of a very low type of performance, strongly characterized by easy traditional practices.

Obviously the same credit award to student teaching in these two situations is not equitable.

The unsupervised practice teaching and observation taking place in some institutions must be severely condemned. Any institution purporting to educate teachers should, among its first endeavors, meet the highest possible standards in providing adequate training facilities. If it does not have its own facilities, it should expect to subsidize, if necessary, a local board to secure direction and control of supervised teaching, participation in the selection of teachers, and stimulation of instruction. The mutual benefits of an ideal relationship should make it sought after by both the local school board and the institution. Failure to provide students with at least acceptable facilities for observation and practice teaching should result in the dropping of a teacher-education program by any institution or the loss of accredited standing with the State or other agencies. In order to stabilize the situation, 5-or-more-year contracts between boards of education and training schools should be undertaken more often, in which the obligations, responsibilities, and duties of each party are specified and provisions for superior critic teachers and adequate supervision are specifically drawn up. Excellent training facilities and arrangements usually rest upon definite mutual understanding and the provision of mutual benefits. For example, whenever salaries need to be paid to critic teachers in excess of those in vogue in a public school to secure competent and superior persons, it seems a legitimate demand to require some subsidy from the college whose students are benefited. The pupils of the local district, however, will likewise benefit. In fact, practically all studies of student achievement in training schools indicate that in these situations, at least, pupils do not suffer from student teaching and usually exceed the standard achievement of other schools. Desirable relationships are often obtained without subsidy.

When adequate control over off-campus observation and practice teaching in local or remote centers is established, off-campus plans may be as desirable or even more so than are campus training schools. This is the opinion of many.

Many are affirming emphatically that experimentation, demonstration, and practice teaching, often occurring together in campus or off-campus schools, cannot be carried on successfully in the same situation.

It is not out of the realm of desirable possibilities that State departments which certificate teachers require such a standard of preparation and experience in critic teachers, close supervision of student teaching, and such correlation of student teaching with other educational work, as will make necessary these more specific mutual agreements between school boards and institutions educating teachers.

College and university instructors generally favor the proposal that practice teaching should be given in schools typical of those in the

region served by the institution. The percentages voting on the proposition were:

Faculty group	Number replying	Percent replying—					
		Yes	Yes with reservation	No with reservation	No	Total	
						Yes	No
1	2	3	4	5	6	7	8
Academic instructors.....	282	82	38	5	5	90	10
Special-subject instructors.....	141	64	41	2	3	95	5
Presidents.....	292	48	42	8	2	90	10
Education instructors.....	143	29	57	11	3	88	14
Teachers college instructors—all.....		57	38	4	1	95	5

Many of the above approvals with reservation would have been unqualified approvals if the phrase "typical of these in the region served" had been "typical of the best in the region served."

*Variable period of practice teaching.*—One issue raised by the practice innovated in several observed situations is whether or not the practice-teaching assignment ought not to be a variable one in which weak students are held to longer periods to attain an acceptable standard of performance or to prove failure. This is done at Pomona College in the Claremont schools.

An innovation observed consisted of selecting only A or B students in previous college work as eligible candidates for student teaching and then to eliminate further those who did not evidence the development or possession of a satisfactory teaching personality and satisfactory art or skill in teaching. Apparent failures were soon given a second start in a new situation. This dual selection on the basis of scholarship and on the basis of demonstrated personal and teaching qualifications according to the local superintendent, in a large city, had produced a group of his best teachers.

*The 90 clock-hour standard.*—A minimum of 90 clock-hours of student teaching has often been adopted because in an institution using a semester plan, that represents 1 hour a day for 18 weeks of 5 school days per week. This standard has been adopted as a minimum for the American Association of Teachers Colleges. To the proposal that a minimum of 90 clock-hours of supervised practice teaching

should be required of prospective teachers, the liberal arts and university faculty groups reacted as follows:

Faculty group	Number replying	Percent replying—				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Presidents.....	287	42	37	15	6	79	21
Academic instructors.....	226	37	25	28	30	52	48
Special-subject instructors.....	135	36	35	20	9	71	29
Education instructors.....	137	41	36	16	7	77	23
Teachers college instructors (all types).....	681	62	28	6	4	90	10

A substantial majority of all instructors either favored outright or favored with reservation this standard. It should be noted that teachers colleges with the practice of a minimum of 90 hours generally established by the standards of their association believe in it more strongly than do the other groups. There is no doubt that the student-teaching requirement is increasing in liberal arts colleges and in universities when data collected by this survey and studies made 5 to 10 years ago are compared. Attention has already been directed to the fact that the median recommended requirement of student teaching, observation, and special methods by the faculties was much greater than the current practice.

One reason for the reservations on 90 hours of supervised practice teaching probably lies in a strong belief by many in the efficacy of the observation of good demonstrations as a major use of the time allotted to student teaching rather than to actual practice teaching. This might be inferred from the replies of these same groups to the proposal that provision for a modicum of skill in teaching will be obtained more effectively by constant supervised observation of good teaching than by the conventional separate supervised courses in practice teaching. The judgment of the respondents was distributed in the following way:

Faculty group	Number replying	Percent replying—				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Presidents.....	284	14	32	36	18	46	54
Academic instructors.....	234	37	38	23	12	65	35
Special-subject instructors.....	132	17	43	30	10	60	40
Education instructors.....	140	7	29	45	19	36	64
Teachers college instructors (all types).....	672	17	30	33	20	47	53

A majority in the teachers college, education, and president groups did not place supervised observations above conventional practice teaching, but a majority of instructors in liberal arts colleges and universities did so rate it. In all groups responses with reservation are many. There is no evidence from scientific studies with which to answer this issue of observation versus practice teaching. A logical practice at present and one often followed is to supply both and to insist on enough practice teaching to help a student avoid the crude trial-and-error stage to a point where his initial performance in the first position will be characterized by satisfactory but possibly not finished or perfected skill in the art of teaching. This standard will call for practice teaching and observation in all institutions and for more practice teaching in most of them.

The improvement of student-teaching facilities, greater emphasis on student-teaching, more directed supervision of it by competent persons, more nearly adequate professional treatment of the teaching field, and the correlation of student teaching, observation, and special methods constitute the urgent needs in the education of teachers. It is in this area where teacher education in independent liberal arts colleges is often weakest.

*The professional treatment of subject-matter courses.*—During recent years there has arisen and developed a point of view among some leaders in education, particularly in the teachers-college group, that in an institution purporting solely to educate teachers every subject-matter course should be professionally treated. Some believe that this should be done so effectively that special-methods courses as such would be discontinued and that such topics as those listed under special methods in the previous section be fully developed during the unfolding of the curriculum. This would require that every subject-matter teacher would have to be thoroughly educated in general education as well as in the technical education of his own field for the elementary or secondary level. This theory is being exemplified, at least in part, in a number of teachers colleges.

The practical considerations which have so far prevented the adoption or even consideration of the plan in liberal arts colleges and in schools of education of universities may be summarized as follows:

1. The proposal has received very little publicity in these institutions and is therefore unknown by many, if not most, instructors.
2. The proportion of instructors teaching subject-matter courses who have had preparation in certain fundamental education courses, including general psychology, which is not usually a course in education in liberal arts colleges and universities, averages 32 percent; for special-subject courses it averages 81 percent. The actual percentages of instructors who have had each of several types of courses in education are shown in table 19.

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TABLE 19.—Percentages of instructors who have had courses in education

Course	Percent of—			
	284 academic instructors	219 special-subject instructors	152 education instructors	804 teachers college instructors (all types)
1	2	3	4	5
Educational administration and supervision.....	21	23	83	53
Education—elementary, secondary, or higher.....	27	45	80	65
Educational methods.....	28	58	86	80
Educational philosophy.....	18	31	84	56
Educational psychology.....	37	54	96	73
General psychology.....	65	86	95	81
History of education.....	66	53	91	79
Social aspects of education.....	15	24	64	43
Other education.....	18	29	56	( <sup>1</sup> )
Average.....	33	44	81	63

<sup>1</sup> Not reported.

These data show that on the whole there are persons in many, perhaps most, departments who have had these formal contacts with education that might qualify them to do such work. However, the extreme position calls for all courses to be so professionalized. For this many would not be qualified.

3. Not all subject-matter instructors have had experience in teaching at the level for which they are preparing teachers. The percentages, however, who have had such experience in elementary or secondary schools are not small, as can be seen from the following tabulation of the percentages of each group of instructors who have had elementary or secondary school experience or both.

Faculty group	Number replying	Percent having—		
		Elementary experience	Secondary experience	Either or Both
1	2	3	4	5
Academic instructors.....	427	11	42	47
Special-subject instructors.....	147	19	39	34
Education instructors.....	143	42	79	58
Teachers college instructors (all types).....	707	45	65	84

<sup>1</sup> Average 56 percent.

<sup>2</sup> Average 84 percent.

Somewhat less than half of the academic instructors, somewhat more than half of the special-subject instructors, 83 percent of the education instructors, or 56 percent of all instructors reporting from colleges and universities, have had either elementary or secondary school experience. For comparison the percentage of 707 teachers-college instructors of all types was given; it is 84, or 28 percent higher.

By types of institutions, the percentage of all instructors, including education instructors, who have had teaching experience on secondary or elementary levels is:

Faculty group	Number replying	Percent with experience
University instructors.....		89
College instructors.....	493	69
Junior-college instructors.....	197	78
Teachers-college instructors.....	68	84
	707	

From the figures just quoted it is apparent that there are fairly large groups of instructors in subject-matter departments of all institutions who have had either formal instruction in education or experience as elementary teachers, or both, which brings to these institutions, even outside of the education department, many who have some insight into the problems of elementary and secondary teachers. Nevertheless, any endeavor to professionalize all subject-matter courses would result in many attempting something for which they have no background. Furthermore, many who have had this background are probably not maintaining vital contacts.

4. The subject-matter courses in all institutions of this type usually contain a majority of students, on the average 55 percent, who do not plan to teach but who will enter other lines of work. It is obvious that it would be as illogical for these persons to be enrolled in courses professionalized for prospective teachers as it would be for prospective teachers to be interested in professionalized treatment of all subject-matter courses, for chemists, engineers, doctors, or lawyers. Throughout the liberal arts colleges, largely in the junior-college level of the universities, and often in senior-college courses, these professional and preprofessional students are thrown together. In large institutions it would be possible in some fields to separate prospective teachers without further reducing the size of classes. This is often done in special subjects like art, music, agriculture, or home economics.

*Attitude toward professional treatment of subject matter.*—The attitude of instructors favors preponderantly a division between subject-matter instruction and professional treatment of teaching content. This is clear from their reaction to the proposal that practically "every subject-matter course in each curriculum should be professionalized; that is, taught in terms of its possible contribution or its application

to the subsequent teaching activity of the students who are being prepared as teachers." Here are the percentages for each group:

Faculty group	Number replying	Percent replying—				Total percent yes	Total percent no
		Yes	Yes, with reservation	No, with reservation	No		
	2	3	4	5	6	7	8
Presidents	290	8	15	31	46	20	80
Academic instructors	256	10	23	41	26	33	67
Special-subject instructors	155	16	27	32	25	43	57
Education instructors	141	9	34	34	23	43	57
Teachers-college groups	667	26	17	22	15	68	32

Outside of teachers colleges, a majority of instructors are generally opposed to the proposition with or without reservations. Academic instructors and presidents are least favorable. The teachers-college group is in its majority trend more favorable to the professional treatment of practically all subject matter, although often with reservation and by no means unanimously. Some of the problems of professional treatment of subject matter noted above prevail to a less extent in teachers colleges than in colleges and universities.

Although university and college faculties do not strongly support the professional treatment of all subject-matter courses for teachers, the majority of them in response to a request to specify the percent of professionalized subject matter in a 4-year curriculum, indicate they would have some professionalization. Only 3 percent stated that they would have none. Ranging from none to all of the courses, the median judgment of the academic group specified 28 percent of the curriculum, or 35 semester-hours; the median judgment of the special-subject group specified 32 percent, or 40 semester-hours; the median for the education group specified 32 percent, or 40 semester-hours; and the median for the education group specified 28 percent or 35 semester-hours. The corresponding percentage for all teachers college instructors was 36 percent, or 45 semester-hours. The proposal was definite in its statement, and there is no doubt that the respondents from these 24 selected universities and colleges would approve the professionalization of nearly one third of the curriculum. That this is not done, however, is indicated by responses to a definite request to indicate which of 11 sampled methods of professional treatment were used in their courses. The percentages for 972 courses checked for each method were small. The method of professionalization and the percentages using each were the following:

## Method of professionalization:

	Percent
Presenting aims of teaching the subject.....	7
Presenting history of the subject.....	5
Available materials for teaching subject.....	5
Evaluation of textbooks used in teaching the subject.....	4
Development of methods of teaching the subject.....	3
Professional literature relative to teaching the subject.....	3
Principles in selecting materials and course of study construction.....	3
Psychology of subject.....	2
Use of standard tests.....	2
Specific difficulties in presenting materials.....	2
Use of new-type examinations in the field studied.....	2

These small percentages warrant the conclusion that the practice of professional treatment of so-called subject-matter courses for teachers is almost negligible in liberal arts colleges and universities and that full responsibility for developing the professionalization of the field has occurred in separate special-methods courses. There is more professionalization in the special subjects than in academic courses, so that the averages of the above percentages would be 6 for special methods courses like art, music, agriculture, home economics, and only 3 for academic fields like English, history, mathematics, languages, or the like.

To summarize: The practical factors in the situation which operate against the adoption of the professionalization of all subject-matter courses are: That the proposal is not widely known; that in institutions studied intensively for this report only about 56 percent of the instructors who responded had experience at either the secondary or elementary level for which they participate in the education of teachers; that while most of the instructors have had some formal instruction in some formal education courses, only between one-third and one-half have probably had an adequate preparation and possibly only 45 percent of the students in the average classes outside of education classes in the liberal arts college are anticipating teaching as a profession.

Finally it should be stated that many are in opposition to the proposal of professionalizing all subject-matter courses and favor the concentration of all professional treatment in separate courses now called special methods courses for the major teaching fields for reasons already cited above, but in addition they hold: (1) That better-qualified instructors are available for the separate courses; (2) that general professionalization of all courses means incidental and accidental treatment of the topics that need to be covered; (3) that systematic development in a separate course such as special methods closely affiliated or unified with observation and practice teaching is psychologically sound; and (4) that such a union further calls for simultaneous professional treatment for too many levels and subjects in the same class.

There is one aspect of the concept of professionalization of teachers' curricula already discussed for which it was found in conferences with instructors there is considerable support in colleges and universities. It demands the designation of a different sort of major for teachers than for other students because the so-called study majors of many higher institutions for a general education are too narrow and do not cover the teaching fields of teachers, particularly in fields such as science, social studies, and English.

This is a phase of the professionalization of work for prospective teachers which is possible, and in independent schools and colleges of education of the universities is often carried out officially, but much more frequently it is done only incidentally in liberal arts colleges through the informal guidance of students by their advisers.

A number of interesting innovations in professional treatment were found. One instructor of special methods in Latin holds that a person who has had a university major in Latin is often unable to read high-school Latin, much less teach it. For each of 3 years of high-school Latin he offers a course in which the subject matter is thoroughly reviewed, and in addition most of the topics in the previous section listed under special methods are covered. He believed in a separate course for professional treatment because there would be little occasion to review the secondary subject matter in regular college courses in his field. His teachers have made a reputation for his department so that in a year of general oversupply, his teachers, a large group in a large university, were all placed.

In the conferences with so-called special methods course instructors general agreement was found among those who tend to do a thoroughgoing job of this work that too little time or credit for theory, practice, and specific training is available for thoroughgoing professional treatment in the limited special methods classes. Occasionally instructors were found who, for lack of background, apparently had no conception at all of the possibilities of the separate course. It is notable that while many instructors favored limitation—that is, not further expansion of work in education—there was strong sentiment for increasing the work in special methods, observation, and practice teaching.

The evidence indicates that much of the broadside criticism directed against colleges and universities concerning an alleged lack of background and preparation of the faculty to educate teachers and their alleged unwillingness to make necessary curricular modification to improve their education is without foundation. The relative value of separate courses for professional treatment and of the professionalization of all courses needs to be established through experimentation. This is difficult to do.

## CHAPTER VII

### ELECTIVES AND PRESCRIPTIONS

*The elective privilege.*—The elective portion of the average curriculum is so substantial a part of it that it constitutes a significant part of the pattern of work taken or of work prescribed. In the education of teachers, it ranks in importance with specialization, general education, and the education courses, but is closely related to all of them and in addition supplements all of them.

In the study of colleges and universities, free electives were defined as those electives that had no formal restrictions whatever. Restricted electives were those which were free choices from specified fields, but, unlike those found in the parallel study of teachers colleges in this Survey, they did not include electives made within a total prescription of specified hours in one field such as in the major, minor, education, a science, or even a social study. The elective privilege in its broadest sense would in addition include the choices permitted within the total prescription in the major, the minors, in education courses, etc., and would be very much larger. However, the policy here followed was to count as electives those choices which would change the field contact pattern. Since, according to this restricted definition of electives, the final median of restricted and free electives was 41 semester-hours in academic curricula, 38 in special-subject curricula, and 54 in education curricula, it will be seen that there is a tendency for much freedom to follow individual interests or needs, or, if misused, less worthy purposes. Whether or not this amount of election is desirable for a teacher is a problem needing serious study. Many registrars who were interviewed were skeptical about the use frequently made of electives, although they believed a large majority of students use electives to good advantage. Instructors who were shown the patterns of prescribed work and the pattern of work taken described in this report were often strong in their opinion that electives should be reduced for teachers, a majority favoring fewer electives for teacher-preparing students than for the student in general curricula.

*Attitudes toward electives.*—A number of proposals were made to instructors regarding prescriptions. To the proposal that "electives should be included in each curriculum designed to educate prospective

teachers in order to provide for the varied interests and aptitudes of students", the replies were as follows:

Faculty group	Number replying	Percent replying				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Presidents.....	295	72	24	2	2	96	4
Academic instructors.....	262	65	30	4	1	95	5
Special-subject instructors.....	140	71	27	2	—	98	2
Education instructors.....	145	65	33	1	1	98	2
Teachers college instructors.....	703	68	27	4	1	95	5

These reactions leave no doubt about a strong positive belief in the provision of elective privileges for students who are preparing to teach.

To another proposal that there should be high prescription in 4-year curricula, with few elective privileges permitted, the attitudes were divided and distributed as follows:

Faculty group	Number replying	Percent replying				Total percent yes	Total percent no
		Yes	Yes with reservation	No with reservation	No		
1	2	3	4	5	6	7	8
Academic instructors.....	270	8	28	29	35	36	64
Special-subject instructors.....	154	6	30	30	34	36	64
Education instructors.....	143	4	32	36	28	36	64
Teachers college instructors.....	703	14	41	30	15	55	45

A substantial majority of all college and university groups were against high prescription and few electives; but teachers colleges showed a small majority in favor of high prescription. To another similar proposal favoring high prescription in 2-year curricula, a majority of all groups responded positively.

Instructors were likewise given an opportunity to indicate about what percentage of the curriculum should be elective. The term "elective" was undefined but apparently was interpreted as free electives because they checked with other types of content in the same question. The reactions were as follows:

Faculty group	Number replying	Definitely prescribed courses of various types			Definitely elective courses		
		Number	Median per cent	Per cent range	Number	Median per cent	Per cent range
1	2	3	4	5	6	7	8
Academic instructors.....	203	214	60	5-90	203	18	0-50
Special-subject instructors.....	133	133	62	10-95	133	17	5-50
Education instructors.....	137	137	75	20-90	134	17.5	0-45
Teachers college instructors.....	625	625	75		611	17.5	

There is general agreement in the median judgments of these groups that nearly but not quite one-fifth of the curriculum should be definitely elective. The teachers-college group and the instructors of education in colleges and universities, however, believe in a higher prescription of definite courses of various types. In fact, they would actually prescribe 75 percent of the courses taken by teachers, while academic and special-subject instructors in colleges and universities would definitely prescribe about 60 percent of the curricula. This attitude no doubt represents higher prescription than obtains in current practice.

Responses to a request for judgment as to where electives should be provided, showed the following percentages of the various groups who would provide for elective privileges in the different fields:

Field	Percent of—			
	231 academic instructors	150 special methods instructors	141 education instructors	722 teachers college instructors
1	2	3	4	5
Within education and psychology prescription.....	35	27	63	35
Within teaching major.....	60	55	69	59
Within teaching minor.....	45	45	65	50
Among fields of knowledge for background.....	91	77	95	92

Large majority percentages in all groups would have electives among the fields of knowledge for general contact and background, smaller majorities would provide electives in the teaching major. Only in the education group in colleges and universities would the majority likewise provide electives in education and in the minor; the teachers-college group is evenly divided in the matter of electives in the minor. The majority of special-subject and academic instructors would not provide electives in education and in the minor, but would hold students to specified courses.

A recapitulation on electives would show general majority belief in electives, but a reduction of its extent from current practice.

Electives would be provided in the major and in fields chosen for general contact. The total elective privilege would not exceed one-fifth of the program; and at least 60 percent of all courses would be prescribed. Instructors of education in colleges and universities would also provide elective privileges out of the total prescription in education and in the minor as well; academic and special-subject groups would not.

## CHAPTER VIII

# INSTITUTIONAL INNOVATIONS AND CURRICULUM TRENDS IN SUBJECT FIELDS

### INSTITUTIONAL INNOVATIONS

It was largely to perfect the background against which the curriculum report on the education of teachers in universities, colleges, and junior colleges was to be written that 30 of the stronger institutions throughout the United States were visited and formal conferences held in each with from 10 to 20 administrative officers and instructors. The interest in curriculum was found to be wide-spread; so much so that leading institutions like Teachers College at Columbia University, the University of Chicago, Harvard University, Swarthmore College, Ohio State University, Stephens College, the University of Michigan, the University of Iowa, the University of California, the College of William and Mary, the University of Minnesota, and others were found experimenting with curricular innovations and in most cases doing research regarding these innovations. In fact, most of the schools visited had some innovation to report.

This chapter will be devoted to calling attention to some of the current trends and innovations found in the schools visited and also to certain present basic information about subject trends and innovations gathered in other investigations of the Survey but not specifically reported.

*New College experiment at Teachers College.*—One of the most promising innovations in the education of teachers is New College at Teachers College, Columbia University. New College is a demonstration and experimental teachers college and a practice school for teaching in higher educational institutions under the direction of Dr. Thomas Alexander. It is devoted to blazing new trails, "to break a new way in teacher education." It plans to prepare highly selected persons for teaching in nursery schools, elementary schools, and secondary schools. The period of study will extend through an indefinite time, perhaps 3 to 6 years, depending upon the individual student. The period of study will be followed by a probationary period of teaching in a cooperating public-school system but under close supervision of New College. Credits will be replaced by examinations in fields considered essential for teaching.

The method of study is an essential feature of the plan. The entire instructional resources of Teachers College, Columbia College, Barnard College, in fact, of Columbia University, will be utilized under a carefully selected staff, of its own. According to the first announcements:

The principles of university study will be followed to allow each student to progress at a rate commensurate with his interests and abilities and to provide growth in resourcefulness and creative power. Essentially, the method will permit independent work on the part of the student in dealing with problems of individual and social living. The usual amount of classroom lecture and discussion will be reduced and supplemented by directed readings, practica and seminars for intensive study of certain problems and fields of study, general lectures of a survey character, field work, including social welfare work, industrial employment, teaching, and traveling.

The entire curriculum is professionally treated, although individual courses are not necessarily so. The aim is creative teaching; work in the field of education is to be the unifying core.

Features of New College include individual instruction, field work, including social welfare experience, a period of contact with industry, wide use of New York's cultural environment, foreign travel and study; evidence of teaching aptitude, high selection and careful guidance of students, limited enrollment, seminar meetings with faculty, laboratory school work, an all-year program, emphasis upon social life, group living, and directed trips, close faculty-student social contacts, wide and varied experiences with children, a health program, and emphasis upon an ideal dormitory life with added provision of a summer camp.

Exceptional care was taken to develop a functional curriculum; to this end, numerous special group conferences were held by the administration group of New College with educational leaders in many fields to formulate the programs.

The experiment began on a limited scale in the fall of 1932 with 90 freshmen and 90 juniors. Its purpose as stated in Curriculum Bulletin No. 1 is the following:

To give such initial preparation for teachers of the nursery school, the kindergarten, the elementary school, and the secondary school as will send them into the field—

1. Independent in thought and resourceful in action.
2. Liberal in point of view through thoroughness of scholarship and breadth of culture.
3. Eager in awakening and sharing intellectual and spiritual life in direct contact with people.
4. Able in assuming the responsibilities of educational leadership in the communities in which they will work.
5. Potent in the development of the social order of the next generation.

It is an original experiment which has integrated what its director has designated as best practices of many sorts observed in Europe and America supplemented by original thinking along new lines.

*The new plan at the University of Chicago.*—The University of Chicago has launched a new plan for all its students, including teachers, which embodies many features. These features are brought into a unified plan which aims, in general, to substitute fields of study for course units, to substitute a qualitative attainment based on comprehensive examinations for credits for a degree, to make students personally responsible to secure their own education instead of giving them their education, to eliminate the unreliability of marks as now awarded in higher education, and further, in the words of President Hutchins, "to promote cooperation in research, to coordinate teaching, and to open the way to experiments in higher education." A prominent feature of the plan is the organization of divisions to cover the usual fields or departments of colleges of arts and sciences, namely, the division of the humanities, the division of the biological sciences, the division of the physical sciences, and the division of the social sciences.

The college, general in scope, covers the junior-college work of a typical student for a period of 2 years. He is not required to attend classes, but orientation courses and unit courses are provided for him to round out a general education, which terminates in a series of comprehensive examinations covering in general each of the divisional fields.

Passing those, he enters one of the divisions for specialization which can direct his education through the baccalaureate, the master's, and the doctoral levels. Student initiative and qualitative standards of attainment are emphasized at every stage. A more detailed description of the plan may be found in volume IV of the University of Chicago survey series.<sup>1</sup> One of the features of the plan is the discontinuance of the school of education as a separate unit and its amalgamation into the general scheme. It is included as a department in the division of the social sciences. Its functions of research and graduate work are thought by the faculty to be better served under the new than under the old plan.

*Fifth year of professional education at the University of Cincinnati.*—In the University of Cincinnati, at the conclusion of baccalaureate work, which has included 18 hours of theoretic work in education, certain students presumably without teaching experience, are selected on the basis of an average of B or above in scholarship. They are assigned to half-time teaching in the public schools of the city of Cincinnati throughout the year with one fourth the pay of a full-time beginning teacher. They also do one half of a regular academic year's work at the University, of which 8 hours are in general methods and 6 hours are in general electives which may be taken for graduate work unless there are deficiencies of some kind. Six of the eight

<sup>1</sup> *Loco cit.*, ch. IV, pp. 109-126.

practicum (general methods) credits may also be counted toward the master's degree. After apprentice teaching has proceeded, there is further elimination for a better selection of students on the basis of teaching personality, with a second trial of initial failures according to the judgment of a committee, in a second new situation. From 10 to 15 percent, sometimes more, are usually eliminated, thus securing a group highly selected for scholarship and without those whose classroom personalities show them to be misfits for teaching. Progressive education activities are incorporated in the practice-teaching situations with freedom to vary educational method. Each teacher is tried out in 2 of 4 levels—primary, intermediate, junior high school, or senior high school. A staff specialist from the teachers college coordinates the theoretic work of the college with the practice teaching and administers certain features on the college side with the cooperating centers. The work of the cooperating centers is, however, an integral part of the work of the Cincinnati schools and each center is under the administrative jurisdiction of the building principal. The regular teacher of the cooperating center is in charge under the principal and under the staff specialist from the teachers college and supervises the work of 4 practice teachers each year and 2 regular rooms of pupils. At the close of the year the successful persons receive 16 semester-credits for student teaching and 14 credits in other subjects, receive a bachelor of education degree, are eligible for a 4-year provisional certificate, and may apply for listing on the preferred list of teachers of the Cincinnati Board of Education. The plan was apparently working well and satisfactorily all around. The superintendent of schools stated that superior persons and well-initiated teachers were thus introduced into the Cincinnati schools.

This plan is administered by Teachers College of the University of Cincinnati in addition to a regular 4-year curriculum which leads to certification in the State of Ohio and a graduate curriculum of another sort.

Problems of the plan which were mentioned to the interviewer were: (1) Some excellent prospects cannot afford a fifth year immediately after the first four. (2) Students get too far along and too old before starting intensively on work in teaching, teaching method, and contact with children. Earlier start at the junior or senior year was recommended by some. (3) The opposition of the graduate school to offering a master's degree for this kind of a fifth year, necessitates additional work beyond the 12 credits which apply toward graduate credit.

*Two years of graduate work for teaching or research in education at Harvard.*—The School of Education at Harvard is not interested in quantity of output but rather in quality of product. To this end it

does not believe the education of good teachers to be possible in less than 6 years. It prescribes 2 years of training with the Ed.M. for teaching and 2 years of training beyond the baccalaureate degree with the Ed.D. for research and higher education.

The essential features of developing the 2-year master's degree for teaching are:

1. All previous work recommended to have been in well-chosen liberal studies.
2. No admission examination.
3. A program of study comprising 16 half-courses. Wide choices possible. No courses are prescribed. Bulletin suggestions of courses for special types of work given.
4. Tutorial plan of study.
5. Apprentice teaching, during each of 2 years in selected cooperating schools such as Cambridge, Belmont, Brookline, Medford, Newton, Somerville, or Watertown.
6. Usual distribution of work: Education, 75 percent; subject matter, 25 percent.
7. General examination at close: Special field examination; comprehensive examination in education.

Certain essential features for developing the doctor of education degree for research or higher education are:

1. A preliminary consultation for guidance.
2. Qualifying examination: Psychological test; development of a problem for doctorate study.
3. A program of study under a general committee on doctorate study.
4. Proved competency in teaching or other educational service.
5. Written general examination: In special field; a broad examination.
6. The thesis.

*Student teaching at the University of California.*—Student teaching at the University of California, surveyed in a brief visit, gave the impression of being an intensive effort, supported by good administration of details to give prospective teachers ample initiation into the problems and the art of teaching in actual teaching situations characteristic of better practices. It is done by the school of education in cooperation with the Board of Education of the city of Oakland in the University High School, the Claremont Junior High School, and the Rockridge Elementary School. Its administration and supervision is closely related because detailed provisions had been made for it in an organization which includes both the university and the administration of the Oakland schools. The student teaching extended not only to observation and actual practice teaching but to first-hand participation as well, in the solution of school problems, in extracurricular life, management of study hall, the library, and substitute work in the Oakland schools.

The assumption of responsibility was gradual and not of the "sink or swim" type. The student in 1 hour of daily practice for a semester gradually assumed full authority when he taught. He was supervised by a supervising teacher and was always in very close cooperation

with the regular teacher. Conferences "under four eyes" were found frequently. Special-methods courses and practice teaching were well coordinated. In addition, each student elected according to need 2 of 15-unit courses just then open to all in such problems as discipline, counseling, extraclassroom activities, the home room, student publications, administrative practice from teachers' viewpoint, measurement problems, class management, and others.

Further observation in other Oakland schools in the field of major and minor teaching choice, and also in other subjects was provided through practice schools and other than practice schools. Lists of special opportunities for such observation were published regularly. At the time the visit was made, the list included classes to illustrate such topics as directed study, plan for individual reading, conducting a language drill lesson, presenting a new unit, blackboard drawings as a device in science, teaching English through assembly activity, skill building in typing, caring for individual differences, motivation in geometry, field trip to a food plant, progress report by students working on individual projects, use of pupil leadership, use of work sheet in science, summation of a unit in chemistry, and others, altogether 50 kinds of opportunities for observation scattered over a period of 4 weeks. Reports on substitute teaching, directed free observation, visiting the schools, special types of activities were required regularly. The whole plan was worked out to give enriched, directed experience.

For a period of 2 hours, the writer visited class after class in the large University High School in which dozens of classes in charge of students were going on simultaneously. Progressive methods, excellent class situations, and willing cooperation of high-school students with practice teachers, who were often found in complete charge without presence of either regular teacher or supervising teacher, were characteristic. Teachers were found to be appreciative of the stimulation of their work through university contact, while university instructors in charge of the work expressed pleasure at being privileged to be in contact with an actual teaching situation and its problems in a progressive school system.

It is the opinion of the visitor that a progressive local school policy, careful organization, familiarity with needs of teachers, the use of master teachers as critic teachers, absence of excessive experimentation in a demonstration and practice situation, administrative provision for an enrichment of observation, close supervision of student teaching with follow-up conferences, and the added maturity of fifth-year students, were elements in what appeared to be an excellent provision for student teaching in a situation far less congested and crowded than is found in many campus training schools.

*Practice teaching arrangements at the College of William and Mary.—* Features of a 15-year contract between the College of William and Mary and the city of Williamsburg, Va.—

1. College to do practice teaching in all grades of elementary and high school.
2. College to have approval of election and retention of all teachers, principal and superintendent.
3. Joint investigation of all applicants.
4. College to supply, through use of a member of the faculty, or some other person approved by college, the instruction in the elementary school and in the high school.
5. College pays salary of all teachers who do directed teaching.
6. College and city each pay one half of salary of superintendent and of principal.

Excellent ability seemed employed and student teaching proceeded under excellent conditions.

*Miscellaneous.*—There are other innovations worthy of more detailed description which should be briefly mentioned to locate them for those especially interested. Among them are a new experimental school in elementary education at the University of Michigan housed in a new building especially planned for the purpose; the provisions of honors section in education for superior students both at the University of Michigan and at the University of Minnesota; the substitution of creative work in lieu of a master's thesis at the University of Iowa, e.g., original compositions in music, paintings in art, or original writings, such as short stories, essays in literature; the senior colloquium at Reed College, an integration course given at the close of the program of studies; and the new movement to bring the use of the library and a college education into closer relationship by making the librarian at Stephens College also the director of instruction.

#### TRENDS IN SUBJECT FIELDS

In the following section the significant facts regarding each subject are given. Readers are advised to read only the discussion of those subjects in which they have a special interest, as the treatment of each field is much the same. The purpose is to show briefly the place of each in the education of teachers and to present certain significant trends of thinking that were discovered in the survey.

*English.*—English was taken up by practically all college students. In some institutions there are students not taking any college English, as a result of group election privileges among several subjects or exemptions through placement examinations, but usually from 96 to 100 percent, usually 100 percent, of the students have taken it. The median amount taken by the various major groups was from 2.8 to 12 credits more than the median of 8 credits that was generally prescribed as a minimum in academic subjects, and from 1.2 to 5.1 credits more than 9.8 credits generally prescribed in special-subject curricula. For education majors the amount taken was almost double the amount

prescribed (9 semester-credits). Students majoring in English tended to increase the median prescription of 30 hours by 6.9 credits.

The percentages of courses in English most frequently taken by 100 teachers majoring in English in representative universities and colleges were: Composition and grammar, 99; Shakespeare, 73; English literature survey, 70; English literary periods, 61; American literature survey, 60; drama, 52; and general literature, 51; courses in dramatics were taken by only 21; courses in speech by only 19.

Conferences with college and university instructors revealed in many cases, perhaps in too many cases, an apparent satisfaction with present offerings. There exists some tendency toward closer articulation of high-school and college work. The public-school junior-college instructors who teach the senior high school survey courses in English literature, and the freshman and sophomore college English instructors seem to be especially conscious of a duplication. Some college and university instructors of English oppose the broadening for teachers of the major in English to include the composition, the speech work, the dramatics, and possibly some journalism which high-school teachers of English are called upon to teach. They believe these should be added through guidance outside of current major prescriptions. Some institutions, particularly the universities where schools of education exist, have provided the broader major to parallel high-school teaching content in English.

The criticisms of the English offering most frequently heard point to an alleged lack of emphasis on creative writing, to the failure to check up in any systematic, thoroughgoing way on the English of those who plan to teach, the failure of English courses to result in life habits of literary or other reading, and a weakness of content in the offering by persons unorientated in education who attempt the professional courses in the teaching of English. It is also pointed out that English teachers know too little about the available content for adolescent reading or about the reading interests of adolescents. Courses in adolescent book selection or reading are being recommended and sometimes offered. The conflict of the liberal education needs for the general student and the professional needs of prospective teachers was clearly brought out in many discussions.

*Fine arts.*—This covers theoretic and practical music and art, including appreciation courses and work in fine arts. The fine arts were not often prescribed, but the transcripts showed that many students took fine arts work as electives. One-half or more of the students who majored in elementary education, home economics, commercial education, physical education for women, botany, general education, and English took courses in the fine arts field. Of the rest of the majors, only from 21 to 41 percent enrolled in any courses in one or both of the fine arts groups. The median prescription when

specifically made was 6 credits in academic curricula, 3 credits in special-subject curricula, and 6 in education curricula. The median amounts taken by all students who elected it did not usually reach the 6 credits that are prescribed; in special-subject curricula they exceeded the smallest requirement of three in one-half of the fields, and fell below in the rest. Music majors increased their prescription of 45 semester-credits in music by 11 credits in all fine arts; art majors increased their median prescription of 24 credits in art by 21 credits in all fine arts.

The percentages of courses in art most frequently taken by 76 teachers majoring in art in representative universities and colleges were: Drawing, 78; design, 65; painting, 62; drawing and painting, 54; history of art, 45; modeling, 42; art education, 39; art appreciation, 38; lettering, 37; and mechanical drawing, 36.

It seems important that all teachers should take at least appreciation courses in music and art; art should be more emphasized for its cultural and recreational values, for its importance in practical life as well as for the enrichment of an increasing amount of leisure that it gives. The life situations of today call for more fine arts prescription, even at the expense of some of the more traditional requirements.

Very few instructors opposed the statement that a general education should include fine arts and music. The opinion was frequently encountered that college people, whether they engage in teaching or not, are lacking in knowledge of past and present art, in artistic taste and in appreciation of visual beauty, and that college requirements and courses do not sufficiently stress fine arts experiences. Among the educational needs which were pointed out in conferences were: Contacts with museums and exhibits, contacts with instructors of art, lectures, courses in art fundamentals, actual personal experience in some form of creative art, blackboard drawing, experience in the making of posters, play costumes, principles of effective work in art, exhibits for teachers, study of beautiful furnishings and decorations for the home and for the school. Many favored orientation courses for all to obtain the activities and experiences which will lead to desirable outcomes so vital in modern life.

Some colleges and universities do not recognize art as a separate department, but expect esthetic training to be an incidental outcome of other departments, such as history, architecture, biological sciences, and others.

*Music.*—Inquiry among those in close contact with music indicated that a number of trends are affecting curricula for music teachers. These may be briefly summarized as a greatly democratized music with more stress upon listening. Some believe that this movement has overturned the balance. The older stress on technical content

for itself has shifted to technical content for new needs. These new needs are a stronger development of instrumental music in schools, of vocal class work, and of the creative idea in music as revealed in dancing and other rhythmic exercises.

There has occurred an increased high-school interest in all music, a stimulation of musical activities through honors, prizes, and awards given through professional and commercial cooperation. There is more attention to carry-over of music into life as illustrated by the movement for more chamber music. As a result, those who prepare to teach music as a specialty need to be better musicians who are in touch with musical life; they are expected to be outstanding performers on one instrument, able to play more or less all instruments, and able to conduct many types of work. They should be capable directors, strong in the theory of music, in history, and in appreciation, and well grounded in methods of teaching and supervising music. The music teacher needs a broad education, and some professors who were interviewed indicated that the B.S. and not the B.M. graduate is best fitted for public-school work in music. When a student starts without previous training in music at least 90 or 120 semester-hours are thought to be necessary in music and music education, but it is better for students to come with such preliminary musical education that at least 50 percent of college work can be in other fields than music.

There is much criticism of the fact that prospective teachers have to pay high fees for their practical music.

More appreciation work in music, more singing in mixed choruses, more attention to playing some instrument, more attention to music structure and music literature, and more exposure to good music is widely recommended for all teachers, not only by music departments but also by others interested in problems of teacher education. Most future teachers of music have made too little formal and informal contact with music at the secondary and higher-education levels.

Strong efforts to develop the musical life and atmosphere of all students were noted, particularly at Oberlin, Smith, Grinnell, the University of Minnesota, and New College at Teachers College, Columbia University.

Oberlin requires of majors in music the passing of a special musicianship test in the presence of a faculty committee if they are to be recommended for public-school music. The University of Minnesota offers the Minneapolis symphony concerts and also an artists' series throughout the winter in its auditorium to which students get special rates. New College is planning an increase in the place of music in the normal living of all its students by providing many of the approaches to good music such as the city of New York can provide.

Listening, singing, and playing activities and general music education will be stressed.

Percentages of courses in music most frequently taken by 98 teachers majoring in music in representative universities and colleges were: Harmony, 92; history of music, 84; vocal technique, 83; piano technique, 78; conducting, 70; analysis, 52; appreciation, 52; chorus and glee club, 51; ear training, 51; orchestration, 47; sight singing, 42; and violin technique, 31.

*Foreign language.*—According to the transcript analyses, most academic and most but fewer special-subject majors had completed courses in foreign languages. Those who majored in French or Latin had gone considerably beyond the median prescriptions of 28 and 35 credits by 16 and 25 more credits, respectively, in all foreign language.

Percentages of courses in foreign language most frequently taken by teachers majoring in a foreign language in representative colleges and universities were:

*Ninety-six French majors.*—Literature courses, 92; composition, 80; conversation, 70; intermediate French, 64; drama, 46; novel, 36; and elementary French, 29.

*One hundred Latin majors.*—Horace, 83; composition, 77; Cicero, 72; Pliny, 52; Livy, 45; Catullus, 45; Vergil, 39; Tacitus, 37; Latin literature, 36; and Terrence, 35.

There was a widespread opinion among language instructors who were interviewed in institutions visited that too many language teachers were not as competent for language teaching in secondary schools as they should be. Remedies suggested were a year of foreign residence by some such plan as those used by Smith College, by the college of William and Mary, and others; the requirement of previous secondary language preparation or a native-speaking knowledge of all those who would major in a language to teach it; and the requirement of more work in language for teachers than for other language majors whenever possible. Rigorous comprehensive competency tests of some sort were recommended to cover speaking, writing, and reading of the language, its grammar, its literature, and the culture of the people. Rigorous elimination of those who cannot achieve high standards was often recommended for those who expect to teach language.

Smith College furnishes an example of what is done for language majors with a year of foreign language study and travel. French students may spend the junior year in Paris, where they live in private French families, to speak the language and to see French life. They take courses in language, philology, philosophy, art, etc., centered in classes organized for foreigners at the Sorbonne. They visit museums and important buildings, take week-end excursions to the Alps, the Rhone, or other places. Easter and Christmas vacations are used for

visits to Rome or Spain. Headquarters is maintained in Paris where all students meet daily and where they can study. The students earn a year of credit. They pay \$1,000, which includes the excursions; they pay for their traveling expenses to Paris and back and provide themselves with \$25 of spending money per month from November 3 to July 1. These students, it was said, often learn to speak French fluently and to write it well.

In about nine tenths of the curricula for students majoring in academic or education subjects and in 58 percent of special-subject majors, students were required to take a median of 12 semester-hours of a foreign language. There was a slight tendency for students to increase this amount. This amount, unless preceded by high-school preparation in language or native language ability, was considered inadequate to provide any high degree of proficiency. There are persons who believe better results would be obtained if for these short-term students without background there were more emphasis upon reading knowledge only instead of attempting to develop the language along all lines. Others would stress the speaking side of language. Some criticize the grammar-translation method as a slow process. Others believe that a comparative course in general language, dwelling upon the development of language and the development of English, would be more profitable and cultural as a substitute for the language requirement. Evidently these are problems needing much thought, study, and research. Language instructors are usually willing to defend a universal language requirement during the secondary or college education of all teachers or during both periods. There is a growing practice in and much opinion in favor of a close articulation of high-school and college foreign-language work, and of stating the language requirement in terms of work done at either level.

*Mathematics.*—Mathematics as a required subject in all general education curricula beyond high school has lately lost ground. Mathematics departments regret this trend. The reasons offered for its general requirement is that the history of mathematics is a history of one side of the development of civilization just as are religion and politics, and that it is almost as wide in its relationships as philosophy. Many mathematics instructors admitted that the practical applications of higher mathematics, though wide, are hard to understand with an amount of mathematics that falls short of the mastery of the calculus, but some of them also believe that in the past there has been a serious neglect to point out the mathematical applications of higher mathematics in physics, astronomy, mechanics, biology, and social statistics. Most of the mathematicians who were asked, said they believed that mathematics teachers in secondary schools should have had courses in physics, mechanics, descriptive geometry, and astron-

omy to qualify them as mathematics teachers. Most instructors oppose the view that much-advanced mathematics does not contribute to mathematics teaching at the high-school level, and they usually believe in much specialization. There are some who would excuse many from any mathematics beyond secondary level.

Mathematics was definitely prescribed in a strong third of 577 academic curricula, in only 19 percent of 122 special-subject curricula, and in one fifth of 41 education curricula. The median prescription for all three was 6 semester-hours. The percentages of students who took it are somewhat larger than the percentages of schools prescribing it. They varied from only 41 percent of Latin majors to 100 percent of the physics majors, usually including a majority of major students in every academic field. Among the students taking prescribed sequences in special subjects it was not so popular; in every case less than half took it, percentages running from 29 percent of home economics majors to 48 percent of agriculture majors. One third of elementary education majors and more than half of general education majors took courses in mathematics. The median amount taken by all majors, except physics majors who took 20, varies from 3.6 credits in agriculture to 8.7 in general education majors.

Percentages of courses in mathematics most frequently taken by 100 teachers majoring in mathematics in representative colleges and universities were: Calculus, 97; analytic geometry, 82; college algebra, 66; trigonometry, 60; theory of equations, 40; elementary analysis, 33; advanced calculus, 32; and differential equations, 31.

Those who see more relative value in other types of subject matter than in mathematics criticize it for its many formal, abstruse formulas, the application of which is not made clear to students and cannot be made clear until much more is studied than is taken for general contact. Mathematics is often held to be forgotten much more than other content, without leaving, it is said, a residuum of principles, concepts, or notions which associate readily with life. Disciplinary value is seldom held up in its defense, although some mathematics professors stressed the point. Many believe its prescription should be limited to those fields where its formulas are indispensable, as for physics or chemistry majors. An equivalent amount of art, of social science, of biology, or of philosophy it is said would have more educational value to the teacher. With the above point of view the writer has some sympathy, and largely because the mathematicians themselves during their interviews did not present a convincing case for the value of six credits of college mathematics as now prescribed to teachers of subjects other than mathematics or the physical sciences. Many but not most of the mathematicians interviewed share these views. Most of them believe that the principal

fault lies with instructors who are concerned with mastery of mathematics without showing its unusual place in science and life.

*Philosophy.*—Philosophy was prescribed in one sixth of the academic curricula, with a median of 6 semester-hours. It was taken by only one sixth of the students majoring in botany, but by 49 percent of the students majoring in English. Most academic students did not elect courses in it. It was less in vogue in special-subject curricula; a median of only 3 credits was prescribed in 10 out of 122 curricula, and only one fourth of the students usually took it.

Many instructors argued that for a teacher who must develop a sense of values, who should develop power of thought and an interpretation of knowledge, a contact with philosophy ought to be indispensable. Nevertheless, most students do not take it; those who do, take a median of 3 to 7 credits according to the nature of the major.

A common criticism of teachers is that they lack a philosophy of life upon which to build a philosophy of education. They are not thinking critically and constructively about the present order and the function of the school in society, but are occupied with the immediate objectives of subject-matter teaching and the technics of method. While little advocacy of speculative systems of philosophy as such for teachers was found among faculties, it was generally thought that philosophy courses which integrate human knowledge, broaden the view, generalize knowledge gained from research, and stimulate the interests in the problems of man and their solution are essential. Very many believed that systematic and formal courses in philosophy are essential background to this end in order to push students back to ultimates; others discredited the value of such courses.

*General psychology.*—This subject was included in a majority of all prescriptions studied, a total of 465 curricula out of 740; the median requirement was 3 credits. The percentages of majors who took it was typically from around two thirds to three fourths or more up to as high as 98 percent for biology majors, and the median amounts taken were 4, 5, or 6 semester-credits. For teachers it is often considered a basic science. It is also sometimes, but not usually, classed as education in colleges and universities. The content of the usual course in general psychology is not education. Unless integrated with educational psychology, general psychology should not be classed as education.

In liberal arts colleges and universities the general course in psychology most frequently preceded a later course in educational psychology. The psychologizing of education has proceeded steadily in recent decades and the psychological content is therefore large. There is a strong trend to increase specialized psychology courses in all institutions, particularly in the universities. Criticism is often made that educational psychology is treated too academically rather than professionally and concretely for teachers.

*Religion and ethics.*—Certain colleges visited seek to build a philosophy of life upon religion and emphasize religious life even to the point of prescribing courses in religion to stimulate the good-life motive. Most denominational colleges and universities, however, seemed to believe that a student's philosophy of life is an individual matter, but that the college must provide, without compulsion, the stimulations of religion for the student.

Whatever the point of view, there was much emphasis of the opinion that teachers need to be good, a better than the average sort, and that the building of character and citizenship was just now one of the most needed contributions to the social good, however attained. To this end careful selection and recommendation of those who are ethical and broad was urged upon teacher-preparation institutions as a necessity, and a conscious avoidance of mediocrity of character and of non-motivated living and teaching was often stressed.

Prescription of courses in religion or Bible was found in only about 15 percent of all curricula, usually in colleges and not in universities. A considerable number of students showed interest in religion by enrolling in such courses; the medians for majors was from only 8 percent in zoology to 48 percent in the social studies. High percentages taking religion were associated much more with English, language, and social science specialization than with science or special subjects. The median number of credits taken ranged from 3 to 7, some percentages not having much significance because of small numbers of institutions involved.

*Science.*—The field of science is broad. One of the institutions included in this survey has 14 science departments. More than 95 percent of the majors in English, French, general social studies, mathematics, agriculture, home economics, physical education for women, physical education for men, elementary and general education, had studied science. The art, Latin, and commercial students took it a little less frequently than the rest. The median for science majors was typically about 50 credits taken in all science or about 40 percent of the curriculum; other medians ranged from 8.2 in commercial education to 24 credits in home economics, depending largely upon the extent to which sciences were related to the major.

Percentages of courses in sciences most frequently taken by teachers majoring in a science in representative colleges and universities were:

*Fifty biology majors.*—General botany, 64; general zoology, 60; human physiology, 38; biology, 36; animal ecology, 32; genetics and eugenics, 30.

*Fifty botany majors.*—General botany, 80; plant physiology, 70; plant ecology, 64; plant classification, 54; morphology, 52; histology, 36; and plant pathology, 32.

*Eighty-two chemistry majors.*—General survey, 100; organic chemistry, 98; qualitative chemistry, 90; quantitative analysis, 80; physical chemistry, 49; and inorganic chemistry, 34.

*Thirty-three physics majors.*—General physics, 79; electricity, 64; light, 61; heat, 58; mechanics, 52; acoustics, 36; magnetism, 30; and radio, 30.

*One hundred general sciences majors.*—General physics, 81; inorganic chemistry, 76; general zoology, 74; general botany, 73; general geology, 61; and astronomy, 27.

The principal issues about science concern the impossibility for teachers to get contacts with more than a few of the many departments, and the technical nature of introductory courses which are more often planned for those who will specialize than for those who want science for general educational background, and which are too often assumed to be best courses for those who take only limited amounts for general content. It is doubtful, for example whether a total science contact is adequately and best served with a course in one science in general chemistry, followed by a technical course in qualitative analysis. These are essential courses for majors, but are they the best 10 hours, or is 10 hours in any one science the optimum science education for a nonscience teacher?

The inadvisability of teachers of science majoring in one science as against a broader major in science as such is also an issue. One well-known leader in this field recommended the following major: Orientation—all science, 8 semester-credits; survey course in one science, 16 semester-credits; unit courses in one science, 10 semester-credits.

The principal arguments of certain science instructors against orientation courses in science are: (1) That there are few capable general science instructors; (2) that penetration of one science is more beneficial than a superficial view of all; and (3) that an appreciation of the scientific method is needed by all and can only be understood by penetrating a single field sufficiently.

Among other recommendations submitted in the conferences was one that human physiology needs more emphasis in college education.

A criticism often made by college science teachers was that high-school courses do not correlate with college, that high-school courses are often too scattered and do not clinch minimum essentials, and that high-school students appear with such a variety of courses that there is no common ground for all at college if orientation courses are attempted. It is probably safe to say that college and university science instructors resist orientation courses and favor high departmentalization more than any other group. They believe contacts with one or two departments better than an alleged impossible contact with all through orientation courses. Because of the importance of science in modern civilization and its breadth, some institutions, as, for example, the University of Chicago, provide orientation courses in science—one in the biological sciences and the other in the physical sciences, thereby stressing science, including mathematics, to the point of almost one-half of the total content of the first 2 years.

*Social studies.*—In the interviews with college instructors about the place of history and social studies in the education of teachers, many

issues were uncovered. There was the "past" or "social heritage" point of view which believes that social studies need not concern so largely the contemporary problems, because emphasis on the present means mere information, transient subject matter, and unsystematic knowledge, whereas a broad sweep of the past emphasizes principles and trends, and supplies the benefits that come from the long-range experience of the race. There were also those who advocated contemporary problems. They would stress present and future problems by an attack in social studies on crucial problems of today and not through a descriptive treatment of the past. "Use historic references for reading but bear down on life today; such an attack will reach more historic material than does the typical history course now." There were advocates of the orientation course who would cut across history, sociology, political science, economics, and geography to assemble fusion courses with perhaps historical treatment supplying the unifying element. There were advocates of indoctrination on social matters who would set up a social program and educate youth toward it, believing that indoctrination for a program like democracy, fascism, and communism is more successful than no program at all or the emphasis upon a neutral attitude which studies all sides and leaves graduates cynics who are incapable to lead definitely or to follow a leadership that is definite. Opposed to these were those who believe there are already too many social controls. Obviously, where opinions are so diverse, experimentation on various plans are in order. Of this there is much. The extensive two-level orientation courses of the University of Chicago and the contemporary civilization course of Columbia University are examples of a considerable trend toward orientation courses in social studies.

There were many who believe the social orientation of the average high-school teacher, even the teacher of history, to be mediocre. Usually this group believes more social studies work is necessary, even if a fifth year must be added to the period of preparation.

There was general agreement that the teacher of one of the social studies needs thorough grounding in all related subjects. Little sentiment was found for professionalizing the service courses, but the opinion prevailed that a better job than is being done can be done in separate special method courses.

Percentages of courses in social science departments most frequently taken by teachers majoring in a social science in representative colleges and universities were:

*One hundred general social science majors.*—Principles of economics, 65; introductory sociology, 63; American government, 60; American history, 58; history and government of Europe, 57; and history of England, 30.

*One hundred history majors.*—American history, 91; modern history, 83; English history, 62; medieval history, 48; ancient history—Rome 36; and ancient history—Greece 35.

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*Forty-six commercial education majors.*—Commercial law, 80; accounting, 70; typewriting, 70; shorthand, 67; business English, 48; office management, 39; and business organization and administration, 35.

Sixty-five percent of 740 prescriptions studied required social studies contacts. Often history was designated; sometimes the prescription was restricted to one or two fields. The median requirement was 6.6 credits for academic majors, 7 credits for special majors, and 9 credits for education majors; these medians were less than those in foreign languages or science. College students, however, elected these courses quite freely and materially increased the relative position of this field in total work taken through the exercise of elective privileges. Among all fields but music, the proportions of students who took social studies were above 92 percent, often reaching 100 percent. In transcripts of music students there were 25 percent without any social science credits. The median amounts taken ranged from only 8.4 for music students to 24.7 credits for commercial education students.

Social studies taken increased from a prescription of 24 credits in a pure history major or from 35 credits in a major in general social studies to a median of 42 credits in all social studies for history majors and 46.5 credits for majors in general social studies. The problem of adequate coverage of history and social studies is a difficult one as the field is so large. The College of Education of the University of Minnesota offers a 5-year curriculum which requires concentration in one field and a general introduction to all others. This results in a large major, but a rather broad one, without the loss of training in advanced courses in at least one field.

There is no doubt that all teachers should continue history and social sciences at the college level, that their orientation on current social, civic, and economical problems must be thorough if they are to be effective teachers and directors of youth, that college-level contacts should be made with sociological, economic, and civic problems by some plan, and that prescription is probably too low and not sufficiently extensive. The leading problems of the present and future are in this area. Teachers are in key positions for the stimulation of thinking on these problems, and youth will catch their interests, insights, habits of careful thinking, and their use of expert opinion.

*Physical and health education.*—Inquiry among instructors revealed a universal acceptance of the principles that teachers must know the ways of healthy living, that they should enjoy various forms of recreation, that they should understand the agencies and organizations for maintaining health, that they should know the rudiments of mental hygiene, and that they should themselves be examples of good physical and mental well-being. Many emphasized the need of an advanced knowledge of physiology of the human body. As a result of these concepts, student health service in college, physical activity

courses for all students, and survey courses in the theory of health, preventive medicine, and sanitation are common.

Among the trends noted in the discussions of curricula designed for specialization of future teachers of physical education were: The beginning of physical education curricula for teachers during the freshman year because of the many skills that needed to be developed, which take time; the looking upon physical education as a way of education which contributes its part by strong development of organic strength of heart, lungs, circulation, motor control, muscular strength, and certain social traits such as sportsmanship and love of sports, and the art of relaxation. In this program athletics is only one phase of physical education. Physical education instructors often point out that the general educationist and academic professor do not fully appreciate physical education as a constituent of a balanced program of education even if they think they do. Much of the recent training aims to put teachers in a position to promote a natural play program rather than formal calisthenics and to anticipate the long adult period during which there should be some interest in play. It is usually felt that the men in public-school physical education are motor minded and not academically minded enough. More education along academic lines and in related sciences for the physical education program were advocated by some instructors, even if the period of training is lengthened to 5 years in order to get a background.

Formal physical and health education was required in all colleges. The practice of not giving credit for it in some institutions and of giving credit for it in others make analysis and conclusions difficult. It was required in 100 percent of 753 prescriptions studied, the median requirement being 4 semester-credits. From a general education standpoint, because of its importance, its growing content should justify institutions to give credit for what is required and to increase correspondingly the total requirement for graduation.

Percentages of courses in physical education most frequently taken by teachers majoring in physical education in representative colleges and universities were:

*Physical education—men.*—General physical education, 100; advanced athletics, 100; examination, diagnosis, correctives, 68; hygiene, 62; kinesiology, 61; football, 59; basket ball, 59; gymnastics, 51; history of physical education, 46; principles, 45; anatomy, 42; track, 40; administration and organization, 37; baseball, 36; and physiology, 35.

*Physical education—women.*—General physical education, 100; advanced athletics, 100; examination, diagnostics and correctives, 74; hygiene, 57; gymnastics, 55; dancing, 57; history of physical education, 47; anatomy, 46; health, 43; swimming, diving, and life-saving, 42; administration and organization, 41; first aid, 41; physiology, 37; principles, 36; and plays and games, 33.

*Household arts.*—Home economics was not found in the offering of many independent liberal arts colleges because it is claimed that it is

vocational education and not in harmony with the aims of a liberal, nonvocational education. It was practically always found in the universities as a vocational curriculum, but where offered, work in it is often open to students for a general education. Right here is an issue. Many point out that home life is as universal as social and political life and that some sort of training of women and men to make home life more ideal, more artistic, and more wholesome should be a part of a liberal education especially for girls, who in more cases than not will (or should) live a life of homemaking or home participation. While many reject the technical courses in foods and clothing or home management at the college level for general education, they would welcome courses in dietetics, interior decoration, child development and growth, eugenics, and psychology of sex as units in other courses or even in orientation courses on home life, where objectives for men and women alike are for better home life.

So far as specialized curricula in home economics for prospective teachers was concerned, the following trends were noted: Less laboratory work in garment construction and foods preparation than formerly because it is now accomplished in secondary courses, but more emphasis upon home and family relationships such as child care and training, home management, nutrition, financial guidance, and more emphasis upon thorough grounding in related sciences.

Percentages of courses in home economics most frequently taken by 100 teachers majoring in home economics in representative colleges and universities were: Nutrition, 80; household management, 73; child care, 69; clothing construction, 61; textiles, 61; costume history and design, 50; foods and cooking—general, 54; household furnishing, 48; related art, 46; social problems, 45; clothing and textiles, 34; and home management, 31.

Needs of home economics departments were pointed out by home economics instructors as (1) recognition of departments for graduate work and (2) the organization of general orientation courses of practical social value to men and women alike.

*Industrial arts and trade training.*—Courses in industrial arts have been called handicrafts in the grades and manual arts, practical arts, manual training, or manual education at higher levels. According to Dr. Homer J. Smith<sup>2</sup> industrial arts is not to be confused with trade training, for it is general education without the vocational aim and seeks to interest, inform, unify, and guide. Both industrial arts and trade training are offered in public schools, and teachers for both or each separately need preparation.

Conferences with instructors have brought out the fact that they regard industrial arts a part of general education for students to under-

<sup>2</sup> Smith, Homer J. *Industrial Arts and Trade Training*. Reprint of an article in *Bruce's School Shop Annual*, 1931. Milwaukee, Wis. Bruce Publishing Co., 1931.

stand and appreciate the present economic and industrial life and its technological advancement, to appreciate the problems of the machine age, and to recognize every citizen's relationship to industry. For this purpose they believe that a well-rounded education in industrial arts is necessary for all, and that it has been hitherto neglected in the general education of many whose liberal academic education has led to no real appreciation of the machine age and its problems and of the work of labor groups. The committee report for New College of Columbia University on an industrial program for teachers to contribute to their social philosophy of education would stress the following activities for teachers: Experiences in shop and laboratory, classroom discussions of such topics as the monetary system supplemented by trips; visits to plants to study industrial processes, to employment bureaus, and to places where new industrial experiments are taking place, such as cooperative stores; study of governmental nonprofit services, such as the Postal Service; visits to farms and study of rural-life problems; a period of work in both rural and urban industry—stores, garages, farms, commission houses, and similar situations.

Most colleges do not have laboratories or shops for industrial arts, although here and there courses in economics and sociology stress the theoretical aspects of the problem. Many, however, stress the view that a real appreciation of industry and its problems is impossible without more concrete contact. Many leaders in teacher preparation believe work in industrial arts an important constituent of a liberal education.

## CHAPTER IX

### THE GRADUATE CURRICULUM FOR TEACHERS

Graduate work for teaching below the level of college education is becoming more common. The percentage of superintendents and principals who have graduate degrees is large and steadily increasing. The number of schools which provide additional salary increments to those teachers who have had graduate training is also steadily increasing—though perhaps temporarily checked by the depression. The number of persons receiving doctoral and master's degrees who plan to teach has exceeded the absorption ability of higher institutions and more and more master's and doctoral graduates must seek secondary, general administrative, supervisory, and special types of functions in larger schools. For this there is precedent in the secondary schools of Europe. The assistant superintendencies and the general supervisory functions in the larger cities, even now, in the opinion of a leading superintendent in America require the background and training of the doctorate to do their work in the light of present available knowledge and with the help of continuing research. Training-school critic teachers in teachers colleges are required to have the master's degree by the standards of the American Association of Teachers' Colleges. Thus, there is an increasing group whose education at the graduate level needs special consideration and whose needs, and the pattern of whose work, may not coincide with the requirements of current practice that has been built largely upon the demands of research and of teaching in higher institutions.

#### THE MASTER'S-DEGREE LEVEL

*Pattern of work completed.*—For the general pattern of combined undergraduate and graduate work completed for the master's degree by prospective teachers, the transcripts of 347 persons from 24 institutions were examined. Of these, 50 had selected their graduate major in English, 50 in French, 50 in home economics, 48 in mathematics, 49 in chemistry, 50 in history, and 50 in educational administration, representing altogether 7 representative fields—English science, language, mathematics, social studies, education, and special subjects. Table 20 presents the pattern of the entire program completed during the undergraduate and graduate period when all undergraduate and graduate credits in the field of specialization were omitted.

TABLE 20.—The nonspecialized undergraduate and graduate contacts of 347 master's-degree graduates, representing 7 major fields of specialization,<sup>1</sup> with the principal fields of knowledge at the undergraduate and graduate levels when undergraduate and graduate credits in the graduate field of specialization are omitted

Field	Number of graduates out of 347 who did not major in field at graduate level	Extent of contact of nonmajor students					Increase or decrease over total undergraduate contacts		
		Number who took undergraduate or graduate courses	Percent who took undergraduate or graduate courses	Average number of credits taken by those who contacted the field	Range in number of credits taken by those who contacted the field	Percent which all work taken in field is of all work taken at both levels	Percent taking courses	Average number of credits taken	Percent which work taken in field is of all work taken
1	2	3	4	5	6	7	8	9	10
Agriculture.....	347	18	5	6.5	2-44	0.2	+2	+1.5	+0.1
Art.....	347	106	31	5.1	1-33	1.0	-3	+1.1	+0.1
Commercial education.....	347	27	8	4.2	1-12	2	+2	-8	0
English.....	297	298	100	16.6	2-50	10.2	0	+8	-2.3
Foreign language (any).....	297	278	94	20.7	3-76	11.9			+6
Classical.....		109	37	14.4	2-50	3.2	+9	+8.0	+1.1
Modern.....		269	91	15.6	2-59	8.7	+9	+1.3	-8
Home economics.....	299	19	6	3.4	1-6	1	-4	-2.0	-8
Industrial arts.....	347	18	5	6.1	1-29	2	-1	+1.3	0
Library science.....	347	17	5	2.1	1-8	1	+1	-1.1	+1
Mathematics.....	297	196	66	10.6	1-37	4.3	+15	+3.1	+1.6
Music.....	347	57	16	3.7	1-28	6	-9	+6	-4
Philosophy.....	347	186	54	7.3	1-54	2.4	+21	+2.3	+1.1
Physical education.....	347	63	24	4.5	1-38	7			+7
General psychology.....	347	235	68	9.1	1-18	2.1	-6	-4	-1.1
Religion.....	347	95	27	6.6	1-66	1.1	-5	+8	-4
Science (any).....	298	281	94	18.4	1-78	10.8			+6
Biological.....		193	65	8.5	1-66	3.4	-6	-9	-1.9
General.....		20	7	6.5	1-20	3	+1	+9	0
Physical.....		277	79	13.0	2-73	7.1	+14	+3.1	+2.3
Social studies (any).....	297	265	96	16.1	2-68	9.6			-2.4
Geography.....		28	9	7.0	2-9	2	-9	-1.2	-5
History.....		235	79	9.6	1-64	4.7	0	-4	-1.8
Economics.....		140	47	6.9	1-58	2.0	-7	+1.8	+4
Political science.....		98	33	3.6	2-23	1.1	-9	0	-8
Sociology.....		131	44	6.4	1-26	1.5	-7	+5	-8
Education (any).....	297	294	98	22.9	2-73	12.1			-4.0
Education and educational psychology.....		246	83	17.6	1-44	9.0	-17	+4.0	-1.7
Special methods.....		168	57	5.8	1-3	2.0	-17	+9	-2.8
Student teaching.....		110	37	4.7	1-15	1.1	-37	+2	-2.8
Miscellaneous.....	347	86	25	8.3	1-72	1.3		+2.3	-1.8
Total, including major.....	347	347	100	161.6	119-234			+37.0	

<sup>1</sup> 7 fields represented are: English (50), French (50), home economics (45), mathematics (50), chemistry (40), history (50), and educational administration (50); total, 347.

It is important to know just what the fifth year of education adds to the 4-year pattern of teachers. For that reason the increases and decreases in percentage of students who took work, in average credits taken, and in percent that work taken in each field was of all work taken are added.

The principal change which occurred was an average increase of course work taken from 126 to 162 semester credits, an increase of 37 semester credits, which is more than an average undergraduate annual load. This average increase of credits outside of the theses is high, because in one institution a master's degree was awarded at the end of

2 years of graduate work; in another additional work beyond the regular fifth year that was routinely prescribed for certification to teach was required for the master's degree. Other institutions often require much prerequisite work to be completed before graduate courses can be taken for credit, and in some of the institutions students actually average more than 1 year of residence and of course work. For these, and possibly other reasons, the mean is high. The median would have been lower, perhaps much lower, because average practice is built upon 1 year of work.

The percentage of all work taken that falls into the major graduate field of concentration has increased from 24.6 for the undergraduate program alone to 31.1 for the undergraduate and graduate program combined. The most characteristic change in the master's-degree pattern was this emphasis upon specialization.

The percentages of master's degree students who took undergraduate or graduate courses increased over bachelor's degree graduates in only 9 fields, especially languages, mathematics, philosophy, and physical sciences. The percentages did not change in 3 fields, and they were relatively lower in 15 fields. The average increase or decrease was not large. However, the more limited selection in the case of 347 master's degree graduates from 7 fields may have been influenced by the effects of more limited sampling as compared with the better sampling of 1,000 selected for study of the undergraduate curriculum from many fields. Therefore, the allotment of much importance to these small amounts of increase or decrease is questionable. The important point, however, is that large percentages of future teachers with master's degrees still have not had college courses in such important fields as art, biology, or physical sciences and social studies other than history.

Although the request was made for transcripts of students who can qualify to teach, which would tend to select those who had education courses, it should also be noted that large percentages have not had special methods or student teaching. However, in many States the master's degree is an acceptable legal requirement for certification to teach in senior high schools and junior colleges.

The average number of credits earned by those who took any courses increased in 17 fields, remained the same in 1 field, and actually—probably because of the limited sampling—showed a decrease in 7 subjects. The average change in total credits for general contact when credits earned in the major field of graduate concentration were excluded was thus seen to be small for the master's degree.

The average increase or decrease in the percent which all work taken in a given field was of all work taken, was very small—only eight tenths of 1 percent. Because the major is emphasized, the typical change was a reduction of percentages in the other fields.

A perspective of the total college education patterns of all work done by the 347 students is furnished in chart 2. The subjects rank as follows in order of total undergraduate and graduate emphasis for the master's degree: The major; education; foreign language, mostly modern; science, mostly physical; English; social sciences, with more

Field	Per cent of all work	Relative amount of work in divisions of each field				
		Agriculture	Commercial ed.	Industrial Arts	Home ec.	Libr. sci.
Special subjects						
Fine arts	1.6		Art 1.0		Music .6	
Psychology	2.1					
Mathematics	4.3					
Miscellaneous	5.7		Philosophy 2.4	Miscellaneous 2.0	Religion 1.1	Deed .2
Social science	9.4		History 4.7	Economics 2.0	Sociol. 1.5	Pol. sci. 1.2
English	10.2					
Science	10.4		Physical 7.1		Biological 3.4	Chem. 1.1
For. language	11.9		Modern 8.7		Classical 3.2	
Education	12.1		General education and educational psychology 9.0		Special methods 2.0	Student teaching 1.1
Major	21.1					

CHART 2.—The general education pattern of 347 master's degree graduates from colleges and universities in the fields of English, French, home economics, chemistry, history, and educational administration.

emphasis on social studies other than history than found for previous levels studies; mathematics; philosophy; psychology; fine arts; religion; geography; agriculture; commercial education; industrial arts; home economics; and library science.

The percentage of students who had no work in some of these fields, the small percentage of total work completed in certain fields, the

need for teaching skill, and the need for subject-matter mastery in two teaching fields, raise the following questions regarding the preparation of teachers with an additional year or two beyond the bachelor's degree:

1. Should one field receive the emphasis it usually does or would it be better to equalize concentration in two?
2. Should much or any of the prospective teacher's time be spent upon research and upon the preparation of a master's thesis?
3. When 5 years are spent in a teacher's preparation, ought the fifth year to be an integral part, that is, a continuation of the previous 2 or 4 years in all lines of development, or is the 4-1 plan by which the fifth year becomes a different sort of year, characterized largely by concentration and specialization, research and thesis writing, superior to the 5 or the 2-3 plan?

On some of these issues further information regarding current opinion and practice was secured through more specific questioning of college and university instructors, and further analysis of the students' transcripts.

For the 198 master's degree graduates, distributed about equally in the fields of English, history, home economics, and mathematics, only 40 percent of all undergraduate and graduate work was taken in the graduate field of specialization during the graduate year. This percentage varied by subjects as follows: English, 40; history, 49; home economics, 32; and mathematics, 41. Most work in the major for all fields studied was completed for the baccalaureate.

The number of subject fields in which courses were taken by 347 master's degree graduates at the graduate level averaged only 2.1 in a range which extended from only 1 field for 28 percent to 6 fields for only 1 student. The percentage distribution was the following: 1 field, 27.7; 2 fields, 45.5; 3 fields, 18.2; 4 fields, 6.3; 5 fields, 2; and 6 fields, 0.3.

The strong tendency to limit the fifth year to work taken for specialization is apparent from the fact that nearly three fourths of the students elected courses in only 1 or 2 fields.

Of the 347 master's degree graduates only 26 percent reported a formal minor accompanying the major; and while the selected minors were scattered among different fields there was some tendency to select minors either in education, the most common of all elected minors, or in fields related to the major. The education majors most often took a minor in education psychology; chemistry majors most often selected mathematics; English majors, though scattered in their choices, favored somewhat the languages or history; French majors favored English; history majors favored political science; and home economics majors favored chemistry.

In 71 percent of the cases the graduate and undergraduate majors were in the same field; in only 2 percent of the cases were the graduate major and the undergraduate minor in the same field. Thus 73

percent of these persons had an undergraduate major or minor in the field of graduate specialization. Corresponding percentages for representative subjects were: chemistry, 80; English, 86; French, 72; history, 74; home economics, 96; and mathematics, 86.

A very important point in planning graduate programs for teachers is that while the mean number of credits required was 162 under-

Field	Per cent of all work	Relative amount of work in divisions of each field			
Art and music	2.1	Art .5 Music .1			
Special subjects	2.1	Physical education .7	Agriculture .6	Industrial Arts .5	Others .3
General psychology	2.5				
Miscellaneous	6.2	Philosophy 2.7	Miscellaneous 1.8	Religion 1.7	
Mathematics	6.8				
English	12.8				
Foreign languages	13.0	Modern languages 8.1		Classical languages 4.9	
Science	13.0	Physical science 8.8		Biological science 3.9	
Social studies	15.3	History 5.9	Economics 4.4	Political science 2.4	Sociology 2.3
Education	28.5	Education and educational psychology 26.8			
				Special methods 1.0	Student teaching .7

CHART 8.—Distribution of credits earned in the various fields of knowledge by 80 master of arts graduates in educational administration.

graduate and graduate credits, the range of credits completed by individuals for the master's degree extended from only 119 credits in an institution where quality credits are accumulated for superior work to 234 credits in another, which is 30 credits more than the median completed for the doctorate in the same group of institutions.

*Master's degree preparation in educational administration.*—Because of the special interest of many schools of education in the preparation of school principals and superintendents, the pattern of work completed by 50 students who had majored in educational administration is presented in chart 3. The figure also illustrates how the patterns of a group differ from the composite pattern shown in chart 2.

There are several characteristic differences in the preparation of these administration students. Only 18 percent of them had majored or minored in education in their undergraduate work. It is a valuable asset to school administration that these key men, who have majored in graduate education to become superintendents and principals, should thus have the wide contacts with other fields to the extent shown in chart 3. The administrator's group is able to show larger percentages of contact in practically every field, except the major itself, which is somewhat smaller in amount than the usual major, but at the same time includes the minimum number of required hours in education which others have had to take to qualify for teaching at the undergraduate level in addition to all other work and a subject-matter major. Many would regard social studies, well balanced among departments, and science desirable fields to rank next to the major. A close examination of transcripts showed that these prospective superintendents as individuals often have large gaps in their general education. Note, for example, that 78 percent had no art in college; 94 percent had no music, not even an appreciation course; 80 percent had no student teaching; 70 percent had no special methods, although all of them had theoretical courses in general education and in psychology. Forty-six percent of these educational administrators had no college sociology, one half of them had no political science, one third had no course in economics, and large minority groups had not enrolled in biological or physical sciences. Some questions are suggested. Was it not essential that these men be orientated in these courses which may be considered directly and indirectly basic to their job and to intelligent leadership in their community? Does college guidance for education positions at the graduate level function as effectively as it should? Does the present program of graduate requirements make it impossible for anyone to take the courses he should have? Are the larger percentages who have taken mathematics or classical languages and the larger average credits earned in these fields justifiable in view of the neglect by superintendents of socio-civic and esthetic types of content? Does a heavy thesis requirement during a fifth year provide a more desirable sort of training than a lighter thesis with a greater number of other contacts? All of these issues are raised by a thoughtful study of facts revealed in transcripts of work completed.

*The thesis requirement.*—An important variable which enters into this situation is the emphasis placed upon a thesis on a research problem. In one institution it may not be required at all and in another it represents the equivalent of as much as 12, 15, 18, or even 24 semester credits of work. The thesis is required in 100 percent of 51 colleges and in 88 percent of 49 universities which reported that the master's degree was conferred.

The attitude of instructors on the thesis requirement was ascertained from answers to questions on the place of the thesis. Of 694 instructors, representing 14 subject fields, 22 percent did not favor a thesis but rather favored much independent written work in all graduate courses. The percentages not favoring a thesis were:

Faculty group	Number replying	Percent
Academic instructors.....	250	20
Special-subject instructors.....	155	28
Education instructors.....	142	18

The largest "no thesis" groups were found in certain special subjects, namely, agriculture (32 percent), art (31 percent), but also in French (27 percent) and in English (27 percent). Small "no thesis" groups were found in history (8 percent) and in chemistry (8 percent).

When instructors were asked to indicate the number of semester credits equivalent to be recommended for a master's thesis, the percentage distribution was as follows:

Faculty group	Number replying	Percentage distribution by number of credits						
		3	6	9	12	15	18	23
		3	4	5	6	7	8	9
Academic instructors.....	91	14	45	24	10	1	3	2
Special-subject instructors.....	36	11	56	17	8	3	3	3
Education instructors.....	68	40	44	12	3	1	0	0

The modal tendency, which is almost a 50 percent tendency, would give the thesis the equivalence of 6 semester credits of course work. A relatively small minority would assign more than 9. The education group is rather decidedly in favor of a light thesis requirement. On the whole for all groups the modal reactions would be to require a thesis for 6, 9, or 3 credits of emphasis in a teacher's program.

*Fifth-year content.*—Certain other plans for the fifth year of work for teachers were proposed in order to ascertain the attitudes of various groups. The proposals and the responses of representative groups to them are given in table 21. Each instructor was privileged to approve as many plans as he would utilize.

TABLE 21.—The opinions of representative groups of instructors on proposals for using the fifth collegiate year in the education of teachers

Proposal	Percentage of—		
	250 academic instructors	155 special methods instructors	142 education instructors
1	2	3	4
1. A year of additional subject matter in the major.....	26	21	1
2. A year of additional subject matter in the major and in related fields.....	43	27	3
3. A year of work filling gaps in previous contacts with major fields of knowledge.....	11	16	8
4. A year of work entirely in the field of education and psychology.....	1	17	3
5. A year of work entirely elective by the student.....	11	17	6
6. A year of work about half of which should be additional work in the major and the other half in education and psychology.....	4	10	40
7. A year of work with two-thirds of it to be in major and one-third in education and psychology.....	14	23	25
8. A year of work, with one-third of it in the major and two-thirds of it in education and psychology.....	2	5	18
9. A thesis dealing with a problem of pure subject-matter research in the major.....	21	21	6
10. A thesis dealing with the education or psychology problems involved in teaching the major subject.....	8	9	43
11. No thesis required but much independent written work in all courses.....	20	28	18
12. Emphasis on some specialized phase of major field in all courses.....	6	7	8
13. Emphasis on general but advanced study of major subject.....	27	21	18
14. Much attention in the training school to application of subject matter and method in the major.....	7	8	20
15. No attention in the training school to applications of subject matter and method in the major.....	3	3	.....

Altogether 547 instructors checked an average of 2 of the 15 plans proposed. No plan received a majority vote, and it is evident that on some points the education instructors and subject-matter instructors show divergent reactions, each more often emphasizing the plan which is most closely related to his work. These reactions are no doubt honestly and not selfishly made, because each sees best the benefit of his own work to teachers; each has been told the value of his work by teachers who have taken it; and each has probably lost contact with the other points of view. Note, for example, that nearly one fourth of the subject-matter instructors but only 1 percent of the education group believed in a full year of graduate work in a subject-matter major; that about two fifths of the subject-matter instructors and only 3 percent of the education group favored a year of work in a subject-matter major and in related work; and that 40 percent of the education group but only 8 percent of the academic group would favor a thesis dealing with the educational or psychological problems involved in teaching the major subject. Other divergent reactions of similar tendency may be seen in plans 6, 9, 10, and 14.

In accentuation of these differences, there are institutions where graduate work for high-school teachers is usually in education and educational psychology and seldom in subject-matter departments. Other instances were found where an academic department refused to permit graduate students majoring in an academic field and ex-

pecting to teach to minor in education. Both are extreme practices which do not always take the best interest of the teacher into first consideration and can scarcely be defended.

As a matter of fact there should be under present conditions many more cases where the graduate work of a future teacher is divided between a teaching field and education, the emphasis varying according to future need and previous preparation of the individual student. All this calls for close cooperation of all faculties in the matter of the graduate work of teachers, which, it is anticipated, will increase in volume as States and cities increase the standards of qualification for positions.

*The integrated 5-year curricula for teachers.*—Throughout the discussions in previous chapters certain limitations of undergraduate preparation for teaching have been noted which seem to require an extension of the period of preparation at least for secondary teachers. For a longer period of preparation for secondary teachers at least there is precedent in the thoroughgoing preparation of secondary teachers in England, France, Germany—and in the United States, the State of California. The limitations of the 4-year program often pointed out are the following:

1. General education is incomplete and has wide gaps. This, of course, may be remedied in part through the wider use of orientation courses in secondary education and at the junior college level.
2. The need of adequate preparation in 2 or 3 teaching fields rather than in only 1 subject, if preparation is to meet the needs of most secondary teachers in America, where, in bringing secondary education within the reach of all, the small high school is typical.
3. In some fields, in the opinion of many instructors who were interviewed, adequate specialization to attain the competency required by present American needs seems impossible. This was particularly stressed for the foreign languages, science, social studies, all phases of the English teachers' work, and the special subjects, without curtailing general education.
4. The increasing pressure from the public-school field itself to send them beginners with more adequate initial preparation in the art of teaching and a sufficient orientation in the theory and science of education requires education courses as essential; but these have crowded out other courses usually taken for the bachelor's degree.

All these needs together have resulted in a strong sentiment for, and some progress in the establishment of, a fifth year of preparation. The issue coming more and more to the foreground is whether the fifth year should be a year of specialization and research in a major field or two of special interest or whether there should be an integrated 5-year program which prepares along all the above lines. The Harvard School of Education insists that it cannot be done in less than 6 years and is requiring 2 years beyond the bachelor's degree of students in education. Its placement in exceptionally good positions of practically all of the considerable number of 6-year people at a time

when other schools placed on the average less than one-third, might be considered an indication that public-school officials appreciate thoroughgoing preparation of teachers.

After more or less experience with 5-year plans in California, Assistant Dean Benjamin of the School of Education at the University of Minnesota, posited the following principles which he believes should underlie the proposed extension of 5-year curricula at Minnesota. It is an illustration of the kind of philosophy which is back of 5-year plans, although many advocates of the 5-year plan might differ with him on these particular principles:

1. It should provide a broader education than does the present 4-year program.
2. It should not include a year of graduate training in the sense of increased specialization and research.
3. The amount of time devoted to strictly professional courses in education should be no greater than in the present 4-year program.
4. Professional education should be improved and integrated in the 5-year curriculum.
5. It should provide for increased contact with actual school situations.
6. Its curriculum should be evaluated as objectively as possible in terms of the quality of its product.
7. It should be organized around the following group of courses:
  - (a) General introductory and orientation courses in basic fields such as social sciences, biological sciences, physical sciences, language, letters and philosophy, music and art.
  - (b) Related content courses (for third, fourth, and fifth year) to broaden the background of the teacher in his specialties.
  - (c) Instructional content in teaching fields.
  - (d) Technical courses in education such as educational psychology, the high school, technique of high-school instruction, etc.
  - (e) Practice courses in education (observation, practice teaching, and research problems).

The purposes to be attained by 5-year curricula have much to commend them, and the movement is gaining momentum. A large number of instructors and administrators in liberal arts colleges were of the opinion, as revealed in conferences, that 5 years of preparation for teachers was necessary; some of them believed they could supply all of the preparation; others said they preferred to establish closer contact with graduate schools in education elsewhere to supply the fifth year while they supplied the first 4 of the 5 years, under either the 4-1 plan or the integrated 5-year plan.

One issue concerns the degree to be awarded and the amount of research to be included. Some 5-year curricula lead to the B.Ed., some to the M.S. or M.A., and others to the Ed.M. The Ed.M. is usually a content degree and not a research degree, while the M.A. is usually, but not always, awarded when a thesis requirement is maintained. It seems reasonable that the M.A. or M.S. degree should be kept for the master's degree requirement with heavier research, and that the Ed.M. be awarded as a practitioner's degree

with emphasis on content for the teacher. Both degrees could then be awarded in education by the same institution. Certain trends are noticeable with respect to the Ed.M. degree: (1) Waiving of the language requirement; (2) omission of a thesis and emphasis upon teaching subjects and professional work in education; and (3) frequently the requirement of successful teaching experience. Harvard requires 2 years for its Ed.M. degree.

#### THE DOCTOR'S-DEGREE LEVEL

Forty-four percent of 50 universities and 5 percent of 153 colleges of liberal arts reported that they awarded doctor's degrees. An extensive curriculum study of the doctoral level was not planned in this section. A full treatment of most matters pertaining to graduate work will be found elsewhere in the report. However, a sampled cross-section of curriculum content at the secondary, undergraduate, and master's degree level was obtained through the analyses of only 50 complete undergraduate and graduate transcripts of doctoral graduates who had majored in education and of 37 doctor's degree graduates who had majored in history where the records were available from the group of colleges and universities intensively studied.

It is not the belief of the Survey staff that the doctorate work should be formalized and standardized in terms of required credits of course work, residence requirements, the passing of set types of examinations, or heavy emphasis on research. The purpose of the doctorate is to develop scholars who can advance knowledge through research, interpretation, and evaluation of data and who can supply a high quality of instruction. Progressive elimination of the less capable, and careful selection, encouragement, and development of talent must be a part of the plan. The fundamental qualifications are mastery of a field and its related branches, ability to do and evaluate research in it, the possession of a broad basic background, a knowledge of society and its institutions and of the function and practices of higher education. The interests of the teaching profession will be best protected if the preparation of doctors be restricted to institutions with exceptional faculties; mere technical requirements can be met easily. For these reasons the discussion that follows should in no wise be interpreted as signifying that course requirements, theses, and the like, are the most important consideration. It is merely an extension of previous discussion to the doctor's level to get a complete picture of the formal aspects of curricula at all levels.

*Pattern of work completed.*—The general pattern of work completed is indicated in rough outline for doctorate graduates in both education and in history in table 22; which lists in parallel columns the percentage of doctors in education and in history who had completed

courses in each of the different fields of subject matter, the mean credits, and the range in credits earned. The total amount of formal course work completed is also given.

TABLE 22.—Distribution of work taken by 50 doctors of philosophy in education and by 37 doctors of philosophy in history at the bachelor's, master's, and doctor's levels combined in colleges and universities

Field	Percent who had contacts out of—		Mean credits earned in—		Range of credits earned in—	
	50 education majors	37 history majors	50 education majors	37 history majors	50 education majors	37 history majors
1	2	3	4	5	6	7
Agriculture.....	28	8	10.3	2.8	2-47	2-8
Art.....	22	11	8.4	3.4	1-11	1-6
Commercial education.....	8	8	4.6	6.1	2-6	1-14
English.....	100	100	22.6	21.6	5-74	6-47
Foreign language (any).....	82	100	19.2	27.6	5-50	6-83
Classical.....	36	51	13.8	17.4	3-38	2-50
Modern.....	76	95	14.8	19.7	3-30	3-79
Home economics.....		5		1.8		1-7
Industrial arts.....	24	5	6.6	3.7	1-11	2-7
Library science.....	6	14	1.3	3.4	1-2	1-10
Mathematics.....	90	65	10.8	7.8	1-32	3-20
Music.....	20	19	2.8	2.6	2-8	1-6
Philosophy.....	48	62	8.6	6.8	2-31	2-22
Physical education.....	28	20	3.7	6.0	1-9	1-12
General psychology.....	80	62	8.2	4.8	1-38	2-9
Religion.....	48	46	5.5	6.8	1-12	1-22
Sciences (any).....	98	89	20.9	13.8	2-84	6-50
Biological.....	74	62		8.9	1-28	3-20
General.....	6	5	13.5	6.3	3-21	4-8
Physical.....	84	68	16.3	2.5	3-84	2-36
Social studies (any).....	98	100	27.9	10.6	4-55	40-190
Geography.....	16	14	2.9	3.9	1-8	1-7
History.....	88	100	12.3	33.4	2-33	40-179
Economics.....	56	65	9.4	10.0	2-30	3-24
Political science.....	40	78	8.6	16.6	2-46	4-36
Sociology.....	44	46	8.3	8.3	2-30	2-22
Education (any).....	100	97	65.6	20.0	45-147	6-70
Education and educational psychology.....	100	92	80.6	18.6	35-133	5-58
Special methods.....	52	60	5.6	4.9	1-18	1-14
Student teaching.....	36	27	5.7	4.2	1-9	1-11
Miscellaneous.....	42	38	9.7	8.1	2-20	1-21
Total.....	100	100	203.2	209.3	153-272	131-291

The median total number of credits of undergraduate and graduate course work completed by doctors in educational administration was 203, but individual students attained the degree in one case with 153 semester credits and in another with as many as 272. The median number of credits completed by those who majored in history was 209 in a range which extended from only 131 up to as much as 291. The increase of median credits completed for the doctorate over the median credits completed for the master's degree was 42 in education and 51 in history, the median for the master's degree in education being higher and the median in education for the doctorate being lower than corresponding medians for history.

The variation in credits completed by groups of students majoring in history and education at the bachelor's, the master's, and the

doctor's degree levels is shown in figure 4. Some doctor's degree graduates took no more course work than some bachelor's degree graduates. The master's and doctor's levels overlap greatly. There are, of course, many factors causing this variation, such as number of years of graduate work required for the doctorate, which was 2 or 3 in the institutions included, the accumulation of quality credits not credited on transcripts to definite courses but counted toward the degree, the amount of individual noncredit seminar and research, the work assigned, the emphasis placed upon the thesis, and the scope and severity of examinations without reference to courses. Eighty-six percent of 22 universities that reported conferring a doctoral degree and 100 percent of 7 colleges that reported conferring a doctoral degree required a dissertation. The interrelationships of these variables may result in a more equalized total attainment, but

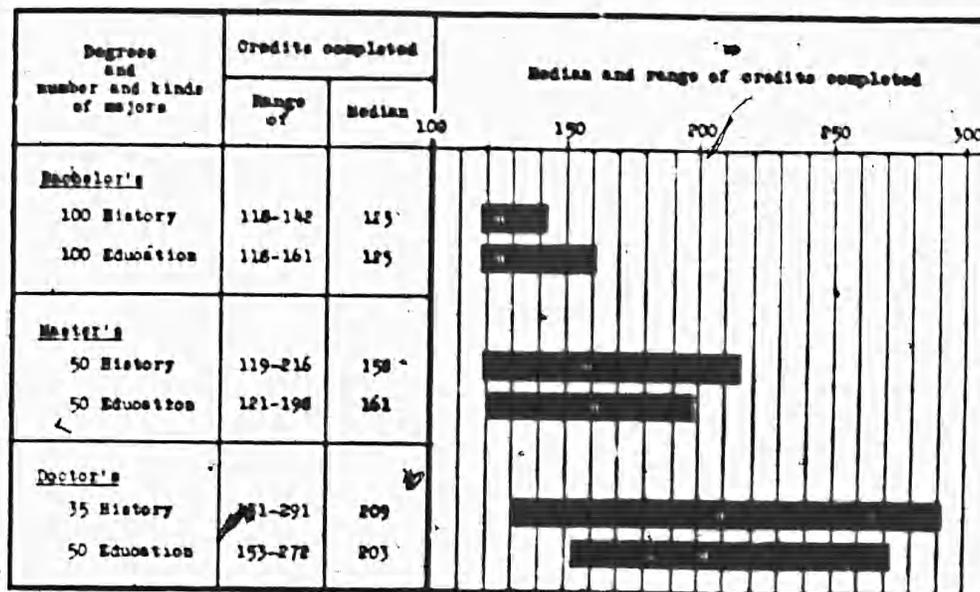


FIGURE 4.—The overlapping of formal credits completed by students majoring in history and education for the bachelor's, master's, and doctor's degrees.

the suggestion which comes from figure 4 is that persons holding similar degrees from the same or different institutions may not represent at all comparable attainments. The matter needs more careful study and is presented here to call attention to a problem in which quality probably transcends quantity. The matter of standards required for any degree is of paramount importance in the education of teachers. These and other data of the Survey point to a situation of extreme quantitative variation, which suggests corresponding differences in quality standards.

A comparison of the entries regarding doctoral graduates in table 22 with corresponding entries regarding lower-degree levels strikingly shows the fact that graduate work, as it probably should at the doctoral level, does not add much to the spread of education, but

adds largely to intensity of specialization in fields previously studied. The extent to which this is true is revealed by the following statements based upon tabulations which are not here presented:

1. The percentages of doctor's students in history who have had contacts with the fields of knowledge is increased over the corresponding undergraduate percentages, an average of only 4 percent for the 23 subjects covered in the tables, the average increase being from 42.9 percent of students studying 23 subjects at the bachelor's degree level to 46.9 percent at the doctor's degree level, the first percentage being based upon a group of 100 students majoring in history and the last upon the group of 35 doctoral majors in history. A comparison of 50 master's degree graduates with the 35 doctoral graduates indicates no increase in the percentage of contacts; in fact, an obtained decrease of 0.3 percent from 47.2 percent on the average contact in 23 fields for the master's degree to 46.9 percent for the doctor's degree, an insignificant difference probably due to sampling, indicates that the graduate student after the master's degree is introduced to practically no new fields.

2. Corresponding increases or decreases could not be ascertained between the bachelor's and doctor's degree levels for education majors because the Survey had not included a group in educational administration at the undergraduate level. However, the corresponding average percentages of a group of 50 majors in educational administration at the master's degree level and another group of 50 majors in educational administration at the doctor's degree level showed an increase of only 0.2 percent from 47.1 for the former to 47.3 for the latter who had taken any work at all in the 23 subjects.

3. These data indicate that, at least for history and education majors, practically no new subject contacts were made at the doctoral level outside the fields of specialization and that at least in history the new subject contacts at the master's degree level were very small. In other words, general education was completed by the beginning of the master's degree work when the 4-1 plan of 5 years of preparation was followed, and the 3 years of graduate work did not contribute more to a general education. For this the doctoral student must depend upon his previous secondary and undergraduate training, and as a doctoral graduate he can claim little more breadth of knowledge outside of his specialties than does the bachelor's degree graduate.

Figure 5 is presented to show the percentage of all work taken at the undergraduate and graduate levels that is taken in each field. The general education of doctoral students majoring in history or in education shows similar general trends and the same characteristic differences. The group of 50 education majors enrolled less frequently in languages and social sciences and when they did enroll took fewer hours of work in these fields. It is significant that 44 percent of these graduates who will occupy key positions in education had not had economics at any level, 60 percent had not had political science, and 56 percent had not had sociology.

The great lag in the number making fine arts contacts persists in this group: One-fourth of the education majors and more than a third of the history majors did not enroll in biological courses of any type at any level. Biology is a basic science for one who would understand the educational process or present-day philosophy; and offhand it appears to be an unfortunate oversight for anyone educated

to the doctorate not to have had an introduction to such basic concepts earlier in his education.

It is apparent throughout all levels that geography is not seriously considered by many undergraduate or graduate students as an impor-

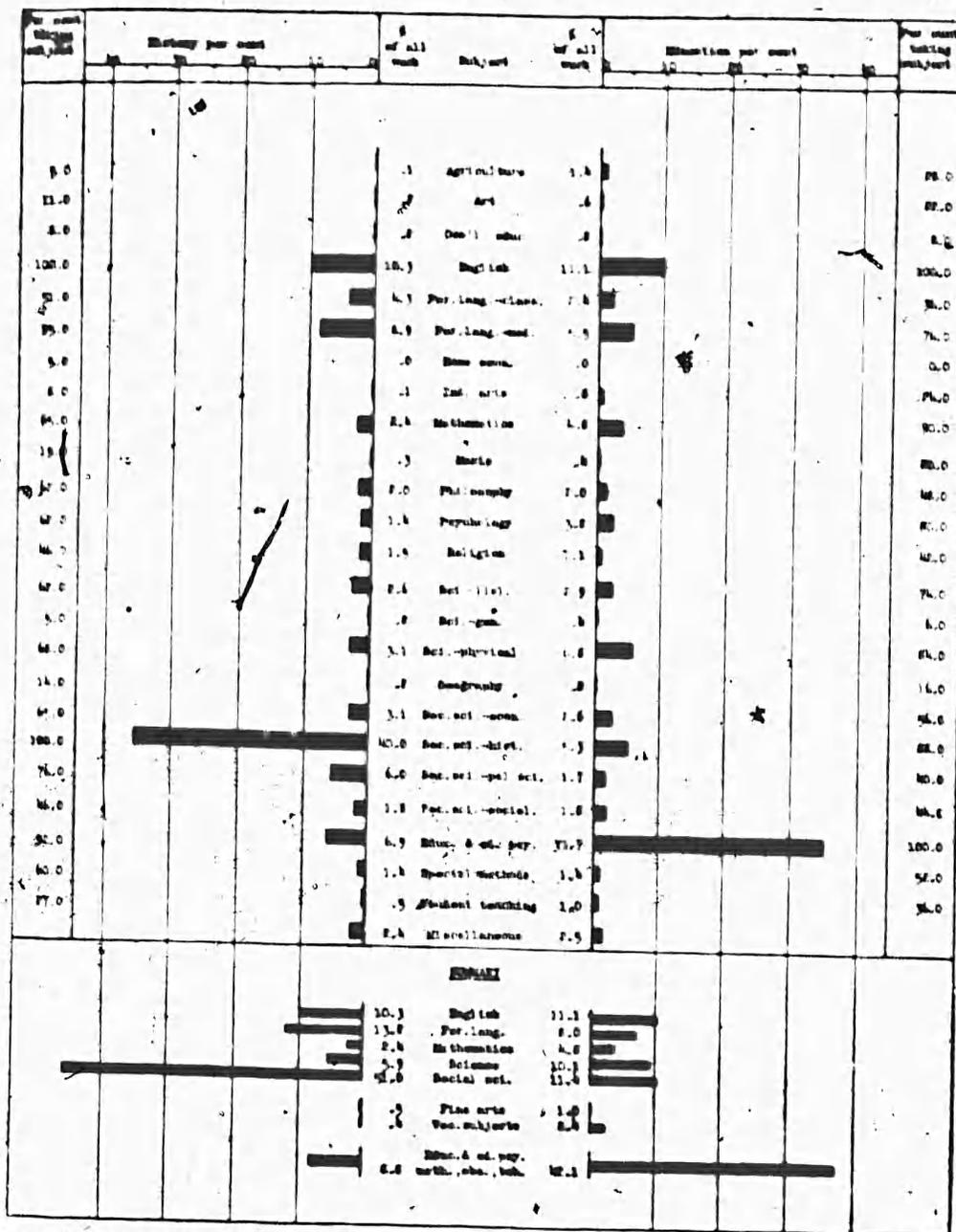


FIGURE 5.—The pattern of work taken on the bachelor's, master's, and doctor's levels by 50 doctors of philosophy in education and 35 doctors of philosophy in history.

tant constituent of general education, while philosophy is passed up by 32 percent of history and 38 percent of education majors.

A comparison of the divisional totals shows that the education majors attained the doctorate with more work in science and mathematics (nearly twice as much) than had history majors, and nearly five times as much work in vocational subjects, while 50 percent more

history majors had pursued foreign languages than had the education majors. If the two long bars in figure 5 representing major specialization are omitted, the patterns for history majors and education majors at the doctoral level are seen to be strikingly alike. The significance of such differences as appear to exist could not be established without far greater sampling than is represented here.

One characteristic difference between the work completed by doctoral graduates was that 69 percent of the history group and only 30 percent of the education group majored in the same field for the bachelor's, master's, and doctor's degrees; however, 58 percent of the education group and only 7 percent of the history group majored in the same field in the doctor's and master's degree work, with another major at the bachelor's degree level. Thus 88 percent of either group followed the same major during both levels of graduate work.

The number of subject-matter field contacts at the doctoral level seldom exceeded four. The percentage distribution was as follows:

Number of fields	Education	History
1.....	46	14
2.....	34	55
3.....	16	17
4.....	2	11
More than 4.....	2	8

There is apparently a tendency for education students to concentrate in fewer fields, probably because so many had not majored in education at the bachelor's degree level.

The total number of semester credits completed in formal course work of the major was 83 in history and 86 in education. These amounts constitute 42 percent of all undergraduate and graduate work completed by education majors and 40 percent of all undergraduate and graduate work completed by history majors.

Sixty-four percent of the education majors and 61 percent of the history majors had no minors for the doctorate; and if an educational psychology minor be considered so closely a related field to education as to be identified with it, then it may be said that 88 percent of them concentrated altogether in education. Similarly, 25 percent of the history majors minored in political science, 3 percent in sociology, and 3 percent in economics; so that 92 percent of them concentrated altogether in social studies.

*Requirements for the degree of doctor of education (Ed.D.)*—The requirements for the degree of doctor of education are typically those for a doctorate in any field and vary as those vary from institution to institution. It is offered either by the graduate school or by the school of education. The change means various sorts of modifications from nothing other than a major in education to modification of the

language requirements, the thesis requirement, the course group requirements, or the total time requirement, but seldom all of these in the same institution. Some believe the entire movement to be one of lowering standards; others point to the severity of the standards for the new degree as inaugurated to show that in certain institutions, at least, the standards are not reduced. There are many who do not favor the Ed.D. degree but who believe in the modification of the master's degree from a research emphasis to an emphasis of the practitioner's needs in teaching.

Harvard does not require the master's degree in education on the way to the doctorate. Both degrees require 2 years of work, the Ed.M. being essentially a practitioner's degree for teaching and the Ed.D. being essentially a research degree. The standards for attaining either are not easy. The University of California and the University of Pittsburgh omit language requirements, and the University of California requires professional experience and aims to emphasize the practitioner's and not the research viewpoint. In most schools where the Ed.D. is granted, the Ph.D. in education is likewise open to graduate students in education.

## CHAPTER X

### INSTRUCTION IN REPRESENTATIVE COURSES<sup>1</sup>

Interviews with instructors in the institutions visited frequently brought out the observation that one of the most important elements of a general college education is the influence of instructors. Another important generalization frequently heard was that subject matter is forgotten and can be reviewed but that what really matters are the scholarly habits, permanent interests, insights, and concomitant stimulations that are developed as a result of the practices employed in the classes. Under this viewpoint the outcomes of method become curriculum objectives.

One phase of the survey aimed to ascertain some facts of personnel, curriculum, and method that were characteristic of courses most representative of teacher education in the selected institutions. To this end the courses of from 30 to 57 catalogs according to the field studied were carefully analyzed to determine what courses were most frequently offered in departments in which teachers major. Inquiry forms relative to personnel, the content and method of courses, and related matters were then sent to about 2,000 instructors of about 3,500 courses in representative colleges and universities. Usable returns were received as follows: Personnel data on 1,019 instructors; content and method in 1,740 answers, and reactions to proposals and issues by 968 instructors. Information was gathered on instructors and courses in the following representative major fields: Botany, chemistry, economics, English, French, history, mathematics, political science, sociology, agriculture, art, home economics, industrial arts, library science, music, physical education (women), elementary education, secondary education, and supervision. Tabulations on all forms in all subjects were not completed in time to be included in the answers and not all instructors answered every question, consequently the totals on any one item never equal the total number of instructors or courses reported above.

<sup>1</sup> The following graduate students at the University of Minnesota assisted in the tabulation and interpretation of the extensive data obtained in connection with representative teaching fields in universities, colleges, and junior colleges: Grace Armstrong, Thomas V. Cunningham, P. S. Dyer, T. O. Everson, Beede Gray, Harvey Jackson, J. Cornell Johnson, Claude Lammers, Norvin L. Landskov, E. Bernice Maloney, Dorothy Maclary, E. H. Metag, W. A. Pelton, Hugh Sweet, and W. G. Wiegand; also Katherine A. Gardiner of George Washington University.

## THE PERSONNEL

Whether the data on personnel of respondents in these institutions is typical of all institutions is not known; it is a safe assumption that they are fairly but not absolutely so. They are probably not so typical of all colleges and universities because the institutions selected for study were selected to be representative of better practices from many different standpoints.<sup>2</sup>

The respondents held every type of degree; 58 percent held doctor's degrees, 32 percent master's degrees, only 8 percent bachelor's degrees, while 2 percent held no degrees. The percentages of doctor's degrees were lowest in art and home economics, and they were generally lower in the special subjects than in academic subjects or education. Bachelor's degrees were more numerous in the special subjects than in other fields, as were also those holding no degrees. One-half of these degrees were received since 1922. By periods when last degrees were received, the respondents distributed in the following percentages:

Year:	Percent	Year:	Percent	Year:	Percent
1930-31.....	12	1915-19.....	14	1900-1904.....	3
1925-29.....	30	1910-14.....	10	1895-99.....	2
1920-24.....	19	1905-9.....	7	Before 1895....	1

The last education of 83 percent of the instructors was received in universities; of 16 percent in colleges, and of 1 percent in teachers colleges. Forty-one percent of the institutions from which the last education was received by respondents were in the area of the North Central Association of Colleges and Secondary Schools, 21 percent in the Middle Atlantic region, 17 percent from New England, 11 percent in the South, and 10 percent on the Pacific coast.

<sup>2</sup> Of the instructors who responded to the questionnaire, 73 percent were men and 27 percent were women. Two-thirds of them held positions in universities, 26 percent in colleges, and the rest, about 9 percent, were from junior colleges. Every rank was represented; 3 percent were deans, 41 percent were professors, 19 percent were associate professors, 18 percent were assistant professors, 2 percent were lecturers, 12 percent were instructors, and 4 percent had other titles. They held positions in colleges and universities representing every section of the country as follows: Smith College; Teachers College, Columbia College, and Barnard College of Columbia University; Swarthmore College; the University of Pittsburgh; the College of William and Mary; Virginia Interment College; the University of North Carolina; the Junior College of Augusta; Florida State College for Women; Birmingham-Southern College; Tennessee Wesleyan College; Oberlin College; University of Cincinnati; University of Michigan; University of Notre Dame; Morton Junior College; Joliet Junior College; University of Iowa; Grinnell College; University of Minnesota; Carleton College; University of Missouri; Stephens College, Independence Junior College; University of Nebraska; Colorado College; University of Texas; John Tarleton Agricultural College; Pomona College; Snow College; University of California; Southern Branch of the University of Idaho, and Reed College. The above institutions were represented in most subject fields. In certain fields additional courses were selected from the University of Arizona, Brigham Young University, Cornell University, George Washington University, University of Idaho, University of Michigan, University of Montana, University of Nevada, University of New Mexico, Rutgers University, Tulane University of Louisiana, University of Vermont, West Virginia University, University of Wyoming, Agnes Scott College, Berea College, Bowdoin College, Bryn Mawr College, Hendrix-Henderson College, Huron College, Jamestown College, Maryville College, Oklahoma College for Women, Rockford College, Washburn College, Whitman College, and Winthrop College.

The average enrollment of colleges was about 875, the average junior college enrollment was 275, and the average university enrollment about 9,000. They represented the larger institutions of each type.



of persons who should be competent to teach special methods in their teaching fields or to give some professional treatment to content in subject-matter courses.

The median total number of years of teaching or administrative experience of the respondents was 17.6 years, the medians for university instructors only, college instructors only, and junior college instructors only being 19, 15.9, and 10.6 years, respectively. Evidently the university group of respondents has had a longer period of teaching and administrative experience.

Most but not nearly all respondents reported on a field which was their only teaching field. The percentage distribution according to the number of fields in which they taught was as follows: 1 field, 84; 2 fields, 14; 3 fields, 1; 4 fields, 1.

For an evaluation of college content by university and college instructors, they were asked to check those fields which have influenced their philosophy of life. The vote was so largely in favor of the major fields of instructors that a tabulation was made which omitted the instructor's field of teaching. The percentages of the eight departments most influential in affecting the philosophy of life then became: Psychology, 12; English, 12; philosophy, 11; education, 9; history, 8; modern language, 6; sociology, 6; and classical languages, 5.

*Staff activities.*—Active membership of instructors on State, regional, and national committees was reported by 51 percent of instructors reporting on this item. The most active groups were instructors in the departments of home economics (97 percent), agriculture (84 percent), art (82 percent), supervision (87 percent), and sociology (82 percent).

Reports of original research were published by 66 percent of the respondents during the 5 years preceding the date of the inquiry form, 29 percent having published a book and 56 percent having published a magazine article. The activities by instructors representing the three types of institutions were as follows:

Type of institution	Percent of instructors having published—		
	A book	An article	Either a book or article
1	2	3	4
University.....	34	61	75
College.....	13	48	53
Junior college.....	8	34	36
All.....	29	56	66

The personnel data about these instructors—the number, sex distribution, ranks held, institutions represented, degrees held, specialization, experience, professional activity, and publishing activity—indicate in general a group of apparently high attainment, whose reactions to proposals on curriculum and on curricular issues should have value.

#### ADMINISTRATION OF REPRESENTATIVE COURSES

The university and college courses which were found most representative of content given to teachers in preparation are probably typical in most respects of undergraduate courses in general. There are two sets of facts about them which should be of interest: One concerns matters of course administration and the other concerns matters of content and method.

Among items of the administration of representative courses which were studied through inquiry forms were: Credit awarded, class size, time and frequency of offering, extent of prescription, off-level registration, standardization, use of texts, duplication among courses and prerequisites.

*Credit awarded.*—Three credits were most typically awarded for completion of courses in a percentage distribution which ranged from 1 to 10 credits as follows:

Number of credits:	Percent	Number of credits—continued.	Percent
1.....	3	6.....	11.00
2.....	18	7.....	.25
3.....	49	8.....	2.00
4.....	11	9.....	.33
5.....	4	10.....	1.00

There were no significant differences in the distribution of credits awarded among universities, colleges, and junior colleges. This median award means that the ordinary teacher completes from 41 to 44 courses for the bachelor's degree.

*Class enrollment.*—Class enrollment is significant enough to warrant some special consideration. The median enrollment of 1,427 classes was 24.5 students. The percentages of classes with each amount of enrollment were the following:

Number of students:	Percent	Number of students:	Percent
1 to 5.....	6	31 to 40.....	10
6 to 10.....	11	41 to 50.....	7
11 to 15.....	12	51 to 60.....	4
16 to 20.....	11	61 to 70.....	3
21 to 25.....	14	71 to 100.....	3
26 to 30.....	12	More than 100.....	8

University classes had a median of 28.6 students; college classes were smallest with a median of 20.2 students; and the junior college median was 26.6.

It was evident that in large universities small classes are partly the consequence of graduate work and the necessity to provide complete

offerings; in small institutions small classes were due to the small number of students and the tendency to offer as wide an offering as possible. The percentages of classes with from only 1 to 10 students was 13 percent for universities, 26 percent for colleges, and 12 percent for junior colleges. The independent liberal arts college has apparently the biggest problem with respect to small classes. Since the classes here represented are those most commonly offered to teachers, it is conceivable that the enrollment trend of all classes would be even smaller.

*Time and frequency of course offering.*—Ninety-two percent of the courses were offered annually and 8 percent only were given in alternate years. Junior colleges alternated their classes more than did colleges, and colleges alternated more than did the universities; the percentages of classes offered in alternate years being 16, 10, and 4, respectively. Alternation of classes is a possible device to reduce the number of small classes as an economy measure, but it increases necessarily the range of content in which instructors teach and decreases the flexibility of program-making for students.

The summer-session offerings were fewer than the offerings of the academic year. Only two-fifths of the representative courses of all institutions were also offered as summer-session courses. The university summer offerings of 55 percent of the total offering were both absolutely and relatively largest. The corresponding college percentage was 23, and that of the junior college was only 17 percent. Obviously, students who depend upon summer work, as do many teachers in service who are upgrading their qualifications, are handicapped in not having as wide a choice of representative courses as students attending during the regular school year.

Twelve percent of all representative courses in universities, but only 1 percent of all courses in the colleges were offered also as correspondence courses.

*Extent of prescription.*—Of 1,421 courses, 45 percent were entirely elective; 5 percent were prescribed for all students; and 36 percent were required of all majors. Others were required of different groups of students.

*Off-level enrollment.*—By off-level enrollment is meant the enrollment of students in classes which are above or below their classification as students in the institution. It is obvious that no restriction on off-level registration would tend to reduce most work from the freshman year through the doctorate to the same level of challenge; the average and the below-average students would set the pace. On the other hand, absolutely fixed class lines would disregard the desirability of adjusting the program of students to ability or to previous training and would prevent the beginning of new lines of study found necessary

after a student has made some progress. Both extremes are to be avoided. To maintain standards and curriculum organization, careful supervision of off-level registration is necessary so that the capable can move faster, the previously prepared take more advanced courses to prevent duplication and loss of time, the mediocre or weak kept out of advanced work, the student well along permitted to reach back to pick up a needed course, the senior college student kept from placing too much of his program in the junior college, and lines drawn somewhat as strictly as possible between graduate and undergraduate work, upper-level and lower-level work. A discussion of this problem as it applies to the University of Chicago may be found in the University of Chicago Survey.<sup>3</sup>

Forty-two percent of the representative courses were definitely restricted to a level. It was reported that 3 percent were open only to freshmen, 11 percent were open only to sophomores, 5 percent were open only to juniors, 9 percent were open only to seniors, 10 percent only to master's level students, and 4 percent were open only to doctor's level students. It is usually possible in most institutions for such general restrictions to be modifiable for the individual student by administrative procedures provided for this purpose to supervise the situation. Restrictions of a broader sort were evident from the report that 13 percent of courses were open to all junior college students only, 29 percent to all senior college students only, and 12 percent to graduate students only. Only 4 percent of the courses were reported as open to all undergraduate and graduate students alike. In all these matters the colleges were drawing stricter lines than the universities at the undergraduate level and the universities were drawing stricter lines than the colleges at the graduate level. The junior colleges were somewhat stricter within their narrower range than were either the universities or colleges at the same level.

*Standardization of courses.*—The tradition of a minimum of institutional and departmental supervision over the content of an instructor's courses, particularly in the higher ranks, is usually followed in higher education. Research, specialization, and the authority of many instructors in a field are legitimate reasons for the observance of these practices, and must result to some extent in desirable variety in advanced courses. First courses in a department, which are largely overview or introductory, may tend to be more standardized, the farther they are removed from the level of research. That this in general might be true was indicated by the report that 64 percent of instructors in junior colleges believed that their courses were standardized, while instructors from 4-year colleges believed that only 44 percent were standardized, and university instructors with more graduate

<sup>3</sup> Eeves, F. W., Peck, W. E., and Russell, John Dale. *Instruction in the University. University of Chicago survey, vol. IV, ch. IV.*

work reported only 32 percent of the courses standardized in content. In colleges and universities standardization is not characteristic of a majority of offerings.

Little can be said about the desirability of standardization or the undesirability of nonstandardization until more is known. Variations in subjects prescribed and taken in major sequences as already noted and the percentages of nonstandardized courses just reported would indicate that teachers educated in different institutions would not have the same scope and content of preparation. The extent to which this is true is not known. The essential point on which most would agree is that a teacher's thorough grounding in the minimum essentials of the teaching fields must be guaranteed; beyond that standardized preparation may restrict rather than promote education. A history teacher must know history in general; an English teacher must know literature and oral and written speech; the foreign language teacher must be able to read, to speak, or to write the language fluently and should know the literature and the culture of the people; the science teacher should have covered physical and biological sciences in general. To the extent that standardization will require the thorough background preparation of all teachers in his teaching fields, to that extent a certain standardization may be considered necessary in the education of teachers. There is little basis for recommending it beyond this point.

*Use of texts.*—In one half of the courses the sequence of topics used in the class followed the sequence of topics in one or more texts; it is assumed that in the other half the sequence of topics followed the individual organization of the instructor. The instructors assumed the "free lance" role in 47 percent of the academic courses and in 69 percent of the special-subject courses. In representative fields texts were followed most in economics (80 percent), mathematics (80 percent), sociology (70 percent), and chemistry (65 percent). They were least followed in French (17 percent), home economics (23 percent), art (25 percent), and in English (29 percent).

The sequence of topics in texts were followed more generally in junior colleges than in colleges and more generally in colleges than in universities, the percentages being: Junior colleges, 64; colleges, 50; and universities, 43. A correlation between the percentages of courses in respective fields reported standardized and the percentages of courses reported to be following textbook topic sequences was found to be ( $r$  computed from  $R$ ) +65, which indicates that there may exist a significant relationship between the standardization of courses and adherence to the topic sequences of textbooks.

*Duplication in courses.*—With more or less freedom given to instructors regarding their course contents, there could result unnecessary duplication. Some repetition of content is no doubt necessary in

sequences to promote learning, and some content may be repeated in other courses when different sets of students pass through them. These practices would hardly be judged unnecessary duplication by anyone except those either unfamiliar with the psychology of learning or with curriculum organization. To definite inquiries regarding duplication, 87 percent of the instructors reported that they did not duplicate or overlap unnecessarily other courses of their department; only 4 percent stated definitely that other instructors overlap and duplicate unnecessarily the content of their courses. The degree of certainty varies somewhat according to departments. There is less certainty about nonexistence of duplication in education, home economics, and economics; much more certainty that it does not exist in botany, chemistry, mathematics, or agriculture. There is just enough feeling of its existence through all departments that it might well be made the object of more careful analysis and study. Elimination of duplication might be a method of effecting economies.

*Prerequisites.*—A related problem is the requirement of sequence in a series of courses within a department. Sequence planned to provide organization and step-up of work is no doubt desirable. Evidence from a small group of studies in higher education has indicated, however, that prerequisites may have less real significance than is attached to them. Prerequisites for which there are no established reasons should be avoided, particularly when a motive may be found in the selfish interest of specific departments to hold students. It is essential that these matters be carefully supervised.

Since the interests of students are paramount, unnecessary prerequisite restriction of a technical nature to courses with important content may be barriers to the acquisition of a general education.

The reports of instructors revealed that 30 percent of the courses represented in this study, required no prerequisite, 32 percent required 1 prerequisite course, 21 percent required 2 prerequisite courses, 9 percent required 3 prerequisite courses, 7 percent required 4 prerequisite courses, and 2 percent required more than 4 prerequisite courses. This means that about one-third of the courses were open to all; that about a second third of the courses were accessible by a 1-course prerequisite, and that an additional third of the courses was accessible by a 2-course prerequisite.

These matters of course administration are perhaps no more important in the education of teachers than they are in the education of anyone else; but they are matters which can seriously affect such education. In all institutions, but particularly in State institutions, policies of poor economy resulting from too many small classes because they are offered too frequently or because too wide an offering is attempted; and the unnecessary duplication of courses in whole or in part, may result in the mounting of unit costs to loss of prestige and of confidence which can eventuate in undue curtailments.

Unsupervised off-level registration can and will result in a lowering of standards. Transcripts of students who had prepared for teaching were found in which entirely too much of the program of work seemed to be of junior college status and too little of senior college status.

The slavish following of texts with textbook memoriter type of examination checks and recitation procedures can be overdone. Classes were visited in which the instructor was quizzing his class, in a backing-the-book type of recitation, it seemed, much too frequently. This is not higher education, even though the use of texts is desirable. No doubt departmental insistence upon prerequisite courses which are unnecessarily technical for anyone but the student who majors in a department may prevent rather than promote general education. Lack of institutional or departmental supervision of course offerings may easily result in omissions and inclusions of content without reference to students' life needs and to relative values. All these are matters which, after all, condition the quality of preparation that teachers receive.

#### CONTENT AND METHOD OF REPRESENTATIVE COURSES

*Instructional aims.*—The aims of higher education have been widely discussed at all times. Carter Good<sup>4</sup> in *Teaching in College and University* devotes a chapter in a bibliographical survey to locate the important contributions in the literature on functions and standards and has cited 181 selected references, mostly of recent date. This indicates something of the outstanding place this matter holds in the minds of those interested.

A list of 34 instructional aims gathered from the literature was submitted to instructors of representative courses with the request that each check all aims and objectives which he attempts to promote in his course. The specific statements classified according to general purposes, with their rank order in the entire list of 34 indicated and the percentages of all courses in which each aim was promoted, are given in table 23.

<sup>4</sup> Good, Carter V. *Teaching in college and university. A Survey of the Problems and Literature in Higher Education*, Baltimore, Md., Warwick and York, Inc., 1929, ch. III, pp. 81-108.

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TABLE\*23.—Aims and objectives of representative courses used in the education of teachers in universities, colleges, and junior colleges (classified)

Rank order of aim	Statement of aim	Percent of 1,100 courses promoting the aim
1	2	3
<b>I. Direct subject-matter or course aims:</b>		
1	To have students acquire facts or meanings concerning the subject through textbooks, lectures by the instructor, classroom discussion, and laboratory activities.....	82
2	To give students a knowledge of the principles of the subject.....	77
3	To make students familiar with the aims and problems of the subject.....	67
10	To prepare students for subsequent needs in the courses for which this is a prerequisite.....	42
14	To attain a certain standard of skill in subjects where skill is demanded.....	37
20	To train in research methods (this includes training in the more specialized techniques of discovering new truth in the field).....	25
27	To give a review of subject matter previously studied.....	16
11	Average.....	49
<b>II. General educational (liberal-education) aims:</b>		
8	To supply some mastery of this field as part of the cultural education desirable for all.....	47
9	To discipline the mind; to develop greater mental capacity; to develop perspective, judgment, and master.....	44
19	To arouse the emotional life of the students and hence promote richer and deeper insight into the experiences of the race.....	26
12	Average.....	39
<b>III. Subject-matter and life functional aims:</b>		
4	To develop proper appreciations (valuations) of the significance of the subject for its own sake—its place in the social heritage.....	54
5, 5	To develop proper appreciations (valuations) of the significance of the subject for its contributions to present-day living.....	50
7	To train in right methods of study, including training in the location and use of reference and source material relating to the subject.....	48
12	To provide students with many opportunities to express orally the concepts, principles, and relationships involved in the field.....	38
12	To inculcate interests which will insure continuous study of the field throughout life, particularly in the recreative contributions of the subject matter.....	38
16	To provide for variations in the interests and abilities of students.....	36
17	To give specialized attention to uncovering and directing special talent and interests of individual students.....	28
18	To give students much written practice (e.g. papers, exercises, theses) in discussing the basic implications of the field.....	27
11	Average.....	40
<b>IV. Direct-life functional aims:</b>		
5, 5	To promote the breadth of view of the student.....	50
12	To promote a scientific attitude toward life.....	38
22	To promote civic-social responsibility; to teach students to adjust themselves to civic-social life.....	22
25	To give moral training in the development of worthy character traits, such as co-operation, courtesy, honesty, and industry.....	19
23, 5	To promote the leisure activities of the student.....	21
26	To train social leaders, motivating them to assume a measure of responsibility for the progress of humanity.....	18
31	To promote the worthy home membership of the student.....	10
32, 5	To promote the health of the student.....	6
34	To promote the religious life of the student.....	5
24	Average.....	21
<b>V. Vocational aims:</b>		
<b>For teaching:</b>		
16	To supply students with the necessary background of subject matter for teaching purposes.....	29
23, 5	To give practice in desirable habits basic to teaching this subject.....	13
23, 5	To make students familiar with the methods of teaching subject.....	13
32, 5	To give practice in teaching, including lesson planning and other types of teaching activities.....	6
26	Average.....	15
<b>VI. Other vocations:</b>		
31	To contribute to the wise choice of vocation or a major field of interest within a vocation.....	23
23, 5	To supply prevocational training for those who need this subject for later vocational training other than teaching.....	21
30	To give direct vocational training other than teaching.....	11
25	Average.....	18

Number of courses reporting: University, 528; college, 419; junior college, 155; all, 1,103.

An inspection of table 23 reveals some very interesting trends, especially if specific aims classified according to general function or purpose are studied by major groups. These trends are clearly indicated in the summary tabulation which follows:

Aim	Average rank of specific aims	Average percent of courses promoting the specific aims
Direct subject-matter or course.....	11	49
General-educational (liberal-education).....	12	39
Subject-matter and life functional.....	11	40
Direct-life functional.....	24	21
Vocational:		
Other vocations.....	25	18
Preparation for teaching.....	26	15

The purely subject-matter or direct-course aims were given first importance and were emphasized in more courses than any other. The emphasis was on facts, principles, prerequisite needs, skill, research, and mastery.

The liberal-education aims, like culture, discipline of the mind, and direction of emotional life and another group of aims which tied up closely with the subject aims and yet had concomitant outcomes which would contribute directly or by transfer of common elements to life activities ranked next; but two groups of these aims on the average were emphasized by approximately 10 percent less of the courses, that is by only two fifths of the courses.

The functional aims more directly related to the elevation of life standards, which a college course should emphasize and which cut across all subjects, more or less, aims like breadth of view, scientific attitude, civic-social responsibility, moral or ethical development, social leadership, home life, health, and religious life were emphasized on the average in one fifth of the courses, although breadth of view was held to be promoted in one half of them.

Those courses on which respondents gave their reactions were selected in the first place as those most frequently prescribed or offered to teachers; yet the percentage of courses which promote directly the vocational aims of teaching were low, averaging 15 percent. If the first one, background for teaching, is omitted since it refers to subject-matter background for teaching, the more strictly vocational aims would be promoted in an average of 11 percent of the courses. General vocational aims, some of which (such as choice of vocation and prevocational training) would apply directly to teaching as well, were reported as promoted in 18 percent of the courses.

Thus teachers are educated in colleges and universities in types of courses where vocational aims are relatively little emphasized, where the functional aims of a college education are largely overlooked or

left to be incidental, and where subject aims, particularly acquisitions of facts, meanings, and principles are stressed mostly.

*Relation to aims of elementary and secondary schools.*—The teacher's work is specifically social and functional at the elementary and secondary level. The accepted statements of aims for these levels are usually like those enumerated by the Kingsley committee called the "Seven Cardinal Principles", or like those in Bobbitt's formulation. The aims emphasized by the Kingsley committee for secondary education are health, command of fundamental processes, worthy home membership, vocation citizenship, worthy use of leisure, and ethical character. Bobbitt sets up the development of abilities for the following life activities: Language activities—social intercommunication, health activities, citizenship activities, general social activities, spare-time activities, keeping oneself mentally fit, religious activities, parental activities and home life, unspecialized practical activities, and the labors of one's calling. It is such functional aims as these that the teacher is supposed to have in mind in educating children.<sup>1</sup>

It may be feared that some college instructors may often be putting second or third things in importance in first place. Certainly it is surprising that the functional-life aims seem to be forgotten in so many courses, even though it may be conceded that not all these aims can be present in every course. Some division of labor even in attaining the outcomes of a college education is essential. However, if this division of labor is present then the maker of curricula for teachers needs to see to it that courses which stress functional aims are included. The examination of transcripts leaves considerable doubt whether or not a college level training for health, home life, leisure, ethics, or even civic-social responsibilities are seriously contemplated.

Introductory courses in a department, as, for example, chemistry, are taken several times as often for general contact as for specialization in a major; yet the aims logically associated with general contact for a general education received surprisingly small emphasis in many introductory courses of this and other fields, whose outcomes when taken for general education purposes should contribute to present-day living, civic-social responsibility, cultural education, social leadership, study of field throughout life, breadth of view, the scientific attitude, and the like. These outcomes, one is forced to believe, are recognized but are often overlooked to a greater extent than other aims, and are probably regarded as incidental concomitants that will take care of themselves. They should not be accidental.

Does inability as a nation, in fact, the inability of all nations, to cope promptly with social economics and home and family problems not reflect this oversight in all education at all levels? Before these

<sup>1</sup> For a presentation of 13 different proposals by teachers in education on the general aims of education see Fraser and Armentrout, *An Introduction to the Literature on Education*, Chicago, Ill., Scott, Foresman and Co., 1931, ch. II, pp. 32-73.

broader aims in education can be accomplished in elementary and secondary schools, teachers need to be educated along similar lines at the college level; and all instructors of college courses, not merely a portion of them, need to see the larger aims of education beyond the mastery of subject matter and the promotion of department—in which are also important aims but certainly not first aims. These statements will not be acceptable to some persons, but these matters have been discussed with several hundred instructors in 30 outstanding universities, colleges, and junior colleges visited during the survey, and it was observed that these views are held by many and that persons known to be foremost thinkers in higher education have expressed them the most vigorously.

*The assignment.*—It is conceivable that the standard of a student's work is affected even in college courses by the frequency, the amount, and the method of assignment. The assignment discloses the objectives of study, indicates the sources of material, and provides motivation, whether or not these matters are of unusual concern at the higher-education level has not been studied. It was deemed at least a point of interest in the study of curricula to ascertain practice.

Seventy percent of the instructors reported that assignments included the use of a basic textbook. Its largest use occurred in the junior college, its next largest use was in the college, and its least use occurred in the university, the percentages being 84, 78, and 66, respectively.

Reference materials were used in not quite two thirds of the courses. Typically both sources of material were utilized. A little more than one third of the reported cases assigned term papers.

Academic instructors used textbook assignments more and reference material less than did special-subject instructors. The textbook was most used in economics, sociology, mathematics, and botany. It was decidedly less used in art and in home economics. Reference material was most used in French, education, sociology, and agriculture. It was decidedly less used in mathematics, art, chemistry, and home economics. Term papers were prevalent in education and in sociology; they were little used in chemistry, mathematics, art, home economics, economics, and French.

The daily assignment was typical of the junior college, but was also the most prevalent type in the other institutions. About 30 percent of the instructors used a weekly unit; and somewhat more than that, 36 percent, employed still larger units. The university tended more in the direction of longer than daily assignment periods; the junior colleges showed the least tendency that way. Larger units were decidedly typical of education courses. Daily assignments were decidedly typical of English, French, and mathematics.

The form in which assignments appeared rank in this order:

Assignment:	Percent
Giving direction for readings in texts or reference books.....	67
Mimeographed materials and exercises to be studied.....	28
Notebooks required.....	28
Syllabi with definite outlines for each day or week or other periods of time.....	23
Dictating exercises to be done outside.....	14

Instructors of education used syllabi and mimeographed material much more than others. Oral directions were more typical of English, French, and mathematics. Notebooks were most common in the sciences, and only somewhat less common in the special subjects.

*Textbooks and references used.*—The most striking observation made in the tabulation of the textbooks used in these courses was that in all fields there were so many different textbooks that very few out-classed others decidedly in frequency of use. In no field except art was a single textbook used by more than eight classes which reported. The lists were characterized by being long, most textbooks being used in only 1 or 2 classes. The same observation held for the reference books that were reported. They were long and characterized by very low frequencies.

A few periodicals in a few fields were somewhat more outstanding in the frequency of their use, those heading the lists in seven fields to appear sufficiently outstanding were:

Economics.....	American Economic Review.
Sociology.....	American Journal of Sociology.
Agriculture.....	Agricultural Education Magazine.
Home economics.....	Vogue.
Library science.....	Library Journal.
Elementary education.....	Elementary School Journal.
Chemistry.....	Journal of American Chemical Society.

*Classroom methods.*—To the extent that methods can be used to develop in students ability to study, to use sources, to develop scholarly initiative, to develop independence of opinion, to write well, to express themselves well, to maintain themselves in discussion, and to master their fields more adequately—to that extent method is curriculum. Some of the concomitant outcomes of method are as important elements in the education of a teacher as is the mastery of facts or principles, the acquisition of insights and skills. Serious study of method on the level of higher education has only begun. A résumé of recent investigations on the conduct of the class period, study problems, and provisions for individual differences in higher education has recently been made.\*

In this survey an attempt was made to ascertain just what types of classroom recitation were most commonly used and by whom they

\* Good, C. V. Op. cit., ch. VI, pp. 126-255.

were used. The analysis was made for 1,242 representative courses in 14 typical fields. The rank of the methods in order of the percentages of courses in which instructors used them is the following:

Method:	Percent	Method—Continued:	Percent
Lecture.....	89	Observation in training schools.....	10
Discussion.....	84	Visual aids.....	9
Written examination.....	76	Exhibits.....	8
Recitation.....	65	Excursions or field trips.....	8
Special reports.....	45	Practice exercises.....	8
Term papers.....	30	Honors for superior students.....	5
Laboratory work.....	29	Dramatization.....	4
Oral review quizzes.....	25		
Problem or project method.....	21		

Methods found in a majority of classes were the lecture, the discussion, the written examination, and the recitation. The lecture ranked first 8 times, in 14 subject fields; the discussion, 4 times; the recitation, once. Laboratory work ranked high in the sciences, in art, in home economics, in agriculture, in library science, and was used extensively also in education. Visual aids were used most in sociology, home economics, agriculture, and elementary education. The excursion was employed more in art, home economics, sociology, agriculture, botany, and chemistry than in other fields. Exhibits were used widely in sociology, home economics, botany, elementary education, and art. Dramatization was outstanding only in art. The oral review quiz was frequently reported in agriculture, mathematics, French, chemistry, botany, history, and English. Term papers were used extensively in all fields. They were most popular in library science, sociology, and agriculture, and were frequently used in education. Observation in training schools was typical of education and also of agriculture and library science, in which fields there were more professionalized subject-matter courses. It was not associated with academic subject-matter courses. The problem-project method was typical of most agriculture courses, and was used extensively in education, library science, home economics, and art. In general, it can be said that the greatest diversity of methods were used in the special subjects, in education, and in sociology.

*Tests and examinations.*—Among classroom procedures most frequently used in representative courses, tests and examinations ranked next to the lecture and the discussion period. It was typical of all fields. Recently it has had increased attention through the introduction of comprehensive examinations, entrance examinations, qualifying examinations (discussed in a previous chapter), and the wider use of objective types of questions in higher education.

The percentages of 1,288 representative courses in which old and newer types of tests were used are as follows for the 3 types of institutions:

Type of institution	Number of courses	Percent of representative course by type of test					
		Essay	True-false	Completion	Multiple choice	Best reason	Matching
1	2	3	4	5	6	7	8
Universities.....	531	67	31	28	24	14	13
Colleges.....	449	76	23	27	14	13	10
Junior colleges.....	152	70	57	51	25	23	30
All.....		71	31	31	22	14	14

The most widely used kind of test was the essay type, which was found in more than two thirds of all courses in universities, colleges, and junior colleges, respectively. The various kinds of objective questions have not become common enough for any one type of them to be found in as many as one third of all the courses, although they were common in education, agriculture, library science, and were somewhat less common in home economics and sociology. Academic instructors in general use them least and rely on the essay type most.

Of the objective types, the true-false and the completion question led decidedly over the best reason or matching types; multiple-choice questions occupied the intermediate position. The influence of the wider use of objective questions in high schools is probably reflected in their larger use reported in junior colleges, some of which were public junior colleges.

The number of examinations varied much by courses; 7.4 percent of the courses had only one examination and 6.2 percent had as many as 10 tests or more per term. The percentage distribution according to the number of tests given is as follows for 1,003 courses under the semester plan and 183 courses under the quarter plan:

	Number of tests per term									
	1	2	3	4	5	6	7	8	9	10 plus
1	2	3	4	5	6	7	8	9	10	11
Percent of semester courses.....	7	18	22	22	10	8	3	3	2	0
Percent of quarter courses.....	9	21	28	21	7	5	1	3	2	10
All courses.....	8	19	22	22	10	7	2	3	1	6

Four fifths of the courses gave no less than 2 nor more than 5 examinations. Three fourths of them provided more than a final and a midterm examination.

The two most widely reported purposes in the selection of test questions were: To check the knowledge of subject matter comprehensively and to have a basis for grading. These purposes were reported for nearly two thirds of the courses, but there were other aims also widely utilized: To check knowledge by sampling (51 percent); to verify growth in reasoning (47 percent); to evaluate skills (38 percent); and to check the development of attitudes (29 percent).

Some of these purposes for giving tests were favored characteristically by some particular departments more than by others. The aims reported by a majority of instructors in a subject may be considered characteristic or typical. Characteristic aims by this standard for certain fields would be as follows:

- To check knowledge comprehensively—all departments.
- To check knowledge by sampling—chemistry, French, history, sociology, agriculture, library science, elementary and secondary education.
- To evaluate skills—French, mathematics, and library science.
- To verify growth in reasoning—chemistry, economics, history, mathematics, sociology, agriculture, art, and home economics.
- To check development of attitudes—agriculture.
- To have a basis for grading—a majority of all courses in each field except agriculture, art, and library science, which had relatively low percentages.

*Bases for determining grades.*—The more that marks in higher education are studied, the more belief in their lack of reliability is strengthened. One of the most recent and careful of these studies made by Clifford R. Maddox<sup>1</sup> for the University of Chicago ends with the following conclusions:

These considerations lead to the grave question as to the wisdom of retaining any system of qualitative marking as a part of the academic machinery at the undergraduate level. It has been shown that departments clearly vary in their standards of marking. It has been shown that, even in a department having a general average marking practice exactly at the all-university average, the various instructors differ greatly in the severity of their marking. It has been suggested that marks may possibly be affected by the quality of the teaching, the students who receive the marks being the fortunate or unfortunate beneficiaries of a process over which they have no control, except as they exercise wisdom in selecting courses under the more capable teachers. Finally it has been suggested that the extent to which the factors required for success are common to all departments is unknown.

When all of these qualifications of instructor's marks are taken into account, it becomes apparent that there is great hazard in using these marks for any important academic purpose, such as the award of honors or dismissal because of poor scholarship. This study leads indisputably to the position that the basing of academic rankings of students upon instructors' marks is unsound. Possibly grades in courses may serve well some other purposes, but their use for

<sup>1</sup> Maddox, Clifford R. *Marking Practices in Undergraduate Courses*. See Reeves, Floyd W., Peck, W. E., and Russell, John Dale, Chicago, Ill. The University of Chicago Press, 1933. *The University of Chicago Survey*, vol. IV, ch. III.

award of honors, for determination of eligibility for graduation, and for the elimination of undesirable students from the institution should be discontinued.

One of the important elements of the new plan at the University of Chicago is that the onus of determining eligibility for graduation has been taken from the marks made in courses and laid upon attainment in a final comprehensive examination. It remains to be seen whether the new plan will overcome the apparent defects in the old system under which course marks have been the final determinants of academic standing.

It may be that the unreliability of college marks as indicated in the above study and other studies may be caused in part by the variety of bases that are used for determining grades of students in representative courses, so that a mark from one instructor does not parallel in its considerations the marks from another. In response to a request to check the methods of determining a student's grade regularly used in the course, the following percentage distribution of bases for grading were found for 1,366 courses representing 14 fields:

	<i>Percent</i>
Final examinations.....	82
Class participation in discussion.....	66
A series of examinations.....	62
General attitude toward work.....	48
Written papers or projects.....	46
General impression of the quality of a student's work.....	42
Oral quizzes.....	34
Term papers.....	32
Series of marks based on recitation responses.....	22
Laboratory exercises.....	27
Regular attendance.....	24

On the average, each instructor reported five of these bases for marking the students. It is very clear that variety of bases for grading would cause unreliability, quite besides the subjectivity of many of them, and the general unreliability of tests themselves, although variety in itself should be a protection against the unfairness of marks.

Bases that are used in three-fourths or more of the courses of a department might be considered strongly characteristic practice. By this standard the use of class participation in discussion is characteristic of English, French, history, mathematics, sociology, agriculture, home economics, library science, and education; the final examination is characteristic of all fields except botany and library science; the series of examinations is characteristic of English, mathematics, and education; and laboratory exercises are most characteristic of botany and chemistry.

General attitude, oral quizzes, a series of marks based on recitations, term papers, written projects, general impression, and regular attendance were bases for marking for three-fourths of the courses in no field, but are frequently reported by more than one-half.

## CHAPTER XI

### CURRICULUM ISSUES

It became very evident in the interviews with instructors that there are many points of view, highly colored by orientation and personal interests. In order to measure roughly the extent of some of these attitudes a list of 63 proposals was made which were based upon issues directly related to the curricula for teachers. Fifty of these were sent to presidents of cooperating institutions, and a later revision, including 13 additional proposals, was sent to instructors of representative courses with the request that they vote yes without qualification, yes with reservations, no with reservations, or no without qualification on each one of them. This was a device to ascertain the trend of thought. Table 24 shows the percentages of more than 600 instructors from 24 institutions which favored or opposed with or without qualification each proposal. There is also added a weighted single index of approval for each proposal. This index is the algebraic sum obtained by adding the products of the respective percentages multiplied by weighted values. Percentages voting yes without qualification were multiplied by +2, percentages voting yes with reservations were multiplied by +1, percentages voting no without qualifications were multiplied by -2. The algebraic sum of these products may range from -200 to +200. Zero indicates divided opinion, +200 absolute approval of all without qualification by anyone, and -200 absolute disapproval of all without qualification by anyone. In figure 2, appendix A, is presented a comparative study of the reaction of the respective groups.

Some of these issues and the votes of instructors upon them have already been presented in earlier chapters of this part in connection with the discussion of problems involving one or more of the issues in the list. These will not be repeated in this chapter. The votes on these issues may be easily obtained from table 24.

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TABLE 24.—The reaction of university, college, and junior college instructors on 63 curriculum proposals relating to the education of teachers

Abbreviated issue statement	Number of instructors voting	Percentages of instructors who voted—				Index	
		Yes (+2)	Yes with reservations (+1)	No with reservations (-1)	No (-2)		
	1	2	3	4	5	6	7
<b>I. General versus specialized work:</b>							
A considerable number of general courses in curricula.....	628	66	26	5	2		+149
The inclusion of orientation courses in all curricula.....	597	64	34	8	5		+124
General rather than specialized education for teachers of various subjects and levels.....	593	14	24	38	24		-34
More interesting courses and fewer specialized courses in curricula for teachers.....	547	17	39	29	16		+12
<b>II. Prescription:</b>							
High prescription in 4-year curricula.....	607	7	30	30	33		-52
Practically total prescription in 2-year curricula.....	589	35	38	17	10		+71
The inclusion of electives in all curricula.....	588	66	31	2	1		+159
<b>III. Professional work:</b>							
A limited education and psychology prescription.....	584	43	27	19	11		+72
Introduction to various theories of school organization.....	585	56	33	7	4		+130
Teachers made critical of new philosophies of organization, curriculum, and methods.....	599	30	36	9	5		+117
The emphasis, at the undergraduate level, upon accepted theories and practices rather than upon research findings.....	560	18	42	26	14		+24
Comprehensive preservice education for all types of teaching situations and difficulties.....	575	23	41	23	13		+38
The provision for practice teaching in situations typical of the surrounding region.....	571	44	45	6	4		+119
Control of education of teachers by professors of education and psychology.....	587	16	33	23	28		-14
Minimum of 90 clock-hours of student teaching.....	536	35	30	22	13		+53
<b>IV. Professional treatment:</b>							
The professionalization of practically all subject-matter courses.....	587	10	22	34	34		-60
The elimination of all special methods courses and the inclusion of special methods in subject-matter courses.....	582	18	24	31	27		-26
The teaching of special methods by subject-matter professors rather than by professors of education.....	605	36	23	25	16		+38
The frequent teaching of demonstration lessons in practice schools by college instructors of subject-matter courses.....	554	25	37	21	17		+32
Frequent opportunity for students in all college courses to observe in the practice school.....	570	57	27	8	7		+119
The superiority of good demonstration to practice teaching in the preparation of teachers.....	545	19	36	30	15		+14
The provision for separate special methods courses in the major subject.....	569	39	31	19	11		+68
<b>V. Differentiation:</b>							
Differentiation beyond usual major and educational requirements for secondary teachers.....	528	31	30	23	16		+37
Some differentiation in curricula for urban and rural teachers.....	579	46	38	11	6		+109
The desirability of limiting each State institution to specified types of teacher preparation.....	563	42	44	10	4		+110
The desirability of centralized State control of all State-supported teacher-training institutions.....	558	41	31	16	12		+73
<b>VI. Criteria of curriculum making:</b>							
Better public-school practices the criterion for 4-year curricula.....	562	15	41	29	15		+12
Better public-school practices the criterion for 2-year curricula.....	552	27	45	18	10		+61
The program of studies based largely upon educational research.....	567	32	41	18	10		+67
The program of studies based largely upon a philosophy of education with research subordinated.....	575	23	35	30	13		+25
Dual emphasis upon general culture and technical training for teaching.....	597	31	16	2	1		+174
Provision for the development of latent abilities.....	568	56	37	5	2		+140
Preparation of secondary teachers to teach several subjects.....	570	44	41	9	6		+108
The desirability of leadership by teacher-training institutions in the reorganization of public-school curricula.....	560	46	42	10	8		+118

TABLE 24.—The reaction of university, college, and junior college instructors on 63 curriculum proposals relating to the education of teachers—Continued

Abbreviated issue statement	Number of instructors voting	Percentages of instructors who voted -				Index
		Yes (+2)	Yes with reservations (+1)	No with reservations (-1)	No (-2)	
1	2	3	4	5	6	7
<b>VI. Criteria of curriculum making—Continued.</b>						
The use of job analysis in the development of teacher-training curricula.....	526	10	44	26	20	-2
Need of a definitely prescribed sequence of courses for every type of teaching position.....	565	27	39	24	10	+49
As much emphasis on techniques of creative education as on teaching of tool and content subjects.....	558	44	43	9	4	+114
<b>VII. Standards:</b>						
High achievement in previous work prerequisite for admission to curricula for teachers.....	573	58	33	5	3	+138
The development in prospective teachers of a capacity for independent professional activity.....	598	79	20	1	1	+175
The desirability of continuing the education of teachers after the preservice period.....	597	82	16	1	0	+179
Growth in teaching skills developed on job rather than during preservice period.....	596	49	30	17	5	+101
Mastery of subject matter the first essential in the education of teachers.....	609	64	26	7	3	+141
The introduction of all prospective teachers to the problems of urban and rural life.....	575	42	41	10	7	+101
4-year curricula more essential for preparation of elementary teachers than for secondary teachers.....	557	11	18	7	39	-69
Limited acceptance of correspondence or extension credit in teacher-training curricula.....	595	63	27	7	3	+140
No college credit for review courses of elementary or secondary subject matter.....	574	49	24	17	10	+85
The elimination of deficiencies in elementary or secondary content of a prospective teaching field.....	590	75	21	2	2	+165
The limitation of teaching certificates to the specific levels and fields of preparation.....	584	63	28	6	3	+142
The limitation of certificates to either the elementary or secondary field.....	564	45	35	12	8	+97
All higher educational institutions permitted to train teachers.....	587	16	21	27	36	-46
Any curriculum largely concerned with subject matter of major.....	593	24	36	27	13	+31
Comprehensive objective personnel data of value to teacher-training institution.....	564	41	45	10	4	+109
Graduate credit for correspondence and group extension courses.....	578	4	23	32	41	-83
Health certificate prerequisite for teaching.....	576	42	42	12	4	+106
1-year curriculum chiefly professional content, cultural background assumed.....	527	24	40	21	15	+37
<b>VIII. Values:</b>						
Attitudes, appreciations, and ideals, the by-products of direct attention to knowledge and skills.....	568	27	38	22	13	+44
Insight into both social and individual behavior important.....	602	85	14	1	1	+181
The cultivation of physical, social, and esthetic capacities as well as intellectual capacities.....	593	77	22	1	0	+175
Emphasis on knowledge and skills required for teaching public-school minimum essentials.....	545	8	22	37	33	-65
Ability to develop personality traits in pupils as important as knowledge and teaching skill.....	579	45	38	12	6	+104
Provision for development of social and individual traits of teachers.....	583	64	29	4	2	+149
Education modified according to social and economic background of prospective teachers.....	556	19	41	24	15	+25
Preparation to teach contemporary life as well as race experience.....	560	48	40	8	4	+120

## GROUP ATTITUDES

A comparative study of the group reactions of instructors of education, presidents, academic instructors, and instructors of special subjects, respectively, on issues can be made with the help of figure 2, appendix A, which plots the index of approval for each group on the index scale for comparison. On the whole, the reactions of the groups—presidents, academic instructors, special-subject instructors, and instructors of education in universities, colleges, junior colleges, and teachers colleges, respectively—were quite similar, the indexes of each group tending to fall near that of the other groups. Some group differences must be noted.

*Special points of view of education instructors.*—The education instructors on most issues exhibited the same trends but were usually more emphatic in their opinion in the direction that other groups tended. On a few issues the preponderance of their views were opposite to those of the whole group. Since it is the group directly interested in teachers, these deviations may be worthy of note. They favored specialized education for specific levels or subjects more strongly than did the whole group. They believed the control of the education of teachers should be by professors of education and psychology, and were as a group divided but not so sure that the prescription in education and psychology should be definitely limited. They would teach the separate special-methods subjects themselves, rather than have the teachers of academic subjects do it. They believed student teaching superior to observation. They were less certain that growth in teaching skills is developed on the job rather than at school. They were more emphatic in denying that all higher institutions should be permitted to educate teachers. They did not believe that any curriculum should be concerned largely with subject matter of the major. They were not so certain and the preponderance of their opinion opposed the statement that attitudes, appreciations, and ideals are byproducts of direct attention to knowledge and skills.

*Of special-subject instructors.*—In no case were the special-subject instructors decidedly different in their attitude from the general tendencies of the other groups.

*Of the academic instructors.*—An inspection of figure 2, appendix A, shows that while in general all groups tend to move up and down the scale together with reference to the issues, there are some attitudes more strongly reflected by the academic instructors than by others. They were the most decided group both in colleges and universities and in teachers colleges in opposition to the control of education of teachers by professors of education and psychology, being in decided variance with university and college instructors of education and the presidents on this point. They were quite positive in believing that

growth in teaching skill develops on the job rather than during the preservice period of training. They were very favorable to the teaching of special-methods courses by subject-matter professors rather than by professors of education. They showed more tendency to believe in the superiority of good demonstration to practical teaching in the preparation of teachers. They were less certain about the necessity of differentiation of curricula for teachers beyond the usual major and educational requirements or about basing the program of studies largely upon educational research; they were more positive in the belief that any curriculum should be largely concerned with subject matter of the major. They were less positive than the others in believing that ability to develop personality traits in pupils is as important as knowledge and teaching skill.

*Of colleges and universities versus teachers college attitudes.*—The differences between individual instructors of each group was greater on most of the issues than the differences between these types of institutions. The teachers college groups believed a little more positively in high prescription in 4-year curricula and in practical total prescription in 2-year curricula, in a minimum of 90 clock-hours of student teaching and in the professional treatment of practically all subject-matter courses. They opposed more strongly the proposal that all higher institutions should be permitted to prepare teachers. Even in most of these matters the attitudes were not far, though significantly, apart, while in all other matters their attitudes move up and down the index scale together with the other groups.

*Of the presidents.*—The presidents were asked to vote on the 50 original of the 63 proposals. They were stronger for high prescription in 4-year curricula and constituted the most decided group favoring a limited prescription in education and psychology. On the control of education of teachers by professors of education and psychology they were about as positive as the education professors themselves, and they were more positive than the others in the belief that differentiation of curricula beyond the usual major and educational requirements is necessary for teaching. They agreed rather decidedly with the education instructors that not all higher educational institutions should be permitted to prepare teachers. Otherwise their judgments followed the general trends of other groups.

## CHAPTER XII

# PROPOSALS AND RECOMMENDATIONS WITH SPECIAL REFERENCE TO THE EDUCATION OF TEACHERS IN UNIVERSITIES, COLLEGES, AND JUNIOR COLLEGES

### GENERAL STATEMENT

At present we "see only in part" on matters of curricula in higher education and that is often a very small part. This is as true of the general education of anyone as it is of the education of teachers. Research, which depends so much upon the isolation and study of single variables, has not yet "come through" with satisfying analyses and measurements of complex curriculum problems, partly because it is difficult to isolate almost inextricable variables and partly because existing instruments of measurement are crude and for many phases of the problem means of measurement have not been developed. General criteria upon which to base the relative value of content to be selected for general education have received little consideration. Even after single factors in teacher selection, or in teaching success, have been isolated and studied, their potency is always affected by the changing potency of other variables; for example, intelligence may be compensated by industry in teaching success, while both may be neutralized by an undesirable personality or poor health. They never operate together in exactly the same way in different individuals. In consequence, curriculum problems are difficult to study with a view of obtaining decisive evidence.

In the meantime the education of teachers must go on. Institutional practices and policies, which in curriculum matters can never be static or crystallized, must be based upon the best information available and need the focusing of the best thought possible upon their implications. It has been the purpose of the staff to present in part III a picture of present curriculum practices in junior colleges, colleges, and universities so that those who desire to study them may have available data which an individual could not gather on short notice. This should result in easier stimulation of more thought upon these problems and the initiation of new experimentation and research to carry the curriculum to higher levels of adequacy. The Survey must not serve as an agency to crystallize practice at this time. Those who have little information will be helped to know what others are

doing, while those who know most about the situation will be helped to carry on and perhaps to vary most from current practice.

However, with the warning that crystallization of practice must not follow this Survey, it has been deemed advisable to speak as individuals who have studied the problem of teacher education in universities and colleges in the large and in detail, to state what would seem to be the best possible proposals and recommendations for the immediate present. These proposals and recommendations cannot be defended in terms of noncontrovertible data of the Survey nor upon a final word from research. They are, however, an effort to outline the best possible program for the education of teachers in colleges and universities made after conferences with hundreds of instructors, with associates on the Survey, diligent reading of the literature and the application of as much thought as time would permit. With these limitations and purposes in mind, the proposals are submitted with the hope that they may stimulate progress.

#### STATE RESPONSIBILITY

1. The setting up of minimum standards for the certification of teachers must be recognized by all institutions as resting in the several States acting through properly constituted agencies since public education is a function of the State. This duty makes the State definitely responsible for the minimum standards that are to be maintained for educating teachers in junior colleges, colleges, and universities when certificates are based, not upon State examinations, but upon curricula, the completion of which leads directly to certification.
2. The supervision of teacher education as a State function implies that the State should formally accredit non-State institutions for the preparation of teachers. This accreditation should be based upon careful, periodic inspection or study of institutional standards, special curriculum provisions, and provisions of student teaching facilities. It must consist of setting minimum standards and not of cramping institutional initiative and experimentation.
3. Practices now in vogue for accrediting institutions to prepare teachers are often loose. There is need for higher standards and specific checks so that weak institutions without adequate provisions are not accredited. The education of teachers is not the right of a weak institution, whether State or private.
4. In general higher standards will result if fewer institutions well staffed and well equipped prepare teachers than if practically every institution prepares a few teachers. Adequate provisions and economy are often dependent on size of student body.
5. In the absence of, or in addition to, other effective means of directing and coordinating the program of teacher education in State and private institutions, the State should bring together periodically the responsible leaders from all institutions to outline its standards and requirements for certification, to discuss problems of teacher education, and to approve practices relative to minimum requirements.
6. One item which it is reasonable for a State to check in institutions accredited to prepare its teachers that is now not usually included is to see that prospective teachers are either prepared or pass a test of competency in the content covered in the entire range of the subjects of the teaching field for which teachers are to be certificated. States have some obligation to outline this content in terms of State needs after careful research.

7. The following criteria are suggested by which a State may judge the qualifications of an institution to be accredited for the preparation of teachers:

- (a) The provision within the institution of an organization with authority and competency to supervise and guide the professional preparation of prospective teachers.
- (b) An adequately prepared faculty in the teaching fields for which it prepares teachers.
- (c) Adequate facilities for observation and practice teaching under the direct supervision of competent persons.
- (d) Careful recruiting and selection of candidates for teaching, and the elimination of the unfit by a combination of criteria.
- (e) The full cooperation of all departments in the education of teachers, with a sympathetic appreciation of the special needs of teacher education.
- (f) The graduation of teachers who by general observation of their success in school situations compare favorably with the product of strong institutions also doing such work.

8. Any State supervision of teacher education must be under officials of high fitness for the work.

#### STATE CERTIFICATION

1. Permanent life certificates should be discontinued, and a plan of periodic renewal upon evidence of efficiency substituted for them.

2. All permanent certificates, if issued at all, should be awarded only after a probationary period of actual teaching.

3. The certification of a teacher should be limited, respectively, to the elementary or secondary school levels, and if for the secondary level, it should be restricted to those fields in which the holder possesses a major, or a minor of not less than 12 and preferably 15 semester-hours of preparation. The blanket teaching certificate covering both elementary and secondary levels should be abolished in all States.

4. A health certificate should be a prerequisite for certification to teach or for renewal of certification to teach.

5. It is recommended that some national agency undertake the standardization of names for similar types of State certificates to promote interstate reciprocity and to facilitate the fair evaluation of certificates. It is recommended that future laws and State departments follow as closely as possible the standardized terminology agreed upon.

6. Every State should know its annual demand for teachers in every subject field through annual or biennial analyses based upon reports from every local district. The State should also know the annual supply of teachers from all institutions accredited to prepare teachers.

7. It is recommended that some States try a plan of certifying by subjects or levels only a limited number above the number needed to supply its demand, devise ways and means to select first those who are best qualified, and keep the others on a waiting list in competition with later applicants.

8. With due allowance for a supply from outside its boundaries, every State should endeavor to coordinate the teacher-education programs with all institutions accredited to prepare teachers so that only a sufficient number but not an excessive oversupply of well-qualified teachers are educated.

#### INSTITUTIONAL ADMINISTRATION OF TEACHER EDUCATION

1. In most universities the education of teachers at least after the junior college period is probably best done by being concentrated in a school of education corresponding to the separate units used for the education of doctors, dentists, lawyers,

musicians, or engineers. The education of teachers by two plans in the same institution, one in the college of liberal arts and the other in a school of education, should be eliminated.

2. In some large institutions with large education enrollments more attention should be given to the provision of separate and well-equipped education buildings or to the convenient grouping together of departments and activities which should be clearly correlated in the education of teachers.

3. Each liberal arts college or university should decide by administrative or faculty action whether or not it wishes to educate teachers and what particular types of teachers it wishes to prepare, according to one of the following levels described in chapter I.

(a) No effort is made to prepare teachers for certification as teachers.

(b) The partial but not complete preparation of teachers for certification on the undergraduate level is undertaken.

(c) Complete preparation of certain types of teacher for certification is attempted in a 4- or 5-year program.

4. An institution which formally undertakes to prepare teachers in part or entirely should enter into the program whole-heartedly. The antagonism or the cold attitude of tolerance sometimes expressed to students regarding preparation of teachers tends to prejudice students toward the profession and later cause employing school officials and State departments to view such institutions critically.

5. In institutions where teachers are prepared, it seems desirable that the entire faculty concerned should occasionally discuss for mutual orientation the curriculum problems of teacher education.

#### ADMISSION AND SELECTION OF PROSPECTIVE TEACHERS

1. Ways and means must be developed to attract and to select persons more carefully for teaching on the basis of such qualifications as health, ethics, scholarship, scientific attitude, breadth of view, mental alertness, and personality, and finally ability to develop art and skill in teaching.

2. Candidates for teaching should be limited to those who make at least average or better grades in all work and better than average grade standards in future teaching fields.

3. While there is no conclusive evidence from research on what qualifications enter most significantly into successful teaching, until more evidence is available, selection of prospective teachers should be based not upon single criteria but upon a combination of criteria such as:

(a) The elimination of at least the lowest third or fourth in scholastic attainment; higher standards to be used wherever there is oversupply of teachers.

(b) The further elimination of those who do not show a teaching personality in student teaching. Initial failures might be given, if possible, a second chance in a new practice situation.

(c) Strong recommendation by faculty to be limited to those who meet 1 and 2 above, and who in addition are known to possess positive strength of character and high ideals.

4. Ideally, every institution for the preparation of teachers should maintain a progressive program of attracting the capable, selecting the most promising, eliminating the unfit, standing behind its best, and following its graduates into their jobs, a program which begins with legitimate student recruiting and ends only after a teacher is successfully established in his profession.

## GUIDANCE

1. A program of guidance should be an important administrative feature of a desirable teacher-education program. The recommended elements of such a program might incorporate such features as the following:

- (a) Tests and interviews after preliminary selection and admission to ascertain abilities, interests, aptitudes, and disabilities or deficiencies.
- (b) Adequate personal data for reference of personnel officers.
- (c) Appraisal of social and other qualifications through extracurricular and other activities.
- (d) Guidance of student into activities needed or those for which he is most fitted.
- (e) Guidance of student after the first year or two into his best teaching fields.
- (f) Reactions of instructors to students' ability in principal fields of concentration for teaching.
- (g) Careful evaluation of teaching personality during student teaching.
- (h) Careful guidance of student into first position for which he is most suited, by placement office.
- (i) Maintenance of contact with graduate during early teaching years, by placement office.

2. There is some danger that the existence of high specialization in instructors with possible resultant distortion of perspective, high departmentalization, and interdepartmental rivalries may often cause faulty guidance. Every institution should provide administrative procedures to safeguard the interests of students from these tendencies.

3. The guidance of especially capable and promising students toward the teaching profession and the guidance away from the teaching profession of the unfit should be begun in the secondary school and continued throughout college.

## EXTRACURRICULAR ACTIVITIES

1. High-school teachers generally should prepare themselves for participation in some form of extracurricular activity at the secondary level.

2. The development of the social personality in the teacher calls for participation in the social activities of the college, which in turn calls for many provisions of this sort by the college.

## CORRESPONDENCE AND GROUP EXTENSION COURSES

1. The quality of extension and correspondence work offered to teachers should be carefully checked in many institutions.

2. Under present conditions, extension credit for teachers outside of the local community of the institution in the case of group classes should be limited. Where ample facilities can be assured, policies toward extension and correspondence work can be liberal.

3. The type of extension work where competent instructors meet with teachers of a local community to work with them on educational problems with the full cooperation of local school authorities is to be encouraged as serving the double purpose of upgrading teachers and keeping the institution close to teaching problems.

## ECONOMIES

1. Possible economies in teacher-education programs may be effected:

- (a) By offering small classes only in alternate years.
- (b) By combining into trunk-line courses those essential elements of training which all must have.

- (c) By giving more attention in departments to the elimination of unnecessary duplication in courses taught by different instructors.
- (d) By resisting the tendency to multiply courses and departments.
- (e) By preparing only those kinds of teachers for which there is ample enrollment and for which adequately differentiated and specialized instruction of good quality can be provided.
- (f) By the maintenance of fewer instructors at better salaries rather than the maintenance of too many instructors at smaller salaries.
- (g) Alternation of small summer-school classes.
- (h) By early elimination of poor prospects for teaching.

### ARTICULATION

1. Closer articulation of junior college work with secondary work of individual students is needed to supplement and to continue, but not to duplicate previous work.

2. In colleges and universities, the purpose of the secondary and junior college level for the teacher should be primarily general education; of the senior college and of fifth-year level, general education plus special education for teaching positions; of the fifth year or first graduate year, either a continuation of senior college aims or specialization in one or two fields; and of the doctorate level, intensive specialization.

3. In checking the pattern of the general education of the individual student at the college level (not including the major), it should always be remembered that for most students the major amount of work in many fields of subject matter in point of time emphasis to be completed during the entire 8 years of high school and college may already have been completed in the high school. This is particularly true of English, history, classical languages, and mathematics.

4. With the view of possibly preventing a useless repetition of content and of providing time for contacts with new content, instructors at the junior college level should study the relative contributions of the parallel content now often found in secondary and junior college survey or introductory courses in English literature, history, science, and possibly other departments.

### DEPARTMENTAL AND DIVISIONAL ORGANIZATION OF COURSES

1. The general and special education of elementary teachers and of secondary teachers for the 10 to 15 types of teaching positions of the secondary school is probably better served in part by a curriculum organization at the junior college level, which is divisional rather than highly departmental. It now requires in many institutions an impossible number of introductory courses to get necessary general contacts with such broader areas of knowledge as physical sciences, biological sciences, English, social studies, comparative literature, or fine art studies. If institutions in serving other types of students and advanced graduate work must maintain highly differentiated departments, provisions for orientation courses and for divisional rather than departmental majors should be made for teachers.

2. It is recommended that experimental orientation courses of the following types be tried for teachers at the junior college level: (a) Biological science; (b) physical science; (c) social sciences; (d) fine arts; (e) physical education, health, and physiology; (f) general literature; and (g) oral and written English.

## STANDARDS

1. A thorough mastery of subject matter is a first essential in the education of teachers.

2. A 4-year college curriculum should be made the minimum preparation for the lowest class of secondary school in every State that has not yet made it so.

3. An early adoption of the standard of 5 years of preparation for the first or highest class of secondary-school certificate in most States is recommended; at least an early beginning in preparing such teachers should be made.

4. The period of preservice preparation for elementary teachers in all universities and colleges should be increased to 4 years with a temporary minimum of 2 years for rural schools only as a step to the attainment of the same level of preparation for the rural teacher as for the urban teacher.

5. Graduate work should be undertaken only in institutions which meet high standards of faculty preparation and at the same time have ample library and laboratory facilities for graduate work.

6. In all curricula there should be provisions for off-level registrations to adjust instruction to past education, to the present and future needs, to the interests, and to the abilities of students; but the careful administration of off-level registration must be definitely provided so that upward or downward registration cannot become so common that the assumed increasing challenge of courses from the junior college through the graduate school may never take place. In this matter there is danger of the extreme of too great rigidity as well as of too great flexibility.

7. The test of proficiency in a teaching field should not be based solely upon the number of credits of course work completed but rather upon specific proof of competency in the subject matter and in giving instruction based upon that subject matter.

8. It is recommended that the number and type of courses in education and in academic majors used as first courses in these fields for teachers be carefully supervised in content and sequence so that the pattern of work completed in a major, a minor, or an education series may be less haphazard and more definitely planned to cover the minimum essentials needed by the teacher. Beyond these ascertained minimum needs of a field, which should be checked through research, it may be very desirable to make provisions for restricted or free electives.

## IN-SERVICE EDUCATION

1. Fewer summer schools, but larger and with wider offerings will best serve the up-grading needs of teachers in service, since small summer schools can offer but a part of the work of the regular year.

2. At least the key people and as many others as possible involved in the education of teachers should maintain first-hand and direct field contacts with the region they are serving in order to maintain a working knowledge of school conditions and sensitivity to current changes.

3. Teachers in service who tend to elect too heavily from education courses should be guided into academic fields.

4. Institutions should follow with careful records the subsequent history and success of their graduates for at least a limited number of years as a study of the efficiency of their own offering.

## CURRICULUM CONTENT

1. Traditional requirements, untested opinions, and instructors' judgments without substantiation from research are as yet too dominant in academic and educational curriculum prescriptions. The most ordinary requirements for

teachers need to be challenged and the results of cooperative research used either to support them or to find more valuable replacements. This refers to such matters as entrance requirements, general graduation requirements, major sequences, prerequisites, education courses, relative value of fields for a general education, nature of the content, and similar items.

2. In the determination of content and the organization of this content in curricula for teachers, the following principles are proposed:

- (a) Teachers occupy a key position in the progress of a rapidly moving civilization. It is important that curricula for their preparation be given much thought to keep them responsive to social change and social need.
- (b) Content must be selected for relative value to teachers as teachers. Vested departmental interests and traditional practices cannot predominate in the face of the needs of a society which demands much of a teacher.
- (c) Content should be related to the ascertained demands and needs of better school practice.
- (d) Content should be based as far as possible upon available research. Research and experimentation should be used increasingly to test and try out the best thought and to blaze new trails.
- (e) Where generalised knowledge based upon research does not supply definite guidance, curriculum-making must be carried forward with the help of a philosophy of education.
- (f) Aside from the social and professional needs that should be reflected in curricula for teachers, there should be provision for the development of latent abilities and interests. This is one reason for supplying elective privileges.
- (g) It must be assumed by institutions and by public-school administrators and supervisors alike that a considerable part of the development of a teacher in the theory and particularly the practice of teaching must take place on the job. A teacher must be brought, however, to reasonable initial competency for his first position in his preservice preparation, but the development of the art of teaching requires for most persons more time than institutions can give.
- (h) In building a curriculum for teachers, the limitation of the available 4-year period of preparation will not permit perfection in any one phase of it. A sane balance should therefore be attempted among all essential lines of development that are necessary. These are:
  - (1) The general education of the teacher as a member of a learned profession. This content for the general education should be selected and rejected in part on the basis of its relative value as basic background to teaching.
  - (2) Adequate preparation in the subject matter of the teaching fields which will call for specialization and final competency.
  - (3) Orientation in education and psychology.
  - (4) Professional treatment of the teaching fields with regard to both content at the future teaching level and to teaching activities.

3. A teachers' curriculum should be an integrated curriculum. Departments in preparing their own offerings of major sequences or courses for general contact for teachers should do so with the needs of teachers in mind. Conferences among college administrators and academic and education instructors and with those who are in touch with public-school needs and with especially competent persons who are thinking about the total program and not merely a part of it should be held frequently.

4. In the preparation of curricula and of course-of-study changes, it would appear from the picture of current practices that many agencies are involved. This is desirable. It appears reasonable, however, to conclude that more changes ought to be supervised by departments, divisions, curriculum committees, or faculties as a whole.

5. Until all professional work is on a graduate level of more than 1 year, professional education for secondary teaching should begin at the undergraduate level.

6. It is likely that teacher-educating institutions can supply much cooperation and leadership to States in the supervision of teacher education.

7. Education instructors should check their courses for duplication of content as a result of recent rapid expansion in content and offering. Consciousness of duplication exists also in other fields.

8. The pattern of the curriculum with respect to the proportion of it to be devoted to (a) survey or nonspecialized orientation courses, (b) usual introductory and advanced unit courses, (c) subjects of the teaching field, (d) all education, (e), observation and practice teaching, and (f) electives will vary according to subject or the level of the public-school systems for which preparation is being made.

9. Curriculum-building for teachers should be supervised by persons who have broad curricular perspective.

10. With increasing attention to the problems of developing the social and individual traits in pupils by teachers, institutions should increasingly provide preparation for these responsibilities.

#### AIMS AND OBJECTIVES

1. Although direct subject-matter aims, such as the acquisition of facts and principles, the acquisition of skills, or taking care of the subsequent needs of courses are important, apparently more conscious stress needs to be given by instructors to the more functional aims of higher education, such as breadth of view, scientific attitude, civic-social responsibility moral training, education for leisure, social leadership, better home life, and health, which are often left to be incidental outcomes of a curriculum in which subject-matter aims are more specifically emphasized.

2. The education of teachers in the independent liberal arts college cannot be reconciled with the view held by some that a liberal education is the sole aim of a liberal arts college. Any institution which purports to educate teachers must combine with the aim of a liberal education for teachers the objective of definite and adequate professional education, which will involve:

- (a) Courses in education.
- (b) Limitation of majors and minors for prospective teachers to teaching fields.
- (c) Specific relation of at least a part of the content of majors and minors for teachers to teaching needs.
- (d) Professional treatment of teaching fields.
- (e) The inculcation of a professional attitude in prospective teachers.

#### GENERAL EDUCATION OF TEACHERS

1. In colleges and universities, the first 2 years of a 4- or 5-year college curriculum should be largely concerned with the continuation and supplementation of general education at the secondary level, and the foundation courses of the future fields of teaching.

2. High-school or college contact with many major fields of knowledge should be one objective of the education of teachers.

3. In the future more emphasis in the general education of teachers is needed upon fine arts, sociology, economics, government, biology, philosophy.
4. There must also be accomplished a thorough introduction of all teachers to the social, economic, and political problems of today with emphasis upon the problems of both urban and rural life.
5. The present pattern of the general education of teachers may be challenged as follows:
- (a) A program is often prescribed without reference to previous work of a student on the secondary level.
  - (b) There is sometimes duplication of subject matter in courses of parallel content on secondary and college level which results in loss of time, for example:
    - Survey courses in English literature.
    - General European history.
    - General chemistry.
  - (c) Much secondary and college mathematics that is required for general education is engineering mathematics and is not taught for general life values; nor does it contribute much to culture. It vanishes quickly and may leave little residue of important appreciations or insights for most people.
  - (d) Much of the language work required of those not majoring in languages may result in little positive contribution in ability to read, speak, or write the language, or in a knowledge of the literature.
  - (e) Science contacts are limited to but 1 or 2 fields because of high departmentalization and because of introductory courses that are often the technical rudiments needed for the major rather than for the general student.
  - (f) Social studies contacts are often inadequate in presenting problems of today.
  - (g) The work is not related to the future work of the teacher.
  - (h) The fine arts apparently are neglected. Requirements might be more widely made in appreciation courses touching music, painting, sculpture, architecture, civic beauty, art in periodicals, and art in the home.
6. There is much agreement among those most interested in the preparation of teachers with the philosophy back of orientation courses, survey courses comprehensive examinations, and qualifying examinations to promote the integration of the general education, the student's scholarly responsibilities, and his initiative in achieving an education and experimental innovations are to be recommended.
7. The amount of specialization beyond a minimum should be controlled to permit broad grounding in more of the essential fields of human activity before additional specialization is attempted.
8. More content might be provided for nonmajor students in courses designed to develop home life. It is not desirable that only home economics majors should have training in nutrition, parental education and child care, home planning, home art, family budgeting, care of the sick, and the like. There is content in these courses that has general life value, too vital to be excluded from a general education.
9. Education as a factor in contemporary civilization is a subject that is apparently not given its rightful place in social-science courses, outside of education, that are available to nonteachers. It should be recognized in the social studies field. A nonteacher-preparing course of the type of a general orientation course on current problems of education should be available to college students either as a separate course or as a part of an orientation course in the social studies.

10. The course offering for general content and the initial course offerings for those who major in a field should be considered separately by each subject department. The first courses for majors may not coincide with optimum content for those who would take a course or two for general cultural purposes. The number of persons taking courses for general content is 4 or 5 times the number of those who specialize. The needs of this larger group is of paramount importance.

11. In the training of teachers there appears to be a need for a stronger emphasis upon creative ability in music, art, writing, and speech.

12. It is recommended that teacher-educating institutions experiment with the development of orientation courses of not too limited credit requirement to permit scholarly treatment of essential topics in the following or similar fields. Such courses might well occupy most of the junior college years or should be supplied in areas which the student cannot touch with departmental courses.

- (a) Fine arts (appreciation course), music, art, sculpture, architecture.
- (b) Biological sciences (animal and plant life, physiology, nature study, heredity, evolution).
- (c) Physical sciences (astronomy, geology, chemistry, physics).
- (d) Social studies or contemporary civilization (economics, sociology, government).
- (e) World history.
- (f) Philosophy, ethics, and religion.
- (g) Comparative literature—ancient and modern.
- (h) Possibly general language and the development of English.

NOTE.—Combinations of b and c and of e and f might be possible.

13. Enrollment in orientation courses should not be a blanket requirement, irrespective of previous high-school work or subsequent college work, but should be conditioned by such considerations. For those with special preparation, there should be available advanced unit courses of ordinary types.

14. The future success of orientation courses will depend upon the development of instructors to do the work and upon a careful study of the relative value of units of possible content.

15. Tests and examinations are receiving an increased emphasis in the comprehensive examination, the qualifying examination, and in the entrance examination. The objectives of these movements, which are better scholarship, better integration, more specific attainment of objectives, and the student's responsibility for his education, should be encouraged and the specific proposals given careful trial and study.

### THE TEACHING FIELDS

1. Majors or minors acceptable for certification to teach in secondary schools should be limited to approximately the following fields:

- English
- Biological sciences, Physical sciences, or Science
- Mathematics
- History and social studies or Social studies and history
- A foreign language
- Agriculture
- Physical education
- Home economics
- Industrial education
- Commercial education
- Music
- Art

2. Most large universities and some colleges should offer additional majors in:
  - Administration—general and secondary
  - Elementary education
  - Supervision
  - Specialized types of positions, such as:
    - Librarians
    - School psychologists
    - Teacher of subnormals
3. A single science, or a single social science, is probably not acceptable as a sole concentration field for preparation to teach below the college level.
4. The use of qualifying comprehensive tests given by institutions in the teaching fields of special preparation is to be encouraged for careful trial in lieu of mere blanket acceptance of a certain number of credits. This should preferably be done before a student is admitted to student teaching and might cover (a) subject matter of the secondary teaching level and (b) background subject matter at the college level.
5. Gross deficiencies in elementary or secondary teaching content must be eliminated. No or little college credit should be given for review and remedial courses of purely elementary or secondary level subject matter in a teaching field.
6. The selection of major and minor teaching field combinations may be based in part upon a knowledge of the most common combinations now found in the field but should probably be in related areas of teaching.
7. Besides the usual departmental major, there should be a concentration of credits in a second field to the extent of at least 15 to 18 credits and sometimes, if possible, a concentration in a third field of at least 12 or 15 semester credits. When the principal sequence is in a broad divisional major such as outlined above, rather than a departmental major, a first minor in one additional field is probably sufficient.
8. It is fallacious to make all majors of equal length, for example, 24 semester-hours. This is especially fallacious when it is done without reference to previous high-school work. In general, conferences with instructors have emphasized these points:
  - Most language teachers with present requirements are underprepared for their work.
  - People who do not present language for entrance to college, unless language is spoken, ought not be permitted (ordinarily) to major in language for teaching.
  - Any science department majors need much introductory preparation in other related sciences to be qualified to teach in secondary schools.
  - Mathematics majors may not need as many actual credits of specialization in mathematics for secondary teaching as do teachers in other fields; at present they are lacking in knowledge of the applications and uses of mathematics, the history and development of numbers and mathematics. Much work in mathematics is often presented for entrance.
  - Many English majors lack preparation in speech, public speaking, dramatics, and comparative literature. Much work in English is presented for entrance.
  - Many history majors do not take enough introductory work in political science, sociology, and economics. Much work in history is presented for entrance.
  - Physical education majors often neglect health, physiology, and hygiene; also an additional teaching minor. Little start in this field is made at secondary school.

Music majors should be more thoroughly checked on musicianship in major field, on appreciation content, and should have a related teaching minor. Work is not usually seriously begun in high school.

Art majors for ordinary high-school teaching should have a teaching minor in addition, and more correlated appreciation work in art, sculpture, architecture, civic beauty, and art of the home. This work is not usually begun in high school.

Special-subject majors are often graduated without orientation courses in education covering the objectives, the curriculum of the units in which they will engage as teachers. Special teachers of art, music, and physical education in secondary schools frequently supervise these subjects in elementary schools and should know elementary education. Little start on the work in special subjects is made in high school.

9. The preparation of teachers in specific teaching fields to meet the needs of secondary schools should include work that will serve as background for as many as possible of the high-school subjects which are taught in the area served by the institution.

10. The prevalence of teaching in 2 fields suggests the possibility of having 2 fields of equal preparation instead of a major and a minor for teachers. As experience and promotion may bring to teachers a single teaching field in a larger high school, additional preparation may be taken at summer school.

#### THE ELEMENTARY TEACHER

1. A 4-year curriculum for future elementary teachers should be required as soon as possible because:

- (a) The elementary teacher is deficient in his general education.
- (b) He has to be prepared to teach in a larger range of subjects than the high-school teacher.
- (c) His activities with smaller and more immature children are more complex and varied.
- (d) Recent trends require greater versatility and adaptation with constant drain upon informational resources outside of present textbooks.

2. So far as teaching needs of elementary teachers is concerned, the subject major could be minimized if not omitted, and general education emphasized. So far as more intensive insight into one field is concerned in the general education of any person, the elementary teacher needs it too. It may be, however, that a major in education and psychology will supply it.

3. Detailed professional treatment of the content and method of the common branches should be stressed, particularly arithmetic, English, geography, health, history, home training, industrial arts, music, science, and social studies. Special adaptations for the work of the elementary teacher must be provided in these subjects in substantial amount beyond the ordinary courses offered for general education in classes in which elementary teachers are segregated to study these problems. These courses correspond to special-methods courses in the secondary teaching field. Their number for the elementary teacher indicates a much greater emphasis of these courses.

4. Specialization for intermediate, primary, and upper-grade work may be done through specialized courses within a general curriculum in elementary education.

5. Four-year colleges and universities with inadequate facilities for specialization in elementary education including practice-teaching and demonstration facilities and differentiated general curricula for elementary teachers, ought not to undertake the preparation of elementary teachers. Short-term curricula should

be abolished. In general, the standard of elementary teacher preparation in its more specialized features, though well done in many cases, is often not as well done as is the education of secondary teachers.

6. Junior colleges should soon give up preparing short-term 1- or 2-year elementary or rural teachers. They should not undertake the work of preparing 2- or 1-year teachers now unless facilities for course work and for practice teaching equal those of the teachers colleges and normal schools for 2-year teachers. In the future they will have to limit their work to the first 2 years of a 4-year curriculum for elementary and secondary teachers alike, in which the general cultural background, and not professional work and teaching field specialization, will be stressed.

7. More intimate treatment of educational psychology for elementary teachers is needed because there is more content, and the immaturity of children makes understanding of their development an essential equipment.

### RURAL EDUCATION

1. The education of rural elementary teachers should ultimately be identical in quality and amount with that of the urban elementary teacher, except that there must be the sort of differentiation within the curriculum to fit the teacher for the efficient management of the rural school, and for a full appreciation of and orientation concerning the advantages as well as the problems of rural life and its improvement. This differentiation for rural education is so important that teachers prepared for elementary education without it ought not to be certified for rural education until it is obtained.

2. Suitable content for specialization of rural teachers consists of rural sociology, rural economics, rural school management, boys' and girls' club work, general elementary education rather than specialization for primary, intermediate, or upper grades, and at least a part of the practice teaching and observation should be in a rural school.

3. In States where blanket certification for rural and urban teaching exists, all elementary teachers should be orientated in the problems and management of a rural school as well as in rural life because one fourth of elementary teachers are employed in one-room rural schools and more than that proportion do their early teaching in a rural school.

4. Institutions educating teachers must not neglect the education of teachers for rural education during current periods of expansion of other curricula.

### PROFESSIONAL PREPARATION IN EDUCATION COURSES

1. The best method of insuring that prospective teachers are introduced to newer types of school organization, procedure, and theories of education is judged to be to provide for it in formal education courses in professionalized subject-matter courses, and by provisions for observation and practice in a training school.

2. Education courses in 4- or 5-year curricula for secondary and elementary teachers should be introduced not later than the junior year.

3. So-called special-methods courses which treat content and method professionally or their equivalent in the professional treatment of subject-matter courses, or both, are desirable in each major or minor field in which recommendation is to be made for the State certificate.

4. Separate special methods courses or professional elements of professionalized subject-matter courses should cover the following topics as a minimum core:

(a) Objectives of subjects in the field—general to education, specific to subject.

- (b) Textbooks in field—evaluation of series, editions, content, etc.
- (c) Standardized tests in field—evaluation of, practice in use, and interpretation of.
- (d) Building of tests on subject matter in each subject of field, for example, essay type, true-false, completion, matching, and others.
- (e) Methods of marking—general schemes; those peculiar to the subjects, for example, compositions, laboratory work projects.
- (f) Preparation of various types of assignment units, for example, Morrison plan, differentiated content.
- (g) Development of curriculum units in a subject.
- (h) Current reorganization trends if any.
- (i) Types of appropriate teaching activities.
- (j) Adjusting the content of each subject field to individual differences.
- (k) Use of text and of reference material.
- (l) Available reference material at elementary or secondary level.
- (m) Acquaintance with the education and subject-matter leaders in the field.
- (n) Habituation of teachers to read most applicable professional and academic journals during preservice training.
- (o) Outstanding educational experiments in field.
- (p) The motivation of the students.
- (q) History of subject in education.
- (r) Teaching students how to think and study in field.
- (s) The use of auxiliary teaching aids and devices.
- (t) Class management.
- (u) Problems of beginning teachers in subjects.
- (v) Contribution of subjects to the seven cardinal principles of secondary education or to elementary education objectives.
- (w) Possible use of comprehensive test to check status of students in it.
- (x) Special teaching devices, auxiliary aids, etc.
- (y) History of subject.
- (z) Knowledge of current general teaching procedures.
- (aa) Grade placement of subject matter.
- (bb) Working knowledge of educational statistics for use and for interpretation of literature.
- (cc) Time allotment.

5. There is probably no proved need of increasing the total number of hours in education; a better selection of content and often reduction of hours is no doubt possible in many offerings for optimum results. This amount, if educational psychology and separate courses for professional treatment of teaching fields, observation and student teaching are included, should probably not exceed 20 semester-hours, excluding general psychology, in a 4-year curriculum for high-school teachers and 30 semester-hours for elementary teachers. It should introduce prospective teachers to various theories of school organization, of the curriculum, general and special-subject methods, make ample provisions for practice teaching, professionalize the content of the teaching field in typical situations, and give a good foundation in general, social, and educational psychology. Frequent opportunity for students to observe good teaching and to do practice teaching in a school should be provided.

6. A personal insight into social and individual behavior is important for all teachers. Intensive courses in general, social, and educational psychology are important as basic, professional background, and should be taught by competent instructors who can make concrete application of the theories to educational situations.

7. For the introduction to and development of most essential skills of teaching, unified courses in methods, observation, participation, and student teaching are judged to be preferred to separate courses in special methods, observation, and practice teaching, respectively.
8. More consideration should be given in education courses for teachers to the field of professional (teacher) problems such as salary schedules, probationary period, tenure, group insurance, supply and demand, retirement, self-development, sabbatical leave, travel, professional organizations, and the like.
9. All prospective teachers of secondary subjects should take fundamental courses in educational psychology, separate courses in the professional treatment of teaching fields if subject-matter courses are not professionalized, student teaching, observation, and principles of either secondary or elementary education if not taken care of in the above units, there should be provision for content in general method, in general and social psychology, and for content in test and measurements in either the elementary or secondary curriculum.
10. There should be enough work in tests, measurements, and statistics for a teacher to be able to read and evaluate the current literature of his field.
11. General psychology should not be designated as an education course unless unified with educational psychology or definitely adapted to education.
12. Technical training for understanding, reading, and evaluating the literature of educational research in a classroom teacher's field should be one of the objectives of every 4-year or 5-year curriculum for teachers; but the extensive training needed to do research competently is not to be stressed unduly, for it will have to be done at the expense of other essential content, more pressing for first consideration.

### PROFESSIONAL TREATMENT OF SUBJECT MATTER

1. In most colleges and universities the professionalization of teaching fields in separate courses is probably to be recommended and preferred to professional treatment of most or all subject-matter courses for teachers.
2. In certain cases, where volume of enrollment permits it separate sections in a subject can be organized for teachers with instructors in charge who have had both subject specialization and training and experience in education at public-school levels. The professionalization of such courses can be attempted.
3. Experimental study of the relative contribution of separate methods courses and of the professional treatment of some, most, or all subject-matter courses is needed before definite recommendation can be made.

### PRESCRIPTION AND ELECTION

1. The general use made of electives by students evidently justifies the provision of some elective privileges. They should be used to develop special talent of the student, to widen his interests, to follow up special interests, and to provide for special needs.
2. The amount of election in curricula of universities and colleges for teachers should be reduced. There should be prescription to cover the following needs:
  - (a) Contact with science, including biology, English, literature, history, sociology, economics, government, general psychology, fine arts, including both music and art and the fine arts appreciation, health, and, if possible, comparative literature for general education.
  - (b) Advanced background subject matter to parallel the subjects to be taught in the teaching fields including orientation in related fields.
  - (c) Preparation in two fields for the secondary teacher.

(d) Basic courses in education and practice teaching.

**NOTE.**—For the average teacher the conventional foreign language and mathematics prescriptions may not have the relative value of the above fields unless directly related to teaching fields.

### STUDENT TEACHING AND THE TRAINING SCHOOLS

1. The prescription by States and if not by them by institutions of preservice practice teaching in elementary and secondary schools should be a basic requirement for all prospective teachers.

2. Every institution purporting to educate teachers should provide campus and off-campus facilities for observation and practice teaching.

3. Student teaching should be a flexible assignment so that all students may be given the opportunity to reach a satisfactory quality of performance to pass or to be excused from more of it, but superior people should be allowed to continue long enough to have had a chance to develop and demonstrate their superiority to capitalize upon it.

4. A prospective teacher who has not developed an adequate or minimum competency in handling a class in his teaching field should not be recommended for certification. College practice-teaching courses should be of sufficient length to show reliably a prospective teacher's potential abilities in the art of teaching.

5. In off-campus situations where observation and practice teaching are done, there should be a definite understanding and joint agreement relative to the responsibility of the institutional authorities and of the city school authorities, respectively, in the selection of persons who serve as supervisory teachers or critic teachers and in the amount and method of supervision that is to be provided for the student teaching.

6. Whatever salary is paid to critic teachers in excess of those in vogue in a public-school situation to procure competent and qualified teachers should be regarded as a legitimate subsidy from an institution which prepares teachers, or if paid by local districts, should be compensation for other services rendered them by the colleges or universities.

7. In order to stabilize off-campus practice teaching and observation situations, contracts for say 3 or 5 years between boards of education and training school should be recommended in which the obligations, responsibilities, and duties of each party are specified.

8. The unsupervised student teaching taking place in some institutions is severely condemned and should be eliminated.

9. Closer cooperation between instructors in education courses, those responsible for the professional treatment of subject matter or teaching fields and the training school should be developed in most institutions.

10. Critic and supervising teachers in demonstration and practice schools should be selected for special skill in teaching and in addition for adequate subject matter and professional preparation. Usually a minimum formal requirement of a master's degree should be insisted upon for this important work. This is the present standard of the American Association of Teachers Colleges.

11. The same laboratory school or at least the same class situation should not be used, if at all possible, for all three of the following purposes:

- (a) Experimentation.
- (b) Demonstration.
- (c) Student teaching.

Experimentation usually should be separated from student teaching, and observation be used in connection with either or both.

12. There should be a larger budget allowance for student teaching in most independent liberal art colleges and many university schools of education, not

only to improve the personnel but also to give the institution a leverage for more direct supervision of observation and practice teaching when it is done in off-campus schools.

### ADMINISTRATION AND SUPERVISION

1. Usually successful experience as a teacher should be one prerequisite for the certification of superintendents, principals, and supervisors.
2. A minimum requirement of 5 to 6 years of preparation for certification of superintendents, supervisors, principals of secondary schools, and principals of elementary schools should be specified by State departments. The responsibility of superintendents as supervisors of secondary and elementary instruction and preparation for that function in typical American towns needs to be stressed.
3. Special curricula for superintendents should include work in elementary education, in secondary education, and in supervision in addition to an adequate foundation in the theory, technique, and practices of administration.

### GRADUATE WORK

1. There might be two general types of fifth-year work for the preparation of public-school teachers. The one might follow the usual 4-1 plan of intensive specialization in one field, with possibly a minor in a related field, and a thesis involving more or less research. The other might be a fifth year integrated with the first 4 and would continue most phases of previous preparations to a point of greater completeness and would minimize or possibly omit the thesis. The first would emphasize research or specialization or both; the latter should emphasize particularly the work of the teacher from the practitioner's point of view with much contact with research. Differentiated degrees might be awarded; they should be master's degrees, possibly the M.A. or M.S. in education for the first type of preparation, and the Ed.M. or M.Ed. for the latter.
2. There should be flexibility so that students can pursue the fifth year according to several plans as their needs may demand:
  - (a) A fifth year integrated with the first 4 years with or without a thesis.
  - (b) A fifth year devoted entirely to one field, a teaching subject, or education, with or without a thesis.
  - (c) A fifth year devoted to a teaching subject and education in combination, with or without a thesis.
3. It should be possible for teachers who do not expect to go into research or to go on to the doctorate to omit the language requirement if it is not needed in their work, in order to devote time and effort to more immediate needs. For this group the language requirement is often an artificial hurdle with little or no important functional value.
4. More careful check of the undergraduate work of majors in education at the doctorate level should be made with reference to supporting work in fields closely related to the major and in the amount and spread of contacts with the major fields of knowledge and culture. These should include courses in sociology, political science, economics, fine art, and philosophy at the undergraduate level.
5. Every effort should be made to resist any reduction of the scholarly quality of the doctorate while experimentation is being made to suit it better to the field of education.
6. The statistical and psychological training of all doctors in education should be, in addition to all other requirements, very rigorous and subject to exacting checks. The quality of educational research will depend much upon the nature of this preparation.

7. More attention to training in scientific writing on research is a need of doctorate students in education.

8. There is a sufficiently extensive and valuable content in higher education that profitable courses can be provided at the graduate level for those who contemplate work in college as personnel, officers, administrators, or instructors. The movement already begun is to be commended.

### INSTRUCTION IN COLLEGES AND UNIVERSITIES

1. The following criteria are submitted as suggestive proposals for the education of teachers:

- (a) Tests should be made in terms of actual course objectives.
- (b) On minimum essentials of skill, knowledge needed for the profession, habits, and information, there should be direct training to the required point of competency.
- (c) In courses of special and general method or on essential professionalized units, there should be more specific instruction amounting to training in such matters as testing, making tests, grading, diagnosis, remedial treatment, construction of curriculum and instructional units, differentiating instruction, use of available reference material and questioning.
- (d) Teachers should be guided at the college level to procure their own education. Scholarly habits of study, habits of reading newest and best literature, ability to originate and organize materials, ability to use library sources—in short, creative scholarship—should be developed through methods of college instruction. For that reason honors courses, the tutorial plan, the comprehensive examination independent of course work, qualifying examinations in majors, wide use of reference material, challenging class discussion, special reports, term papers, and course projects are to be encouraged, but they need to go farther than being mere administrative set-ups.
- (e) Prospective teachers should be inducted into a full understanding of the library-classification system, into the understanding and a working knowledge of all types of library helps, through constant use of the library in instruction. It is also desirable to give them some formal instruction in library use.

2. College life and college instruction should induct the prospective teacher into an ability, inclination, and habit of reading widely a high type of nonprofessional current books and periodicals. This outcome of college education cannot be left to incidental development. It should be made an objective of college education specifically worked for in many courses; it is a special concern also of the library department and should be reflected in its activities.

3. For the use of education classes recent, pertinent publications in the fields of education, psychology, and special teaching fields should be provided. Some libraries were seen in the Survey in which provisions for educational students were too limited or out of date, or both.

### CURRICULUM RESEARCH

1. There is need for the special study through experimentation and other research of practically every problem raised in this Survey. Institutions, particularly the schools of education in universities which have achieved a leadership in educational research, are to be commended for what has been done, but most curriculum research is in the beginning stages of far more painstaking and more exacting endeavor than has been thus far placed upon it. "The sod has

been broken, but cultivation of the soil is needed." Traditional practices and innovations should be subjected to rigorous try-out and check of results.

2. Among the more basic needs are:

(a) Measurement of outcomes. Before more successful experimentation can be done on the effectiveness of various types of curricula in the changes they produce in students' development, more reliable and valid instruments are needed for measuring such outcomes of the education of teachers as mastery of subject matter, competency in a teaching field, breadth of interest, scientific attitude, social attitudes, use of library, skill in student teaching, skill in the use of special types of professional activities such as building examinations, planning curriculum units, stimulating class motivation or stimulating student activity, and personal qualifications for teaching.

(b) More curriculum research on general education. Too little research of the relative value for the teacher or for the general student has been undertaken on the units of subject matter now offered for general education purpose. Present selection is based in part on tradition and too often upon unchecked individual opinion. This is a virgin field for research and will have to be done largely by subject-matter experts who are familiar with the techniques of curriculum research, who are capable of refining present techniques and of blazing new trails. A first need is the determination of criteria.

3. Measurement of teaching success with the use of techniques of social psychology as well as of individual psychology.

4. The prediction of teaching success.

5. Student selection.

# PART 4

## PART IV. THE TRAINING SCHOOL IN THE EDUCATION OF TEACHERS<sup>1</sup>

### CHAPTER I

## NATURE OF PRACTICE COURSES OFFERED IN DIFFERENT CURRICULA

### INTRODUCTION

The principle of practice in the acquisition of skill is firmly established. As a means of providing a period of supervised practice in the acquisition of teaching skill, and at the same time protecting the children from the hazards of trial-and-error instruction, the training school has many justifications.

An analysis of the stated purposes of practice teaching reveals few fundamental differences of opinion. The following statement gives a comprehensive view of the purposes:

The major results to be secured through practice teaching may be described as follows: (1) A progressive, professional attitude which includes a desire to advance and excel in teaching, a spirit of inquiry and investigation toward problems of teaching, an interest in modern educational methods, the development of desirable personal qualities of a successful teacher, a feeling of responsibility for the progress of each pupil, and a willingness to cooperate in all undertakings of the school; (2) knowledge of appropriate materials of instruction and an understanding of modern educational methods, of the purposes of testing, of valid principles of classroom management, and of standards of accomplishment; (3) skill in the technique of teaching, in class room management, in effective student leadership, and in the selection and organization of appropriate units of subject matter.<sup>2</sup>

Concerning the value of practice teaching, Dr. Mead has summarized the evidence as follows:

Opinion and objective data on the value of student teaching are not unanimously favorable to it and skilled work, but in cases of well-administered student teaching the evidence is favorable \* \* \*. In cases in which measurable results have been secured some have shown that pupils taught by student teachers had not especially benefited by the work; others that desired progress had been attained. Usually the low quality was found in poorly administered training schools. Neophytes in the profession without help of supervisors cause a loss to the learner. The need to overcome this initial "practice teaching" year can be met by well-organized supervised student teaching.<sup>3</sup>

<sup>1</sup> This study was made by Dr. Frank K. Foster, specialist in summer schools and training school problems, of the United States Office of Education 1931-32, and now Professor of Education at the University of North Dakota.

<sup>2</sup> Braslich, Ernest R., and others. *The Supervision and Administration of Practice Teaching*. *Educational Administration and Supervision*, 11: 1, January 1925.

<sup>3</sup> Mead, A. R. *Supervised Student Teaching*. Richmond, Va. Johnson Publishing Co., 1930. P. 129-142.

Several studies have reported teachers' estimates on the value of practice teaching. All substantially agree that practice teaching is most important among the various factors in the education of teachers. Ullman, for example, says: "Success in practice teaching is the best single measure of teaching success."<sup>4</sup> The evidence seems to indicate that the underlying principle of supervised practice teaching is sound.

Although the training school has been accepted in principle, unanimity of opinion on its most desirable organization and the most effective methods of conducting it is apparently lacking. Since the stated purposes of practice teaching relate to every major phase of the work of an institution for the education of teachers, an effective application of these purposes presents issues which are diverse and dependent. The relationship between the stated purposes of practice teaching and the features of the training school needs clarification. Dr. Mead has cited the following features of the training school which need standardization before any authoritative prescriptions for practice can be made:

1. Laboratory school buildings.
2. Laboratory school staff.
3. Classroom supervision of student teaching.
4. Management of observation, participation, and experimentation.
5. Laboratory school curricula.
6. Preparation, selection, and placement of student teachers.
7. Credits for an exemption from any phase of laboratory school work in teacher preparation.
8. Certain features of organization and legislation.
9. Amount of laboratory school work to be done.<sup>5</sup>

The diversity of the problems related to practice teaching and the limitations upon this study prevented an inclusive report on all the issues. This report is, therefore, confined to a selected few of the more important problems of the training school. Various other important aspects of the training school are treated in other parts of the report of the National Survey of the Education of Teachers. The problems treated in this report are: (1) Types of teachers educated and length of curricula; (2) amount of practice teaching; (3) offerings and requirements in practice teaching; (4) exemptions from practice teaching; (5) subject and grade-level assignments of practice teachers; (6) uses of the training school; (7) coordination between college departments and the training school; (8) activities of practice teachers; and (9) policies in the organization and administration of observation.

Primary data were obtained by means of a questionnaire. The secondary sources of information were: Published studies in the form

<sup>4</sup> Ullman, Roy E. *The Prognostic Value of Certain Factors Related to Teaching Success*. Ashland, Ohio, A. L. Garber Co., 1921. P. 67.

<sup>5</sup> Mead, A. R. *Op. cit.*, p. 212.

of articles and theses; educational association reports; catalogs of institutions which educate teachers; professional books; and personal visits to representative training institutions in various sections of the United States.

The questionnaire was sent to all institutions which educate teachers and which had previously expressed a willingness to cooperate in the Survey.

Table 1 shows the distribution of returns by types of institutions in the several geographical areas. Although the sampling represents approximately only one third of the institutions preparing teachers, the distribution is fairly representative of the types of institutions in each of the geographical areas.

A preliminary tabulation of the data revealed the fact that the type of institution was more important than the geographical area. In the remainder of the report the data are, therefore, differentiated on the basis of type of institution. In certain instances even the differences between types of institutions were so insignificant that larger groupings were made in order to simplify the tables.

TABLE 1.—*Distribution of returns by type of institution and geographical area*

Type of institution	New England	Middle Atlantic	South	North Central	West	Total
1	2	3	4	5	6	7
Universities.....	1	7	3	9	2	27
Colleges.....	3	23	26	41	9	102
Junior colleges.....			11	19	1	31
Teachers colleges.....	3	13	18	19	8	61
Normal schools.....	7	7	2	3	5	24
City training schools.....		2		2		4
Private training or technical schools.....	4	3		2		9
Total.....	18	55	65	95	25	258

#### KINDS OF TEACHERS EDUCATED AND LENGTH OF CURRICULA

The practice facilities which are needed in the education of teachers are dependent upon the positions for which teachers are educated and upon the length of the curricula offered for each kind of teacher. Table 2 shows the extent to which the several types of institutions engaged in the education of different kinds of teachers, and table 3 shows the percentage of different types of institutions which offered curricula of varying length for the several kinds of teachers educated.

Certain types of institutions are devoted primarily to the education of teachers for specific grade levels in the school organization. Universities and colleges have been chiefly concerned with the preparation of teachers for secondary schools. As indicated in table 2, all the universities and colleges reporting were still preparing secondary teachers. All the junior colleges, normal schools, and teachers col-

leges reporting educated elementary teachers. The organization of the typical junior college, however, restricts the offerings for teachers in certain grade levels for which certification demands more than 2 years for preparation. The curricula offered by the majority of teachers colleges were for the same types of teachers as those offered by universities and colleges.

TABLE 2.—Percent of institutions which educate teachers for different types of positions

Type of teacher	Universities	Colleges	Junior colleges	Teachers colleges	Normal schools
1	2	3	4	5	6
Number of returns upon which percentages are computed.....	37	95	29	55	22
High-school liberal arts.....	100	100	13.8	77.6	-----
High-school sciences.....	100	100	10.3	77.6	-----
Junior high school or upper grades.....	59.2	50.5	34.1	91.3	45.4
Elementary grades.....	44.4	38.8	100	100	100
Kindergarten-primary.....	18.5	17.8	30.7	72.4	68.2
Nursery-preschool.....	11.1	5.2	3.4	5.1	9.1
Rural school.....	7.4	13.6	37.6	65.5	31.8
Senior high-school principal.....	37.0	8.4	3.4	22.4	-----
Junior high-school principal.....	33.3	9.4	6.9	24.1	9.1
Elementary principal.....	25.9	8.4	6.9	32.6	5.1
General supervisor.....	25.9	5.2	3.4	29.3	4.5
Superintendent of schools.....	29.7	5.2	3.4	19.0	4.5
Agriculture.....	22.2	10.5	3.4	20.7	-----
Art education.....	40.7	23.1	3.4	48.2	9.1
Commerce.....	55.5	20.0	6.9	34.5	4.5
Home economics.....	59.2	34.7	10.3	55.1	9.1
Public-school music.....	22.2	9.4	10.3	44.8	19.2
Industrial or manual arts.....	48.1	43.1	20.7	53.4	9.1
Physical education and health:					
Men.....	59.2	29.4	6.9	41.3	9.1
Women.....	55.5	29.4	10.3	48.2	9.1
Trades and industry.....	3.6	3.2	6.9	5.1	-----
School librarian.....	18.5	11.5	3.4	15.5	-----
Guidance (deans and counselors).....	11.1		3.4	6.9	-----
Speech arts.....					-----
Mental deficienta.....		1.1			9.1

This table should be read as follows: Of the 37 universities reporting, 100 percent prepared high-school teachers in the liberal arts subjects; 100 percent prepared high-school teachers in the sciences, and so on.

Apparently the traditional right to engage in the education of teachers is subject to little restriction. Regardless of the ability of some types of institutions to provide for the effective preparation of teachers, that work is carried on with little or no restraint. As long as any and all types of institutions are permitted to educate teachers for any and all kinds of positions, an undesirable duplication of effort will exist. Unless these institutions make some coordinated effort to restrict enrollments and offerings in terms of current demands for teachers, the excess of certified teachers and the resulting waste of effort will continue to increase.

Certificates for teaching are based largely upon the completion of 1, 2, 3, or 4 years of work beyond the secondary school according to the type of teaching work or the grade level for which the certificates are issued. The number of years of preparation required for different certificates varies among the several States. Two years of education beyond high school are required generally for elementary teacher

certification; 4 years is generally required for secondary teacher certification.

TABLE 3.—Percent of universities, colleges, and junior colleges and of teachers colleges and normal schools which offered 1-, 2-, 3-, and 4-year curricula for each kind of educational position

Kind of educational positions	Number of cases	Universities, colleges, and junior colleges				Number of cases	Teachers colleges and normal schools			
		1-year	2-year	3-year	4-year		1-year	2-year	3-year	4-year
1	2	3	4	5	6	7	8	9	10	11
High-school liberal arts.....	116	( )	( )		95.7	44			( )	100.0
High-school sciences.....	113	( )	( )		98.2	44			( )	100.0
Junior high school.....	61		18.0	13.1	77.0	61		34.4	18.0	77.0
Elementary grades.....	65	9.2	37.7	( )	52.3	77	( )	67.5	24.6	54.5
Kindergarten-primary.....	22	( )	53.6	( )	31.8	51	( )	58.8	27.4	60.8
Nursery-preschool.....	6	( )	( )	( )	( )	6		( )		100.0
Rural school.....	18	( )	83.3	( )	27.7	43	34.0	65.1	( )	27.9
Senior high school principal.....	14	( )	( )	( )	100.0	12	( )	( )	( )	100.0
Junior high school principal.....	16	( )	( )	( )	87.5	14	( )	( )	( )	100.0
Elementary principal.....	12		25.0		83.5	19				94.7
General supervisor.....	8	( )			75.0	18				94.4
Superintendent of schools.....	9				100.0	11				100.0
Agriculture.....	13		( )		92.3	12		( )	( )	100.0
Art education.....	30		( )	( )	83.3	27		( )	( )	92.6
Commerce.....	24		( )	( )	91.7	20			30.0	80.0
Home economics.....	38	( )	( )	( )	94.7	29		( )	( )	100.0
Industrial or manual arts.....	15				100.0	28		( )	( )	98.4
Public-school music.....	47	( )	21.2	( )	70.2	29		( )	17.2	93.1
Physical education:										
Men.....	38	( )	( )	( )	86.8	23		( )	26.1	100.0
Women.....	38	( )	( )	( )	89.5	26		( )	( )	98.1
Trades and industry.....	5	( )				3		( )	( )	( )
School librarian.....	14	( )	( )		64.3	9		( )	( )	100.0
Guidance (deans and counselors).....	2				( )	2				( )

<sup>1</sup> Offering by 5 or fewer institutions.

This table should be read as follows: Of the 116 universities, colleges, and junior colleges reporting, fewer than 5 offered 1-year curricula for the preparation of high-school teachers of liberal arts subjects; 95.7 percent offered 4-year curricula for the preparation of teachers of these subjects, and in the same manner for the other figures. (It is evident for some of the curricula that not all of the institutions in the group could offer such curricula—for example, the junior colleges and 4-year curricula.)

With the exception of a 1-year curriculum for rural teachers in 34 percent of the 43 teachers colleges and normal schools, few of the institutions reporting offered 1-year curricula. In all types of institutions the offerings of 2-year curricula were largely confined to the preparation of teachers for junior high schools, elementary grades, kindergarten-primary groups, and rural schools. Three-year curricula among the universities, colleges, and junior colleges as a group were relatively infrequent for any type of teaching work, the most frequent offering being for junior high school teachers.

The 4-year curriculum was the typical offering in the universities and colleges for the several kinds of teaching positions, with the exception of kindergarten-primary and rural teachers. More than half of the institutions in this group which educate elementary teachers offered a 4-year curriculum for elementary teachers. Among the teachers colleges which educate teachers, approximately all the institutions offered the 4-year curriculum for elementary, kindergarten-primary, and rural teachers. Little difference was noted between the two groups of institutions in the percentage of institutions

in each group which provided a 4-year curriculum for the several types of positions for which teachers are educated. The 4-year offerings were strikingly parallel for the same type of work in both groups of institutions. In most instances, however, the percentage of institutions which provided 4-year curricula was slightly greater in the teachers college group. The data indicate a decided tendency toward the 4-year curriculum in both groups of institutions for the several types of work for which teachers are prepared.

#### AMOUNT OF PRACTICE TEACHING

Different emphases on the purposes of practice teaching, the demands of standardizing agencies, the type and adequacy of training-school facilities, and the administrative possibilities of the institution are some of the causes of variations in the amount of practice teaching. The optimum amount of practice teaching has not as yet been determined.

Three questions arise in an analysis of the amount of practice teaching offered: (1) How many clock-hours of practice teaching are offered? (2) How many semester-hours of credit are allotted to practice teaching? (3) What is the relation between the amount of time involved in practice teaching (clock-hours) and the amount of credit allowed for practice teaching (semester-hours)?

Table 4 presents the clock-hours of practice teaching in the 2-year curricula and the 4-year curricula for representative groups of teachers in two types of institutions which educate teachers. Several comparisons of the data in table 4 are possible, such as, for example:

TABLE 4.—Clock-hours of practice teaching offered in 2- and 4-year curricula for representative types of teachers in two groups of institutions which educate teachers

Kinds of teachers educated	Number of cases	Clock-hours in universities, colleges, and junior colleges		Number of cases	Clock-hours in teachers colleges and normal schools	
		Range	Median		Range	Median
1	2	3	4	5	6	7
<b>2-year curricula:</b>						
High-school liberal arts.....	2	( <sup>1</sup> )	( <sup>1</sup> )	3	( <sup>1</sup> )	( <sup>1</sup> )
Junior high school.....	7	36-110	85.0	22	36-270	97.5
Elementary grades.....	31	30-200	82.8	49	36-450	141.0
Rural grades.....	8	60-240	87.5	29	36-450	116.2
Public-school music.....	6	50-90	65.0	6	36-180	65.0
Physical education (men).....				2	( <sup>1</sup> )	( <sup>1</sup> )
<b>4-year curricula:</b>						
High-school liberal arts.....	100	18-270	67.8	40	30-315	114.0
Junior high school.....	38	24-220	70.0	40	40-117	144.0
Elementary grades.....	22	24-220	86.0	39	36-500	146.5
Rural grades.....				12	36-500	115.0
Public-school music.....	36	24-150	73.3	24	36-300	93.3
Physical education (men).....	29	24-170	56.0	13	36-315	100.0

<sup>1</sup> The range and median for 5 or fewer cases were not computed.

This table should be read as follows: In the 31 universities, colleges, and junior colleges reporting a 2-year curriculum for elementary teachers, the range in clock-hours of practice teaching was from 30 to 200 and the median was 82.8 clock-hours. 49 teachers colleges and normal schools reported 2-year curricula for elementary teachers with a range in clock-hours from 36 to 450 and a median of 141 clock-hours of practice teaching. To compensate for differences in the number of minutes in a period of practice, all reports were reduced to a common 60-minute basis. Variations in minutes per day, days per week, and weeks of practice teaching are shown in table 9.

1. Comparison of the 2-year and the 4-year curricula for different types of teaching positions in each group of institutions: In the universities, colleges, and junior colleges the differences were not significantly large. In the teachers colleges and normal school, however, the median number of clock-hours in the 2-year curricula for junior high school teachers was 97.5 compared to 141 clock-hours for elementary grade teachers; in the 4-year curricula for teachers of public-school music the median number of clock-hours was 93.3 while it was 146.5 for teachers of elementary grades.

2. Comparison of the 2-year and the 4-year curricula for the same type of position in each group of institutions: The difference in the median number of clock-hours of practice teaching between the 2-year and the 4-year curricula for any single type of training was not large except for junior high school and public-school music teachers in the teachers colleges and normal schools. For the 2-year junior high school curricula, the median number of clock-hours was 97.5 and 144 for the 4-year curricula. For the 2-year public-school music curricula the median number of clock-hours was 65 (only 6 cases) and 93.3 for the 4-year curricula.

3. Comparison of the two groups of institutions for the same type of positions in curricula of the same length: These differences were the most pronounced. For example, in the 2-year curricula for teachers of elementary grades, the median number of clock-hours in the universities, colleges, and junior colleges was 82.8 compared with 141 in the teachers colleges and normal schools. For the same type of training in the 4-year curricula, the median number of clock-hours in the universities, colleges, and junior colleges was 85 in contrast to 146.5 in the teachers colleges and normal schools. For each of the types of training in each curriculum, the median number of clock-hours in the teachers colleges and normal schools exceeded that of the corresponding type of training in the universities, colleges, and junior colleges, with the exception of the 2-year curricula for public-school music teachers, wherein the medians were identical (65 clock-hours).

Variations in administrative organizations result in varying terminology in connection with the credits given for practice teaching. For the purposes of this investigation, all units of credit were changed to their equivalent in terms of semester-hours (a semester-hour is the credit allowed for a course which meets an hour once a week, for a period of 16 to 18 weeks). Table 5 gives a distribution of the semester-hours of credit for practice teaching in the 2-year and the 4-year curricula for representative types of training. The ranges and the medians in semester-hours are shown for the several types of training according to the two groups of institutions.

The data in table 5 offer comparisons similar to those suggested for table 4, for example:

1. Comparison of the 2-year and the 4-year curricula for different types of training in each group of institutions: Differences among the various types of training in curricula of different lengths in the universities, colleges, and junior colleges were relatively small. In the teachers colleges and normal schools, however, there was as much as 2 and 3 semester-hours difference in the medians. The median number of semester-hours of credit in the 2-year curricula for junior high school teachers was 6 compared to 8.1 for rural grade teachers. In the 4-year curricula for public-school music teachers, the median number of semester-hours of credit was 5.2 and was 8.4 for elementary grade teachers.

2. Comparison of the 2-year and the 4-year curricula for the same type of training in each group of institutions: Only in the teachers colleges and normal schools were there noticeable differences. The median number of semester-hours of credit for the junior high school 2-year curricula was 6 and in the 4-year curricula was 8.33. The median number of semester-hours of credit for the elementary grade 2-year curricula was 7.17, for the 4-year curricula, 8.4, while the medians in the 2-year and the 4-year curricula for rural schools were, respectively, 8.1 and 8.33.

3. Comparison of the two groups of institutions for the same type of training in curricula of the same length: The differences in the median semester-hours of credit between the two types of institutions can be shown by one type of position. In the universities, colleges, and junior colleges the median number of semester-hours of credit for elementary-grade teachers in 2-year curricula was 4.4 in contrast to 7.17 in the teachers colleges and normal schools. In the 4-year curricula for elementary teachers the median number of semester-hours of credit in the universities and colleges was 4.5 compared with 8.4 for the teachers colleges. For every type of teacher training reported in both the 2-year and the 4-year curricula, the median number of semester-hours of credit for practice teaching in the teachers college and normal school groups exceeded the median for the corresponding types of curricula in the universities, colleges, and junior colleges; the ratios on the basis of median number of semester-hours of credit for the several types of positions were approximately 3 to 2 for the 2-year curricula and 2 to 1 for the 4-year curricula between the teachers college and normal school group and the university, college, and junior college group.

Several regional and national studies have reported amounts of practice teaching in different types of institutions for several kinds of positions for which teachers are educated. Some of the studies are reported in terms of clock-hours, others in terms of number of weeks, and a few in terms of semester-hours of credit for practice teaching. The data cannot be stated in common terms for accurate comparisons

with the data of the present study, but the findings are given in chronological order in table 6 for the reader's convenience.

TABLE 5.—Semester-hours of practice teaching in 2-year and 4-year curricula for representative kinds of teachers in 2 groups of institutions

Kinds of teachers educated	Number of cases	Semester-hours in universities, colleges, and junior colleges		Number of cases	Semester-hours in teachers colleges and normal schools	
		Range	Median		Range	Median
1	2	3	4	5	6	7
<b>2-year curricula:</b>						
High-school liberal arts.....	2	2-3	( <sup>1</sup> )	3	3-4	( <sup>1</sup> )
Junior high school.....	8	1-7	4.5	24	1-10	6.0
Elementary grades.....	35	1-10	4.4	46	1-20	7.17
Rural school.....	8	3-7	3.8	24	2-18	8.1
Public-school music.....	5	1-4	( <sup>1</sup> )	4	2-5	( <sup>1</sup> )
Physical education (men).....				2	1-3	( <sup>1</sup> )
<b>4-year curricula:</b>						
High-school liberal arts.....	93	1-12	3.53	37	3-14	7.25
Junior high school.....	43	2-12	4.2	41	3-20	8.33
Elementary grades.....	22	2-12	4.5	35	3-20	8.4
Rural school.....				13	5-20	8.33
Public-school music.....	38	2-12	3.85	26	2-12	5.2
Physical education (men).....	31	2-7	3.8	17	3-18	7.75

<sup>1</sup> The range and median for 5 or fewer cases were not computed.

This table should be read as follows: In the 4-year curricula, 93 universities, colleges, and junior colleges reported practice teaching with credit for high-school liberal arts teachers. The range of credit in these institutions was from 1 to 12 semester-hours and the median number of semester-hours of credit was 3.53. For the same type of teacher, 37 teachers colleges and normal schools ranged in semester-hours of credit from 3 to 14, with a median of 7.25 semester-hours.

TABLE 6.—Comparative findings of 12 studies relative to number of clock-hours and semester-hours offered for different types of teachers by different types of institutions

Author <sup>1</sup>	Date	Number of cases	Type of institution	Type of teacher	Clock-hours	Semester-hours
1	2	3	4	5	6	7
Mead.....	1914-15	{ 31 74	Liberal arts colleges. Universities and colleges.	High school..... do.....		2.5 average. 3.98 average.
Walk.....	1915	23	Normal schools.....	Elementary.....	{173.4 average. 180.3 median.	
Life <sup>2</sup> .....	1918	{ 50 28	Universities and colleges. Normal schools.....	High school..... do.....	68.6 mean..... 106.3 mean.....	
Newcomb.....	1923	59	Teachers colleges.....	do.....		7.5 average.
Hall-Quest.....	1925	90	do.....	do.....	95.....	
Haertter and Smith.....	1926	{ 23 19	Universities and colleges. do.....	do.....	60-70.....	4 median.
Wade and Fretz.....	1926	71	Normal schools and teachers colleges.	Elementary.....	4 to 36 weeks.	5.
Armentrout.....	1927	42	Teachers colleges.....	{2-year curricula 4-year curricula		5.7. 5.6.
Land-grant survey.....	1930	32	Land-grant colleges.	High school.....	30-120.....	3 (2-7).
Hackler.....	1930	75			{10-500. 114 average.	
Baughner.....	1931	97	Private liberal arts colleges.		17 weeks.....	3.9.
Jarman.....	1932	45	State universities.....	High school.....		4.3.

<sup>1</sup> With 1 exception (note 2) complete bibliographic references may be found in vol. 1, Selected Bibliography on the Education of Teachers.

<sup>2</sup> Life, F. M. Practice Teaching for High-School Teachers. School Review, 26: 671-683. November 1918.

Obvious differences in the amounts of practice teaching in different types of institutions as revealed by the previous studies, reported in table 6, suggested a comparison of the clock-hours and semester-hours of credit for the separate types of institutions concerned in the present study. Table 7 presents these data.

The ranges in clock-hours and semester-hours of credit for secondary academic teachers were greater in the colleges than in the universities. The median number of clock-hours of practice in the universities exceeded the median in the colleges by 9 hours, yet the medians in semester-hours of credit were almost identical. Apparently, colleges allow the same amount of credit as the universities for a smaller number of clock-hours of practice teaching for secondary academic teachers. In the 4-year curricula for elementary teachers, the universities and the colleges had identical medians in clock-hours (90) and identical medians in semester-hours of credit (4.5). In the 4-year curricula for secondary academic teachers, the teachers colleges showed a median of 8 semester-hours of credit for practice teaching—more than twice that of either the universities or the colleges. The median number of semester-hours of credit for elementary teachers in the teachers colleges was 6.5, as compared to 4.5 in universities and 4.5 in colleges. The median number of semester-hours of credit for practice teaching in the 2- or 3-year curricula in normal schools was 10—greater than the medians for universities and colleges by 5.5 semester-hours and greater than the median for teachers colleges by 3.5 semester-hours.

TABLE 7.—*Clock-hours and semester-hours of practice teaching for elementary and secondary academic teachers for each type of institution*

Type of institution	Number of cases	Clock-hours		Semester-hours	
		Range	Median	Range	Median
1	2	3	4	5	6
<b>Secondary academic teachers:</b>					
Universities.....	22	18-120	71.7	1-6	3.28
Colleges.....	70	22-310	62.8	1-11	3.3
Teachers colleges.....	37	38-315	133.3	3-14	8.0
<b>Elementary teachers:</b>					
Universities.....	10	28-315	90.0	2-7	4.5
Colleges.....	20	28-150	90.0	2-12	4.5
Teachers colleges.....	47	38-220	116.0	3-14	6.5
Normal schools.....	17	110-500	206.0	5-20	10.0

<sup>1</sup> Normal schools with 2-year or 3-year curricula; all other institutions, 4-year curricula.

This table should be read as follows: For the 22 universities preparing teachers of secondary academic subjects, the median number of clock-hours of practice teaching was 71.7; the range in clock-hours for this group was from 18 to 120; the median number of semester-hours of credit for practice teaching was 3.28; and the range in semester-hours of credit for practice teaching was from 1 to 6.

Universities and colleges devoted a greater number of clock-hours to practice teaching in the education of elementary teachers than in the preparation of secondary academic teachers in their 4-year cur-

ricula. They likewise allowed more credit for practice teaching in the 4-year curricula for elementary teachers. Contrariwise, teachers colleges provided a greater number of clock-hours and allowed a greater number of semester-hours of credit in practice teaching for secondary academic teachers than for elementary teachers.

Several recent studies have shown that the ratio between clock-hours of practice teaching and the semester-hours of credit allowed is subject to wide variations. A distribution of the 94 institutions which educate elementary teachers, as shown in table 7, is presented in table 8. A vertical reading of the data will show the variations in clock-hours for a given unit of semester-hours credit and a horizontal reading will show the variations in semester-hours of credit for a given number of clock-hours of practice. Attention is directed to the range of 2 to 20 semester-hours of credit and the range of 26 to 500 clock-hours of practice teaching in the 94 institutions. The median number of clock-hours was 143 and the median semester-hour credit was 6.4. A vertical reading of clock-hours of practice teaching for 6 semester-hours of credit reveals the following: The requirement of 1 institution fell in the step of 26 to 50 clock-hours, 1 institution in 81 to 90, 1 institution in 101 to 110, 2 institutions in 111 to 120, 2 institutions in 141 to 150, 1 institution in 201 to 210, and 1 institution in 231 to 240 clock-hours for 6 semester-hours of credit for practice teaching. Amounts of credit for a given number of clock-hours of practice teaching varied widely. In the frequency-step of 141 to 150 clock-hours, 2 institutions reported 6 semester-hours of credit, 2 reported 7 semester-hours, 2 reported 8 semester-hours, 5 reported 10 semester-hours, and 2 reported 12 semester-hours—a range of 6 to 12 semester-hours of credit for 141 to 150 clock-hours of practice teaching in 13 institutions. Similar variations are revealed in the horizontal and vertical readings of each clock-hour and semester-hour frequency.

The report of the recent Survey of Land-Grant Colleges and Universities states the pressing problems which these variations present:

There is substantial variation among the institutions relative to the number of clock-hours of practice required for a given number of semester-hours of credit; 3, 4, or 5 clock-hours per week for 1 semester may be required for 3 semester-hours of credit. With such variations the semester-hour unit of credit is an extremely crude measure of student achievement in this course (practice teaching) and it is difficult to see how one institution can accept statements from other institutions with any certainty as to what such credit really signifies.\*

\* Klein, Arthur J. *Survey of Land-Grant Colleges and Universities*. Washington, U.S. Government Printing Office, 1930. (Office of Education. Bulletin, 1930, no. 9, 2: 199.)

TABLE 8.—Distribution of semester-hours of practice teaching by clock-hours of practice teaching for 94 universities, colleges, teachers colleges, and normal schools which educate elementary teachers

Range in clock-hours	Range in semester-hours																Total	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		20
26-50	1	4	1	1	1													8
51-60		1	3															4
61-70		1																1
71-80	1	1		3														5
81-90		1	2	1	1	1	1											6
91-100				4		1												5
101-110		1		2	1													4
111-120		1		1	2	3	1											8
121-130				1														1
131-140							1											1
141-150					2	2	2		5		2							13
151-160																		
161-170																		
171-180			1					2		1		1		1				6
181-190																		
191-200				2					1	2	1							6
201-210					1									1				2
211-220		1																1
221-230								1		1								2
231-240					1	1						1						3
241-250															1	1		2
251-260																		
261-270							1		6									7
271-280																		
281-290																	1	1
291-300									1									2
300								1										1
375																		1
400													2					2
450													1					1
500									1			1					1	2
Total	2	11	7	15	9	7	10	1	17	1	4	1	5	1	1	2		94

The ratio between the number of clock-hours of practice teaching and the amount of credit allowed in the various institutions in the findings of the present study is subject to greater variations than in the findings of the study quoted above. These variations make difficult the transfer of credit for practice teaching from one institution to another. Until uniformity of practice prevails in giving credit for practice teaching, State requirements of specified amounts of practice teaching for certification will have little influence.

The frequency and length of the practice-teaching periods is largely an administrative problem. Table 9 shows considerable range in the number of weeks of practice, with a modal practice of 18 weeks. In many instances the inadequacy of facilities necessarily limits the period of practice. The traditional organization of the school year on the semester or the quarter basis also tends to fix the period of practice. Further restriction on the period of practice is necessitated by the great number of teachers in training. In view of the present oversupply of certified teachers, limiting the number in training within a safe margin of the actual replacement needs in service would permit more intensive use of present training facilities.

The modal practice in the number of practice-teaching periods per week was definitely five. Although the number of minutes per day of practice is affected by the organization of the daily schedule of the training school, the general tendency was toward the 50-to-60-minute period.

TABLE 9.—Number of weeks, days per week, and minutes per day of practice teaching in 129 universities, colleges, and teachers colleges in 4-year curricula for representative types of teachers

Number of weeks, days per week, or minutes per day	Type of teacher (4-year curricula)			
	Secondary academic	Junior high school	Elementary school	Public-school music
1	2	3	4	5
<b>Weeks:</b>				
3.....	2	1		1
4.....	1			
6.....	5	1	3	2
8.....	4	1	1	2
9.....	9	3	2	3
12.....	21	11	9	8
16.....	8	4	1	2
18.....	55	33	20	22
20.....	11	6	8	5
24.....	2	2	1	2
30.....	10	11	11	6
36.....				4
48.....				1
60.....	1		1	
<b>Days per week:</b>				
1.....				
2.....	1			
3.....	3		1	4
4.....	9	3	1	
5.....	3	5	2	2
6.....	112	63	53	40
<b>Minutes per day:</b>				
20-30.....	1		1	3
40-45.....		1		6
50-60.....	22	11	5	10
80-120.....	89	44	32	22
135-180.....	8	8	9	5
200-300.....	5	5	6	1
	4	3	6	1

## CHAPTER II

# POLICIES, REQUIREMENTS, ACTIVITIES, AND COORDINATION PRACTICES

### POLICIES AND REQUIREMENTS

Practice teaching is not stipulated as a requirement for certification in many States. Even in the States which require practice, a specific requirement of practice teaching has not generally been applied to all types of teacher education. In 1930, 25 States required varying amounts of credit in practice teaching for one or more types of certificates.<sup>1</sup> In the absence of any general requirement of practice teaching for certification the proportion of beginning teachers with practice-teaching experience was relatively small. Dr. Mead summarized the studies on proportion of teachers with practice-teaching experience which were published before 1927, as follows:

Approximately 50 percent of the teachers of the central section of the United States have had student teaching; in other sections the percentage is smaller. We may say, then, that 50 percent of beginning teachers or more do not have such preparation.<sup>2</sup>

More recent data show a decided increase in the proportion of beginning teachers who have had practice teaching. The responses of several thousand beginning teachers to an inquiry by the National Survey of the Education of Teachers supplied the data for table 10 concerning teachers of different school divisions with one and two or more teaching subjects who have not had practice teaching. Apparently the proportion of beginning teachers who have not had practice teaching is decreasing rapidly. The acceptance of practice teaching as a requisite part of teacher education, the requirements of accrediting associations, and the fact that an increasing number of States require practice for one or more types of certificates have increased the proportion of beginning teachers who have had practice-teaching experience.

Data on institutional policies in the offering and requirement of practice teaching for the several types of positions for which teachers are educated indicate variations which account in part for the proportion of beginning teachers who have not had practice teaching. As an index of practices, three mutually exclusive policies are stated in table 11, namely, practice teaching not offered,

<sup>1</sup> Tewksbury, M. A. Certification of Public-School Teachers in the United States. Master's thesis. Seattle, Wash., University of Washington, 1930. Pp. 57, 70.

<sup>2</sup> Mead, A. B. Op. cit. p. 140.

practice teaching offered but not required, or practice teaching required. The data indicate the extent to which these policies operate in different types of institutions according to several groups of teachers.

TABLE 10.—Number and percentage of elementary, junior high-school, high-school teachers with no practice teaching<sup>1</sup>

School division	Number of subjects taught	Number of replies	Number with no practice teaching	Range in percent	Average percent of teachers with no practice teaching
1	2	3	4	5	6
Elementary.....		16,316	2,010	1.5-66.7	12.3
Junior high.....	1.....	8,292	1,182	0-50.0	14.2
	2 or more.....	16,509	2,464	2.9-37.2	14.9
Senior high.....	1.....	19,009	5,007	8.9-47.7	26.3
	2 or more.....	42,853	9,736	7.3-67.2	22.9

<sup>1</sup> National Survey of the Education of Teachers. Adapted from data returned on Inquiry No. 1. Data as of school year 1930-31.

TABLE 11.—Percent of universities, colleges, junior colleges, and teachers colleges and normal schools which reported practice teaching not offered, offered but not required, and required for each kind of teaching position.

Kind of teaching position	Universities, colleges, and junior colleges				Teachers colleges and normal schools			
	Number of cases	Not offered	Offered but not required	Required	Number of cases	Not offered	Offered but not required	Required
1	2	3	4	5	6	7	8	9
High-school liberal arts.....	110	( )	14	85	41	0	( )	93
High-school sciences.....	110	( )	14	85	41	0	( )	93
Junior high school.....	59	( )	17	80	59	0	( )	97
Elementary grades.....	61	( )	15	84	76	0	( )	96
Kindergarten-primary.....	20	0	25	75	69	0	( )	98
Nursery-preschool.....	5	( )	0	80	6	( )	( )	67
Rural-school grades.....	19	( )	32	58	35	( )	( )	97
Senior-high principal.....	15	40	( )	47	10	0	0	100
Junior-high principal.....	16	31	( )	56	11	0	0	100
Elementary-school principal.....	12	42	( )	42	15	( )	0	93
General supervisor.....	8	38	( )	50	15	( )	0	93
Superintendent of schools.....	9	56	( )	33	9	0	0	100
Agriculture.....	11	0	( )	91	11	( )	( )	83
Art education.....	27	( )	11	85	24	( )	( )	96
Commerce.....	28	( )	14	75	17	0	( )	82
Home economics.....	41	( )	12	85	30	0	( )	90
Industrial or manual arts.....	13	0	( )	92	24	( )	( )	92
Public-school music.....	49	( )	16	80	26	0	0	100
Physical education:								
Men.....	33	0	( )	94	23	0	( )	96
Women.....	36	0	( )	97	27	0	( )	96
Trades and industry.....	3	0	0	( )	3	0	0	( )
School librarian.....	15	27	0	47	8	0	0	( )
Guidance (deans and counselors).....	2	0	0	( )	4	0	( )	100

<sup>1</sup> Three or fewer institutions reported.

This table should be read as follows: Of the 110 universities, colleges, and junior colleges reporting the preparation of high-school teachers for liberal-arts subjects, 3 or fewer reported practice teaching not offered; 14 percent practice teaching offered but not required; 85 percent practice teaching required.

Teachers colleges and normal schools as a group required, with few exceptions, practice teaching for all teachers. One institution in the group reported that practice teaching was not offered in six curricula. The very general requirement of practice teaching in institutions whose primary purpose is the education of teachers is an indication of the importance of supervised practice teaching in any program of teacher education.

Practice teaching was not a general requirement for the various kinds of positions for which teachers were educated in universities, colleges, and junior colleges. Even in the traditional field of secondary teacher preparation, 15 percent of the institutions reported that practice teaching was not required. In 9 curricula, 75 percent or less reported that practice teaching was not required. In 11 curricula, from 11 to 32 percent of the institutions which educated teachers for 11 types of work offered but did not require practice teaching. Of the 23 kinds of training listed, practice teaching was offered by all of the institutions in only 7 of the curricula. From 31 to 56 percent of the institutions which educated administrators and supervisors provided no practice teaching in those curricula. The extent to which practice teaching was not offered or was offered but not required for several kinds of work in universities, colleges, and junior colleges suggests the need of an extension of the practice-teaching requirement among these institutions. Teachers colleges and normal schools have already prescribed practice teaching.

If practice teaching is valid under favorable conditions of organization and supervision, more rigid prescriptions of practice teaching for all types of training are needed. Nothing short of State requirement of practice teaching for certification will stop the qualifying of teachers who have not had practice teaching under supervision. In a recent study of liberal arts colleges Baugher ascertained that "the typical liberal arts college adds practice teaching for secondary school teachers when the State department of education makes it a requirement for certification, and that it usually does so no sooner."<sup>2</sup>

Closely allied to the problem of practice teaching as a requirement for certification is the policy of exemption from practice teaching. Exemption from practice is largely a discretionary power which is exercised by the particular institution. Exemptions are granted for various reasons. Where training facilities are lacking for practice teaching in some or all subjects, either a complete waiver of practice teaching is granted or a substitution of equivalent credit in academic or professional courses is made. Previous teaching experience is a justification which many institutions use as a basis for the exemption of students from practice teaching. The constant change of teachers

<sup>2</sup> Baugher, Jacob I. *Organization and Administration of Practice Teaching in Privately Endowed Colleges of Liberal Arts*. New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1921. (Contributions to education, no. 487) p. 28.

to various certificate or grade levels creates a complex administrative problem in the application of any requirement of practice teaching.

Under what conditions do institutions which educate teachers exempt students from the requirement of practice teaching? Table 12 gives the data concerning the bases of exemption reported by the two groups of institutions. In both groups the most frequently given reason for exemption was "practice teaching done in another institution." The wide variations among institutions in the amount of credit for a given number of clock-hours of practice teaching revealed in table 8 raises a question about the validity of exemption on the basis of practice teaching in another institution. "Previous teaching experience in any grade or subject" was frequently a basis for exemption from practice teaching in all types of training in both groups of institutions. Exemptions on "previous teaching experience in the same major field" and "previous teaching experience in the same subject" occurred in significantly large frequencies. "Training school facilities in subject not available" and "an unavoidable conflict of classes" were bases for exemption in a negligible number of instances in teachers colleges and normal schools. The frequency with which "no exemptions permitted" was reported for all kinds of training in both groups of institutions indicates a strong tendency toward this policy.

TABLE 12.—Percent of different types of institutions which exempt students from practice teaching, according to the bases for exemption and the kinds of positions for which teachers are educated

Basis of exemption	Kind of position in 160 universities, colleges, and junior colleges				Kind of position in 85 teachers colleges and normal schools			
	Elementary	Secondary academic	Special subjects	Rural	Elementary	Secondary academic	Special subjects	Rural
1	2	3	4	5	6	7	8	9
Number of cases.....	56	102	38	8	66	51	30	27
Previous teaching experience in any grade or subject.....	23.9	18.6	23.6	37.5	19.7	19.6	20.0	14.8
Previous teaching experience in the same major field.....	5.4	20.6	13.1	-----	9.1	13.7	13.3	7.4
Previous teaching experience in the same subject.....	2.6	13.7	13.1	-----	4.5	3.9	10.0	3.7
Practice teaching done in another institution.....	66.1	68.6	57.9	50.0	53.0	56.8	66.7	40.7
Training school facilities in subject not available.....	1.7	2.9	5.3	-----	-----	1.9	-----	3.7
An unavoidable conflict of classes.....	2.6	2.9	2.6	-----	-----	-----	-----	-----
No exemptions permitted.....	16.1	22.5	31.6	37.5	33.3	31.3	20.0	44.4

This table should be read as follows: Of the 56 universities, colleges, and junior colleges which reported the preparation of teachers for the elementary schools, 23.9 percent exempted students from practice teaching on the basis of previous teaching experience in any grade or subject, and so on.

Total exemption on the basis of previous teaching experience is a questionable practice, particularly when teachers seek certification for grade levels above or below the grades previously taught. Differ-

ences in content, techniques, and age of the pupils in the several grades warrant a probationary period of practice teaching for all teachers who seek exemption on the basis of previous teaching experience. Nominal success as an elementary teacher is an inadequate measure of the individual's ability to do successful high-school teaching. Although successful teaching is subject to many interpretations, one of the most reliable criteria for estimating teaching ability is the ability shown in practice teaching under adequate supervision.

#### SUBJECT AND GRADE ASSIGNMENTS OF PRACTICE TEACHERS

A significant issue in the education of teachers is the number of subjects and grades in which practice teaching should be done.

In order to render the most effective service in teaching, prospective teachers should be prepared in those subjects which they will later teach. The institutions which educate teachers should, therefore, obtain the facts concerning current demands for teachers with certain subject combinations in the several school divisions. About half the States issue one or more certificates valid in all grades of elementary and secondary schools. Institutions which educate teachers usually specify a major and a minor teaching subject for prospective teachers without any assurance that the students will later teach the subjects in which they have prepared.

The number of subjects in the teaching load of junior high-school and senior high school teachers in all the States reveals the following practices:

Of 84,257 junior high-school teachers who reported, 37 percent are teaching 1 subject only, 51 percent are teaching 2 subjects only, and 12 percent are teaching 3 or more subjects. Of the 82,627 senior high-school teachers reported, 34 percent are teaching 1 subject, 53 percent 2 subjects, and 13 percent are teaching 3 or more subjects.<sup>4</sup>

A recent representative study summarizes the practices in Tennessee as follows:

The number and percent of the 1,445 teachers whose transcripts were examined teaching in a specified number of fields is 500, or 34.6 percent, teaching in 1 field; 621, or 43 percent, are teaching in 2 fields; 263, or 11.2 percent, are teaching in 3 fields; and 61, or 5 percent, are teaching in 4 or more fields. There are 1,414 or 92 percent, of the teachers teaching their major subjects; 839, or 62 percent, teaching their minor subjects; and 471, or 32.6 percent, teaching other subjects than their major or minor.<sup>5</sup>

This discrepancy between the practice of major and minor offerings in institutions which educate teachers and the actual number of teachers who teach subjects outside their major and minor fields of preparation is a challenge to certificating agencies, institutions which educate teachers, accrediting agencies, and public-school administrators.

<sup>4</sup> Adapted from Inquiry No. 1. National Survey of the Education of Teachers.

<sup>5</sup> Jones, H. L. A Study of the Fitness of the High-School Teachers of Tennessee. Nashville, Tenn., George Peabody College for Teachers, 1931. (Contributions to education, no. 90), pp. 130-131.

Of the teachers reporting a majority were teaching two or more subjects; a substantial proportion were teaching in the minor fields; and teaching loads with subjects outside the major and minor fields of preparation were not uncommon. The extent to which institutions of higher education have recognized these conditions in their organization and administration of practice teaching is shown in table 13.

TABLE 13.—Percent of institutions which follow various practices in the assignment of practice teachers according to different subject-matter fields, grade-levels, and the number of phases of a given subject for the several types of teaching positions

Assignment practice	Kind of position in 160 universities, colleges, and junior colleges				Kind of position in 85 teachers colleges, and normal schools			
	Elementary	Secondary academic	Special subjects	Rural	Elementary	Secondary academic	Special subjects	Rural
1	2	3	4	5	6	7	8	9
Number of cases.....	71	121	51	10	80	67	35	23
Major subject only.....	4.2	20.6	58.8	—	3.7	17.7	54.3	6.2
Either major or minor only.....	4.2	42.9	19.6	10.0	2.5	24.2	17.1	3.1
Both major and minor subjects.....	22.5	32.2	21.6	30.0	17.5	55.4	26.7	6.2
Various grade levels.....	84.5	21.5	21.6	60.0	91.2	29.0	22.8	90.6
Two or more phases of subject.....	9.8	37.2	41.2	20.0	11.2	25.8	22.8	9.4

Apparently the major and minor fields of preparation are not vital considerations in the practice-teaching assignments of elementary teachers in either group of institutions. Practices in the assignment of rural teachers most closely approximated the assignment practices for elementary teachers in both groups of institutions.

The assignment of secondary academic teachers in practice teaching was based largely on 1 and 2 subjects. Forty-one and nine-tenths percent of the teachers colleges and normal schools and 65.2 percent of the universities, colleges, and junior colleges assigned practice teachers in one subject only, the major subject only or either the major or minor subject only. More than half of the teachers colleges and normal schools and fewer than a third of the universities, colleges, and junior colleges assigned students in both major and minor subjects. Twenty-nine percent of the teachers colleges and normal schools and 21.5 percent of the universities, colleges, and junior colleges provided practice on various grade levels.

The majority of institutions in both groups provided practice in the major only for special-subject teachers. A fourth of all the institutions made assignments in both major and minor subjects in the special fields.

If practice teaching is to provide experience in the subjects which the teachers will later teach, the common procedure of providing practice in one subject is questionable in light of the limited number of beginning teachers who actually teach only one subject.

In the absence of scientifically supported data on the desirability or effectiveness of practice teaching in two or more subjects, particularly on the high-school level, several hypotheses are submitted which suggest problems for investigation by the administrators of training schools.

1. Primary responsibility of State-supported institutions which educate teachers is the preparation of teachers for the schools of the State in which the institutions exist. This implies a knowledge of the actual number of teachers needed, a knowledge of subject combinations in teaching loads, and a system of placement which would coordinate the supply of teachers with the demands of the public schools.

Changes in certification practices are needed. The freedom now exercised by institutions in the preparation of large numbers of teachers without due regard to the actual demand for teachers prevents effective coordination of supply and demand. Restricted certification would stabilize the relation of supply and demand.

Without a fundamental change in the relation of supply to demand, provision for practice teaching in all the subjects to be taught later cannot be assured.

2. Practice teaching is only a partial preparation for the multiple responsibilities of classroom teaching. A better selection of the activities to be included in practice teaching is imperative. Many of the standardized activities are routine matters which would enhance the experience of the practice teacher to a very limited extent if they were repeated in a second or third subject. Beyond the typical activities demanded of all teachers, the wide variations in techniques between different grades and between different subjects suggest the need for selection of and emphasis upon the teaching activities which are unique to specific grades and specific subjects.

3. The training schools cannot provide for practice in all subjects unless there is a reduction in number of students or material expansion of facilities. The provision of practice teaching in all subjects to be taught later would modify the organization of the training school. Additional supervision of practice teachers would be required, and each new assignment would require the attention of the supervisor during the orientation period. Mere additional practice with supervision is not sufficient.

4. Under present conditions the provision of "a minimum of 90 hours of practice teaching" in all subjects which the teacher will later teach is impracticable. What effect would practice teaching in two or more subjects within the limits of the time now devoted to practice have upon the pupils which the practice teacher will later teach? Assuming that 90 hours are devoted to practice, will 45 hours of practice in each of two subjects be more helpful to the student

teacher than practice in one of the subjects for the full 90 hours? Since the primary responsibility of the training school must be to the pupils the question should also be asked concerning the effect of each type of assignment upon the pupils in the training school. No available evidence indicates which practice is more desirable. Before any general plan for an offering of practice teaching in all the subjects which the practice teacher will later teach can be organized, the foregoing questions must be submitted to intensive investigation.

#### TRAINING-SCHOOL PROVISIONS

Provision for adequate training-school facilities is an important issue in the program of teacher education. Opinions vary concerning the relative desirability of having practice facilities provided in campus training schools or in affiliated school organizations. Unquestionably, from the standpoint of conservation of students' and supervisors' time and more direct supervision of student practice, the campus school is the more effective. The affiliated school, however, more nearly approaches genuine public-school conditions. Regardless of the advantages or disadvantages of either type, the organization and procedure in any training program are largely determined by the exigencies of the local situation. The initial cost and maintenance of a campus school prohibit its extensive adoption as the sole facility for practice. The concept of induction into teaching as involving observation, participation, and practice teaching is difficult to realize in most campus schools if responsible practice for the standard number of 90 hours as a minimum is to be provided for the present large number of prospective teachers.

Although the campus schools are growing in numbers, the use of affiliated schools is still the dominant practice. Table 14 gives a distribution of the several types of training-school organizations. Only 36 institutions in the 258 reported campus schools only. Seventy-nine institutions reported campus schools with affiliated schools; approximately 45 percent of the institutions employed a campus school in their teacher-training work. A greater proportion of teachers colleges and normal schools reported campus schools than did universities, colleges, and junior colleges. Of the 258 institutions, 143 utilized affiliated schools only. Colleges depended more on affiliated schools than did the other types of institutions. Of the 143 institutions with affiliated schools only for practice, the control of these schools for practice was vested entirely in the affiliated school systems in 70 percent of the cases; the other 30 percent were controlled jointly by the affiliated school authorities and the administrators of the teacher-preparation institutions.

TABLE 14.—*Distribution of types of training-school organization according to type of institution*

Type of institution	Type of training-school organization				Total
	Campus only	Campus and affiliated	Affiliated outside control	Affiliated joint control	
	2	3	4	5	6
Universities.....	1	9	11	6	27
Colleges.....	10	14	66	12	102
Junior colleges.....	6	5	12	8	31
Teachers colleges.....	14	33	6	8	61
Normal schools.....	5	11	1	7	24
City training schools.....		2	1	1	4
Private training or technical schools.....		5	3	1	9
<b>Total.....</b>	<b>36</b>	<b>79</b>	<b>100</b>	<b>43</b>	<b>258</b>

## USES OF THE TRAINING SCHOOL

Certain advantages and disadvantages have been claimed for the campus and the off-campus training school.<sup>6</sup> Limitations of the opportunity for observation, demonstration, and experimentation have been stated as a chief disadvantage in the use of the off-campus schools. Institutions which employ both a campus school and affiliated schools are reported in table 15.

While this table shows some differences between the two groups of institutions in their use of training schools, the only difference deserving comment is the consistent evidence that the teachers colleges and normal schools make more use of the training schools than do the colleges and universities.

It is also evident from this table that campus schools are much more frequently employed for observation and demonstration purposes than are the affiliated schools. Since directed observation is now recognized as an important part in the professional preparation of teachers this fact becomes of extreme significance in the program of any institution educating teachers.

To the extent that experimentation is desired in the work of such institutions it is clearly shown in table 15 that experimentation is much more frequently employed in campus schools—partly because the institution has more control of campus schools and partly because of the advantages of proximity.

<sup>6</sup> Mead, A. B., and others. *Advantages and Disadvantages of Campus and "Off-Campus" Laboratory Schools*. Educational Administration and Supervision, 16: 196-207, March 1930.

TABLE 15.—Percent of institutions with campus and affiliated training school organizations which employ the campus school and affiliated schools for various purposes in the education of teachers for different kinds of positions

Training practice	Elementary		Secondary academic		Special subjects		Rural	
	Campus	Affiliated	Campus	Affiliated	Campus	Affiliated	Campus	Affiliated
1	2	3	4	5	6	7	8	9
Number of universities, colleges, and junior colleges.....	19		22		16		1	
Number of teachers colleges and normal schools.....	42		34		23		24	
Universities, colleges, and junior colleges:								
Observation.....	90.0	66.7	76.9	72.7	77.7	84.6		100.0
Demonstration.....	80.0		70.9	55.5	66.7	61.5		100.0
Practice teaching.....	90.0	100.0	92.3	81.8	100.0	100.0		100.0
Experimentation.....	30.0		53.8	15.1	33.3	23.1		
Teachers colleges and normal schools:								
Observation.....	96.8	57.8	94.1	65.2	70.5	64.3	77.7	44.4
Demonstration.....	100.0	35.7	94.1	34.8	76.5	42.9	100.0	16.7
Practice teaching.....	93.7	92.8	94.1	95.6	94.1	92.8	44.4	100.0
Experimentation.....	50.0	14.3	53.0	8.7	35.3	14.3	22.2	5.8

#### PRACTICES OF COLLEGE DEPARTMENTS COORDINATED WITH THE TRAINING SCHOOL

The necessity for closer coordination between college departments and the training school is unquestioned. Several methods have been proposed by which college departments may utilize the training school for the practical interpretation of the content and techniques. Table 16 indicates the extent to which professional, academic, and special-subject departments in the several types of institutions engaged in training-school activities. The teaching of classes or demonstration lessons in the training school by members of college departments in universities and colleges was reported by less than 14 percent of the institutions for any given department. A greater percentage of college instructors in teachers colleges and normal schools taught classes or conducted occasional demonstrations in the training school than in the other group of institutions. The teaching of regularly scheduled demonstrations in the training school by college teachers was reported by less than 7 percent of the institutions in both groups for each department. Professional departments in universities and colleges arranged for regular and occasional demonstrations by the demonstration teacher in the training school to a greater extent than did academic and special-subject departments in the same group of institutions. Professional departments in teachers colleges and normal schools also arranged for demonstrations by training-school teachers to a greater extent than did academic and special-subject departments in the same group of institutions. The percentages for regular and occasional demonstrations arranged with the training-

school teachers by all departments in teachers colleges and normal schools were approximately four times greater than the corresponding percentages in the other group of institutions.

TABLE 16.—Percent of universities and colleges, and normal schools and teachers colleges, using different methods to coordinate professional, academic, and special-subject departments with the training school

Methods of coordination	105 universities and colleges			81 normal schools and teachers colleges		
	Professional	Academic	Special subjects	Professional	Academic	Special subjects
1	2	3	4	5	6	7
Teach 1 or more classes in training school.....	13.33	8.57	10.50	14.81	17.28	32.10
Teach regular scheduled demonstrations in training school.....	4.76	2.85	4.76	6.17	2.47	6.17
Teach occasional special demonstrations in training school.....	11.43	8.57	7.62	28.40	25.90	32.10
Arrange for regular demonstrations taught by training-school teacher.....	16.19	9.50	4.76	59.26	41.90	32.10
Arrange for occasional special demonstrations taught by training-school teacher.....	20.00	13.33	8.57	61.72	41.90	30.90
Participate in formulation of training-school policies.....	38.10	13.33	10.50	49.38	28.40	25.90
Participate in organization of training-school curricula.....	21.90	14.30	9.50	55.55	41.90	35.80
Give courses in special methods.....	43.80	55.20	35.20	67.90	48.10	48.10
Share supervision of practice teachers in training school.....	50.50	31.40	22.90	45.70	30.80	45.70
Assist in organization and supervision of experimental work in training school.....	24.76	10.50	3.80	51.85	25.90	25.90

Each of the departments in teachers colleges and normal schools reported participation in the organization of training-school curricula to a greater degree than did any department in the universities and colleges.

Courses in special methods were offered by professional and special-subject departments in teachers colleges and normal schools to a greater extent than by the corresponding departments in universities and colleges. Academic departments in the latter group, however, offered special methods courses in a greater percentage of the institutions than did the academic departments in teachers colleges and normal schools.

Professional departments in both groups of institutions shared in the supervision of practice teachers in the training school to a greater extent than did the academic departments. No significant difference in the extent of this practice was noted between the respective departments in each group of institutions except in special-subject departments. The percentage of special-subject departments in teachers colleges and normal schools was twice that of the special-subject departments in universities and colleges.

Professional departments in both groups of institutions assisted in the organization and supervision of experimental work in the training school to a greater extent than did academic and special-subject departments in the respective groups of institutions. The differ-

ences were approximately twice as great in professional and academic departments and four times as great in special-subject departments.

In general, the indicated practices of coordination were performed by the different college departments more frequently in teachers colleges and normal schools than in universities and colleges. Professional departments in both groups of institutions took part in the several coordination practices to a greater extent than did academic and special subject departments. In the majority of the coordination practices, academic departments in universities and colleges participated to a greater extent than special subject departments. The differences in the percentages for the several practices between academic and special-subject departments in teachers colleges and normal schools were insignificant. Apparently, teachers colleges and normal schools coordinated the work of the several college departments with the training school more fully than did the college departments in universities and colleges.

Answers to the questionnaires concerning the responsibility of departments for the supervision of practice teachers indicated that among the universities, colleges, and junior colleges, academic departments were responsible for such supervision in comparatively few instances. For the several types of positions for which teachers are educated, less than 12 percent of the institutions reported academic departments as responsible for the supervision of practice teachers. In this group of institutions, supervision of practice teachers was generally the responsibility of the education department. Combined responsibility of academic and education departments for supervision of practice teachers was reported by less than 15 percent of the institutions for all types of positions except rural. Only in the fields of public-school music was the supervisory responsibility vested in the special-subject department to any noticeable extent, and then in only 29.4 percent of the cases.

Other data indicated that teachers colleges and normal schools utilized all the college departments more extensively in the direct supervision of practice teachers than was done by colleges and universities. The data just referred to indicate also a greater participation by subject-matter departments in the supervision of practice teachers in teachers colleges and normal schools than exists in the other group of institutions.

#### OBSERVATION IN THE EDUCATION OF TEACHERS

Practices relative to the use of observation in the programs of teacher education were investigated and the reports tabulated. The tables are not included because they revealed very few significant differences between the two groups of institutions or among the curricula for different kinds of teachers. More than half of the institu-

tions provided for observation of teaching preceding practice. More than a third offered it parallel to practice teaching and about a tenth did not offer work in observation. It was most frequently not offered in the programs for rural teachers, commercial teachers, teachers of public-school music, and teachers of physical education for men.

Even though there was little difference between the two groups of institutions in the time at which observation was offered, there was a slight difference in the matter of whether or not the work of observation was organized as a separate course. Among the universities and colleges about as many offered it in a separate course as offered it in connection with other courses. There was a distinct tendency for the normal schools and teachers colleges to care for observation in connection with other courses, the ratio being about 3 combining it with other courses to 2 that offered it separately.

#### SAMPLED ACTIVITIES OF PRACTICE TEACHING

The offering of practice teaching under approximate or actual public-school conditions presupposes a variety of activities in which the practice teacher may obtain experience. The wide variations in the amount of time devoted to practice teaching among institutions, the degree of effective organization of the content of practice teaching with respect to the most useful activities, the adequacy of facilities for practice, and the types of teaching positions for which teachers are educated influence the variety of and the emphasis placed upon the many activities of practice teaching. Since not all the activities of teaching can be provided in the limited time devoted to practice, some selection of the activities which are considered most essential in the preparation of teachers is imperative.

The selection of activities must not be haphazard. The student must obtain mastery of certain phases of teaching before he can be entrusted with the responsibility of a class to teach. Gradual induction of the student-teacher into the complexities of teaching protects the pupils in the training school from the ill effects of crude teaching on the part of the practice teacher. In an effort to provide a guide to systematic mastery of teaching techniques, several noteworthy studies of graded units for observation and participation have been published.<sup>7</sup>

Several analytical studies have also been made of the activities of practice teachers. Armentrout<sup>8</sup> made an activity analysis of the

<sup>7</sup> See An annotated list of 25 manuals (for observation and participation). *Educational administration and supervision*, 15: 47-51, January 1929.

<sup>8</sup> Armentrout, W. D. *The Conduct of Student Teaching in State Teachers Colleges*. Greeley, Colo. Colorado State Teachers College, 1927. (Educational series, no. 2.)

work of practice teachers, classifying the activities into nine major headings as follows:

1. Activities pertaining to the setting in which the teaching and learning processes take place.
2. Activities concerned with the organization of subject matter.
3. Activities concerned with the teaching of subject matter.
4. Activities pertaining to the discipline of pupils.
5. Activities pertaining to professional growth.
6. Activities concerned with the organization of the school.
7. Activities of the community.
8. Activities involved in the observation of the training teacher (critic).
9. Activities involved in conferences with the training teacher (critic).

The Commonwealth Teacher-Training Study by Charters and Waples provides a comprehensive list of activities. The list comprises 1,001 teaching activities which are subjected to a decile rating as to their importance.<sup>9</sup>

Two recent studies of teaching activities incorporated into the content of practice teaching in State teachers colleges have been made. Dr. Flowers<sup>10</sup> evaluated "the content of student teaching courses designed for the training of secondary teachers in State teachers colleges." Four major types of activities were submitted to 100 directors of practice teaching for a ranking of the separate activities under each major head. "Activities involving class instruction, activities involving classroom management and control, the student-teacher's part in extra-class and community activities, and the student-teacher's growth" were used. In addition to being ranked according to importance, each activity was classified according to the college division in which the activity was taught and the directors' estimates of the most desirable allocation of each activity among the college divisions.

The second study of activities was conducted by Esther Marion Nelson on the content of student teaching in State teachers colleges.<sup>11</sup> Miss Nelson evaluated the contacts and experiences of practice teachers in elementary grades. She devoted 10 months to visiting 57 State teachers colleges in 27 different States—distributed in all sections of the United States. Her data were obtained in personal conferences, using an interview blank with a detailed check-list of the activities usually performed by practice teachers. She was, therefore, enabled to secure from student teachers and those who supervise them not only an accurate list of the things which student teachers do, but she was able to secure very frank opinions upon the helpfulness and lack of value of many of the activities studied.

<sup>9</sup> Charters, W. W., and Waples, Douglas. *Commonwealth Teacher-Training Study*. Chicago, Ill., University of Chicago Press, 1929. Pp. 593-620.

<sup>10</sup> Flowers, J. G. *The Content of Student Teaching Courses Designed for the Training of Secondary Teachers in State Teachers Colleges*. New York, N.Y., Bureau of Publications, Teachers College, Columbia University, 1932.

<sup>11</sup> Nelson, E. M. *The Content of Student Teaching in Elementary Curricula in State Teachers Colleges*. Doctor's thesis. New York, N.Y., Teachers College, Columbia University, 1932.

Only a few of the findings of Miss Nelson's study are reported here because it is expected that the completed study will be available by the time this is published.

A few of the recommended changes most frequently suggested by student teachers for the improvement of practice teaching were:

- (a) More opportunity for individual conferences with faculty members in which personal commendations, constructive criticisms, helpful suggestions, and definite aids are given to the student teachers.
- (b) More opportunity to initiate activities and to assume responsibility in different types of teaching situations.
- (c) More thorough command and sounder mastery of subject matter before entering senior student-teaching courses.
- (d) More well-directed and carefully guided observations of the critic teacher at work with children during regular student-teaching courses.
- (e) Less student teachers per grade and per critic, in order to provide for more definite guidance of each student teacher.
- (f) More effective supervision and helpful guidance during student-teaching courses.
- (g) Experience in organizing and carrying out comprehensive units of work.
- (h) Longer period of time to establish higher professional attitudes and to secure clearer conceptions of teaching as a whole, e.g., by devoting to student teaching one half day for one half year.
- (i) More gradual induction into student teaching.

The tabulated suggestions resulted in a number of interesting comparisons because differences were made between the students in 2-year curricula and also among those who had practice teaching for 1 or 2 hours a day, half a day, and all day. It seems that the students whose practice teaching was obtained in units of whole days over a shorter period of time had fewer suggestions for improving conditions than either of the other groups. It may, therefore, be assumed that practice teaching under those conditions seemed more nearly to meet the needs of the students.

In the same manner the activities which the students had found to be least helpful and those most helpful to them as student teachers were secured. The five items most frequently mentioned in each group are listed.

Least helpful: (a) Washing blackboards, cleaning erasers, sweeping floors, and doing other janitorial work; (b) observing other student teachers too frequently; (c) attending general and group conferences of all the student teachers; (d) writing elaborate and detailed lesson plans for too long a period of time; (e) observing in an undirected and haphazard manner.

Most helpful: (a) Teaching children under the guidance of an expert teacher critic or supervisor; (b) teaching and assuming responsibility for the development, growth, and progress of a group of children; (c) observing, under efficient direction and proper guidance, the work of competent teachers, critics, and supervisors; (d) meeting in individual conferences with the critic teachers and supervisors in which they offer constructive criticisms, helpful suggestions, valuable ideas, and definite aids; (e) planning, organizing, and working out comprehensive units of work.

Another phase of Miss Nelson's study secured an estimate of the degree of difficulty encountered by student teachers in mastering the underlying principles and in acquiring skill in each activity and also the necessity for training in each activity. The evaluations on these two bases were then compared with the amount of experience which student teachers actually secured during their practice-teaching periods.

Many items were discovered which were rated high in difficulty and in necessity for training, but in which the students got little or no experience. "Securing more intelligent understanding of the children by investigating and studying their home, neighborhood, and community environments" is a case in point.

Three activities in which more than 95 percent of the student teachers received actual practice during student-teaching courses in the elementary grades were:

1. Arranging work on blackboards and bulletin boards.
2. Regulating physical factors of the room.
3. Attending to schoolroom housekeeping.

Three activities in which less than 5 percent of the student teachers received actual practice during student-teaching courses in the elementary grades were:

1. Making professional contacts outside of the school.
  - (a) Joining professional organizations.
  - (b) Contributing to professional meetings or programs.
2. Participating in social, civic, and welfare organizations in the community.
3. Selecting texts and reference books to be purchased by the school.

Without any attempt to select on the basis of their relative importance, a sampling was made of 20 teaching activities and included as a check list in the survey questionnaire to the cooperating institutions. Table 17 shows the percentage of institutions which reported each activity as a definite experience in practice teaching for the several types of positions for which teachers were educated. More than 75 percent of the institutions in both groups provided experience in adjustment of physical features of classroom to pupils, in caring for materials and apparatus, in preparing lesson plans, and in teaching units for several days in sequence, for all groups of teachers.

The extent to which the other activities in the sampled list of 20 were provided by the 2 groups of institutions and for the 4 kinds of teachers is clearly indicated in table 17. The fact that so little provision was made for vocational and educational counseling of students, the establishment of relationships with staff personnel and teaching the use of the school library is of very great importance to those responsible for the development and administration of practice-teaching programs.

TABLE 17.—Percent of universities, colleges, and junior colleges, and teachers colleges and normal schools which provide experience in 20 (sampled) teaching activities, distributed according to types of teachers educated

Activities experienced	Universities, colleges, and junior colleges				Teachers colleges and normal schools			
	Elementary	Secondary academic	Secondary special	Rural	Elementary	Secondary academic	Secondary special	Rural
1	2	3	4	5	6	7	8	9
Number of institutions.....	72	122	56	13	81	55	30	30
Adjust physical features to pupils.....	80.5	85.2	83.9	84.6	88.8	85.4	84.6	94.8
Adjust pupils to routine of room.....	81.9	78.4	80.3	69.2	93.3	81.8	74.3	89.7
Keep records and make reports.....	77.7	82.7	80.3	53.8	91.3	89.1	84.6	97.4
Care for materials and apparatus.....	97.2	87.7	96.4	76.9	93.8	92.7	92.3	97.4
Organize pupil monitorial system.....	31.9	23.7	25.0	39.1	51.8	43.6	43.6	46.1
Prepare lesson plans.....	98.6	100.0	98.2	84.6	98.7	98.2	94.8	100.0
Select and organize subject matter.....	72.2	85.2	89.3	53.8	91.3	89.1	92.3	92.3
Teach unit several days in sequence.....	86.1	88.5	92.8	84.6	96.5	100.0	92.3	89.7
Direct the study of pupils.....	81.9	86.0	85.7	61.5	96.5	96.3	76.9	94.8
Discover means to promote morale.....	72.2	69.7	69.6	53.8	82.7	83.6	74.3	82.0
Handle remedial discipline.....	52.8	59.0	55.3	80.9	72.8	70.9	69.2	79.5
Prepare, give, and interpret tests.....	81.9	89.3	82.0	53.8	71.6	83.6	82.0	89.7
Adjust instruction to individual differences.....	77.7	77.8	85.7	53.8	90.1	89.1	87.0	92.3
Teach use of school library.....	37.5	46.7	46.4	39.1	70.3	74.5	51.3	76.9
Organize and direct excursions and projects.....	59.7	50.8	64.2	61.5	88.8	81.8	76.9	82.0
Direct pupils' extraclass activities.....	51.4	27.0	37.5	46.1	83.9	74.5	59.0	76.9
Prepare special holiday programs.....	52.8	29.5	39.3	53.8	90.1	56.3	56.4	89.7
Relationships to staff personnel.....	30.5	32.0	57.1	15.3	46.9	40.0	33.3	48.7
Vocational and educational counseling of pupils.....	22.2	13.1	19.6	0	19.7	34.5	25.6	15.4
Establish relationships with community.....	47.2	14.8	23.2	15.3	41.9	41.8	43.6	59.0

In general, the normal schools and teachers colleges make more nearly adequate provisions for these activities than do the colleges and universities.

## CHAPTER III

# SUMMARY AND RECOMMENDATIONS

### SUMMARY

*I. Purposes of practice teaching.*—Existing data on the purposes of practice teaching in the professional education of teachers indicate a general agreement that it is a desirable method for the development of required teaching skills and that when done under close supervision it is possible to protect children from the ill effects of poor teaching during the novitiate period. In spite of the general agreement that practice teaching is desirable there is great variety in the provisions made for it in different types of institutions and among institutions of the same type within a State.

*II. Type of teacher educated and length of curricula.*—1. Universities and colleges have been, and still are, chiefly concerned with the preparation of teachers for secondary schools, although a sharp increase in the offering for elementary teachers is obvious. Normal schools, by the limitations of the length of their curricula in relation to prevailing standards of teacher certification, are essentially restricted to the preparation of elementary teachers. The teachers colleges have not confined their offerings to any particular grade level.

2. The traditional 4-year curriculum has been maintained as a standard in universities and colleges with the exception of the curricula for kindergarten-primary and rural teachers which are frequently only 2 years in length. Although the 2-year curriculum is more common for these types of teachers, the fact remains that approximately a third of the universities and colleges offer 4-year curricula for kindergarten-primary and rural teachers. One-year and three-year curricula for any of the types of teaching positions are relatively infrequent.

Among the teachers colleges, 4-year curricula are now offered by approximately all the institutions with the exceptions of the offerings for elementary, kindergarten-primary, and rural teachers. In spite of the greater frequency of 2-year curricula for these three kinds of teachers, the proportion of institutions with 4-year offerings indicates a tendency toward the 4-year curriculum as a standard for all types of teaching positions. Further, the striking parallel in the extent of 4-year offerings for the same types of teachers between universities and colleges and teachers colleges and normal schools suggests the 4-year curriculum as a pattern for teachers in all types

of positions regardless of the type of institution which prepares them. The 3-year curriculum appears to be largely a transition stage between the 2-year offering and the generally accepted 4-year offering.

*III. Amounts of practice teaching.*—1. In colleges and universities there was in 1931-32 a range from 18 to 270 clock-hours of practice teaching. The range in clock-hours among teachers, colleges and normal schools was from 30 to 500 clock-hours. "In the 2-year curricula for elementary teachers the median number of clock-hours of practice teaching was 82.8 in colleges and universities and 141 clock-hours in normal schools and teachers colleges. The corresponding medians for elementary teachers in 4-year curricula were 85 and 146.5 clock-hours. Corresponding differences between the two groups of institutions with the 2-year and 4-year curricula were evident for the several kinds of teachers.

2. When these periods of practice-teaching are translated into semester-hours the range extends from 1 semester-hour to 20 semester-hours in both groups of institutions.

In the 2-year curricula for elementary teachers the median semester-hours of credit for practice teaching was 4.4 for universities and colleges and 7.17 for teachers colleges and normal schools. The corresponding medians for elementary teachers in the 4-year curricula were 4.5 and 8.4 semester-hours. Corresponding differences between the two groups of institutions existed for the several kinds of teachers educated.

3. The comparisons among universities, colleges, and teachers colleges in terms of clock-hours and semester-hours of credit for practice teaching indicate that teachers colleges devote approximately twice the number of clock-hours to practice teaching for secondary teachers as do colleges and universities. In the elementary field, teachers colleges show a median in clock-hours greater by 26 clock-hours than colleges and universities.

4. The modal practice for the number of weeks of practice teaching is 18 weeks. Five days a week is the typical plan for practice teaching and the general tendency is toward the 50- to 60-minute period of practice.

*IV. Offerings and requirements in practice teaching.*—1. Practice teaching has been stipulated as a requirement for certification as teachers in approximately one-half of the States, although the requirement does not apply to all kinds of teachers. Comparative data reveal, however, that the proportion of beginning teachers who have had practice teaching is decidedly on the increase.

2. Practically all teachers colleges and normal schools require practice teaching in all fields for which they prepare teachers while in contrast to this policy universities and colleges do not even offer practice teaching in from 27 to 56 percent of the cases for certain

kinds of teachers. Further, a notable proportion, from 11 to 32 percent of the universities and colleges, offer practice teaching for certain kinds of teachers but do not require it.

3. Practice teaching under supervision was considered so valuable that relatively few institutions exempted students from practice. Previous teaching experience is allowed to exempt a student from practice teaching in less than a third of the colleges and universities and in less than a fifth of the teachers colleges and normal schools. More than a third of both groups of institutions permit no exemptions from practice teaching.

V. *Subject and grade assignment of practice teachers.*—1. Colleges and universities assign secondary teachers for practice teaching in 1 subject in 65 percent of the institutions while only 42 percent of the normal schools and teachers colleges limit the practice teaching of secondary teachers to 1 subject. Less than a third of the colleges and universities assign secondary teachers in both their major and minor subjects while 56 percent of the normal schools and teachers colleges assign students in both major and minor subjects. In both groups of institutions more than a half assign teachers of special subjects in one subject only.

2. Practice teachers of elementary subjects and rural grades in both groups of institutions receive practice teaching on various grade levels.

VI. *Training school provisions and their use.*—1. Normal schools and teachers colleges usually have a training school on the campus as well as the use of affiliated off-campus schools. Colleges and universities, however, depend largely for their practice facilities upon affiliated off-campus schools over which, in 70 percent of the cases, they do not have control.

2. In both groups of institutions, with both campus and affiliated off-campus schools, the various activities of observation, demonstration, practice teaching, and experimentation were carried on in campus schools in a greater proportion of the institutions than in affiliated schools.

VII. *Coordination of college departments with the training school.*—Faculty members of the teachers colleges and normal schools not only used the training school more for the several activities but they took a much more active part in determining the policies of the training school and in assisting with the supervision of practice teachers than the faculty members of colleges and universities. Significant as this fact is, its importance is decreased by the fact that at best only 40 percent of the normal schools and teachers colleges and about 10 percent of the universities and colleges reported that staff members "arrange for regular demonstrations taught by training-school critic teachers." When these percentages are further reduced by the

relatively large number of most faculties who do not make regular use of the training school the actual proportions of this important professional factor become relatively insignificant.

*VIII. Policies in organization and practices in offering of observation.*—1. The extent to which observation is not offered for certain kinds of teachers in both groups of institutions, while not large, indicates a disregard of this important function by a significant number of institutions.

2. Practice is about evenly divided with respect to offering observation as a separate course or as part of some other course in colleges and universities.

*IX. Sampling of teaching activities of practice teaching.*—Judged from a sampling of 20 teaching activities, teachers colleges and normal schools with few exceptions provide experience in a greater number of the sampled activities than the colleges and universities. Institutions in both groups emphasize teaching experiences on the routine level in contrast with teaching experiences which are more complex.

#### RECOMMENDATIONS

1. All institutions engaged in the preparation of teachers should make provision for an initial period of supervised practice in each type of educational position for which students are preparing.
2. Institutions should have enough control over the schools in which practice is given to approve the teachers with whom students are placed, determine the assignments of students, and modify the curriculum and the methods of instruction in the schools.
3. Present practice would indicate that 90 clock-hours of supervised practice should be regarded as a minimum although it is evident that this should vary according to the needs of individuals and subjects. This matter should be made the subject for extensive investigation and should be settled in terms of a desirable degree of initial competency when the teacher begins to teach.
4. All prospective teachers should either have satisfied practice-teaching requirements or shown the required amount of teaching competency before they are issued any form of teaching certificate. As far as possible practice teaching should be done in situations approximating those in which the students will later secure positions.
5. Student teachers should be afforded the opportunity to do practice teaching in more than 1 subject and in more than 1 grade if they are preparing for work in the elementary or rural schools and in at least their major and first minor subjects if they are preparing to be secondary teachers.
6. Staff members—both the teachers of the so-called academic subjects and those teaching the special subjects should be encouraged

- and, if necessary, compelled to make more professional contacts with the training schools. These contacts may well take the forms of demonstration lessons, cooperative supervision of the work of student teachers, construction of training-school curricula, or the supervision of research and experimentation with teaching methods at various grade levels in their subjects.
7. Student teachers should be given practice in a larger number of the more complex teaching activities as well as the more obvious and mechanical school housekeeping duties which are now most frequently provided.
  8. More of the desired results from practice teaching in the education of teachers appear to be possible when institutions either have the training schools on the campus or have a campus school supplemented with nearby affiliated schools which may be used for practice.

# PART 5

## PART V. SUMMER SESSIONS FOR TEACHERS<sup>1</sup>

### CHAPTER I

#### INTRODUCTION: PURPOSES OF SUMMER SESSIONS

##### INTRODUCTION

The summer session has become an important factor in the education of teachers. Relatively, it is a recent development. Antecedents of the present summer session have been described by Willoughby<sup>2</sup> and Judd.<sup>3</sup>

The summer session idea has gained widespread acceptance since the early beginnings made by Louis Agassiz in 1872. In the summer of 1931, there were in the United States 654 summer schools enrolling 425,100 students.<sup>4</sup> Of these students, 273,148 were enrolled in courses in education; this number is 28.6 percent of the total number of teachers in the United States.

In-service teachers, unable to take leave of absence for professional improvement, have made extensive use of the summer session in order to secure the additional preparation necessary to satisfy the higher standards prescribed for tenure or promotion, and to meet the competition of an ever-increasing supply of young teachers.

Unless requirements are advanced, present educational standards will soon be satisfied by most teachers in service. What, then, will be the contributions which the summer session can make toward the professional education of American teachers?

##### SCOPE OF THE STUDY

A list of questions about summer sessions was submitted to the deans and directors of summer sessions during their annual meeting at Charlottesville, Va., October 1931, and several of the questions were indicated by those present as important issues in their summer-school organizations. These expressions assisted in selecting the following topics for treatment in the present study: (1) Purposes of

<sup>1</sup> This study was prepared by Dr. Frank K. Foster, specialist in summer schools and training-school problems.

<sup>2</sup> Willoughby, W. W. *The History of Summer Schools in the United States*. Commissioner of Education Report, 1891-92, vol. II, pp. 893-967.

<sup>3</sup> Judd, C. D. *The Summer School as an Agency for the Training of Teachers in the United States*. Nashville, Tenn., George Peabody College for Teachers, 1921. (Contributions to Education, no. 3, ch. 2.)

<sup>4</sup> National Education Association, Research Division. *Growth of Summer School Attendance*. Journal of the National Education Association, 20: 298, November 1931.

summer sessions, (2) summer-session calendars, (3) summer-session enrollments, (4) policy-forming bodies, (5) financing and advertising policies, (6) summer-session staff, (7) trends in selected curricula, and (8) the summer-session training schools.

#### SOURCES OF DATA

An inquiry form was addressed to all directors of summer sessions who had previously indicated a willingness to cooperate in the study. Three hundred and thirty-three usable returns were tabulated. A classification of the returns by type of institution and geographical distribution indicated a sampling adequate for reliable interpretations. The greater variations between types of institutions than between geographical locations suggested a classification of the data on the basis of types of institutions.

Materials from books, educational periodicals, and summer-session catalogs were analyzed, and several institutions in various sections of the country were visited to secure additional data.

#### PURPOSES OF SUMMER SESSIONS

The relative importance of the various purposes for which summer sessions were organized is indicated in table 1.

The prescription of the baccalaureate degree as a basis for the certification of some groups of teachers has determined one of the chief purposes of the summer sessions in universities, colleges, and teachers colleges. Curricula leading to the bachelor's degree in the various teaching subjects have very generally included among the prescribed courses some prescribed professional courses. As a result, work for the bachelor's degree and professional education courses have been important in the summer sessions of universities, colleges, and teachers colleges.

The prescription of higher standards for high-school teachers and for certain types of school administrators and supervisors has increased the demand for work leading to the master's degree and even to the doctorate. The large proportion of universities which emphasized graduate work in the summer sessions indicates a distinct demand for graduate degrees. Eleven of the teachers colleges reporting granted the master's degree and listed the work as of primary importance in the summer session.

Continuation of the program of studies of the regular year was the only other dominant purpose of the summer session in all types of institutions.

The limited emphasis upon those purposes which indicate specific contributions toward direct teacher education should be considered by directors of summer sessions in preparing their programs of work.

TABLE 1.—Number of institutions reporting each purpose as of primary or secondary importance in the organization of the summer session

Purposes of summer sessions	Number and types of institutions reporting									
	65 universi- ties		137 colleges		28 junior colleges		84 teachers colleges		19 normal schools	
	P <sup>1</sup>	S <sup>2</sup>	P <sup>1</sup>	S <sup>2</sup>	P <sup>1</sup>	S <sup>2</sup>	P <sup>1</sup>	S <sup>2</sup>	P <sup>1</sup>	S <sup>2</sup>
1	2	3	4	5	6	7	8	9	10	11
1. Continuation of the program of studies of the regular year.....	32	19	63	35	19	6	52	19	10	5
2. Convenience of administration by dividing the year into 4 equal parts.....	3	13	2	19	1	2	5	26	2	2
3. Regular year students an opportunity to make up back-work owing to absence, failure, etc.....	14	36	3	74	5	15	10	59	0	14
4. Opportunity for in-service teachers to obtain:										
(a) Preprofessional work (junior college).....	25	14	27	16	20	1	29	12	8	0
(b) Bachelor's degree.....	49	9	96	20	2	0	73	8	3	2
(c) Master's degree.....	50	5	26	7	0	0	11	0	0	0
(d) Doctor's degree.....	22	7	2	3	0	0	1	0	0	0
5. Undergraduate work for those who wish to reduce the period of residence (regular year students).....	27	28	51	56	12	6	30	41	5	10
6. Graduate work for those who wish to reduce the period of residence (regular year students).....	34	20	13	10	0	2	3	7	0	2
7. Opportunity for superintendents, principals, supervisors, teachers, and others who desire further professional work (no credit desired).....	25	20	16	43	5	3	17	32	3	9
8. Courses for persons who seek intellectual improvement (no credit desired).....	7	33	8	46	3	6	3	33	1	9
9. Professional courses meeting the requirements for the extension of teachers' certificates without examination.....	32	18	75	33	18	6	43	32	6	7
10. Opportunity for teachers to raise the grade of the teaching certificate now held.....	30	22	70	38	14	7	48	18	8	5
11. Offerings for out-of-State students who will later transfer their credits to an out-of-State institution.....	1	35	6	44	2	5	1	31	0	3
12. Opportunity for students to remove deficiencies in entrance requirements.....	1	20	8	35	5	8	2	24	0	3
13. Special offerings not given in the regular year, e.g., coaching vocational courses, institutes, etc.....	10	32	16	26	2	2	5	36	2	4
14. Facilities for experimentation and research with method or content of teaching subjects.....	19	12	7	16	1	2	7	19	0	4
15. A try-out period for high-school graduates who wish to acquaint themselves with institutional practices before entrance upon the work of the regular year.....	4	18	0	20	0	6	0	20	0	0

<sup>1</sup>P=Of primary importance in summer session.  
<sup>2</sup>S=Of secondary importance in summer session.

The table should be read as follows: Of the 65 universities reporting, 32 (column 2) indicated "continuation of program of the regular year" as of "primary importance" in the summer session, and 19 (column 3) indicated the same purpose as of "secondary importance." The difference between the total reports on primary and secondary importance and the number of institutions reporting represents either no answer or no indicated importance. In the case of "continuation of program of the regular year" for the universities, 65 less (32+19) equals 14 no answers or no indicated importance for that purpose. Read the data opposite each purpose under each type of institution in the same manner.

No significant differences were found in the importance assigned to purposes of the summer session and the importance assigned to the same purposes in the regular year. Further evidence of similarity in purposes was obtained by comparing the importance of each purpose

of the summer session with the importance of the same purpose during the regular year. Three categories were stated as follows: (1) Of primary importance in both summer session and regular year; (2) of primary importance in summer session and of secondary importance in the regular year; and (3) of secondary importance in the summer session and of primary importance in the regular year. These data are presented in table 2.

TABLE 2.—Number of institutions which indicated agreement upon the relative importance of various purposes of the summer session and their relative importance in the regular year

Purpose	65 universities			137 colleges			23 junior colleges			84 teachers colleges			19 normal schools		
	B <sup>1</sup>	S <sup>2</sup>	R <sup>3</sup>	B <sup>1</sup>	S <sup>2</sup>	R <sup>3</sup>	B <sup>1</sup>	S <sup>2</sup>	R <sup>3</sup>	B <sup>1</sup>	S <sup>2</sup>	R <sup>3</sup>	B <sup>1</sup>	S <sup>2</sup>	R <sup>3</sup>
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Opportunity for in-service teachers to obtain:															
(a) Preprofessional work (junior college).....	18	5	4	10	8	0	7	5	0	25	2	3	4	2	0
(b) Bachelor's degree.....	31	6	4	45	19	10	2	0	0	55	7	2	2	0	0
(c) Master's degree.....	27	12	2	6	6	0	0	0	0	5	3	0	0	0	0
(d) Doctor's degree.....	13	4	1	0	1	1	0	0	0	1	0	0	0	0	0
2. Opportunity for superintendents, principals, supervisors, teachers, and others who desire further professional work.....	5	10	0	2	8	0	2	1	0	8	3	0	0	0	0
3. Courses for persons who seek intellectual improvement (no credit desired).....	2	4	0	4	1	2	1	1	1	2	0	2	0	0	0
4. Professional courses meeting the requirements for the extension of teachers' certificates without examination.....	11	11	1	24	24	2	6	7	0	18	13	0	1	2	0
5. Opportunity for teachers to raise the grade of the certificate now held.....	11	11	1	16	29	1	6	4	0	24	12	1	1	1	2
6. Offerings for out-of-State students who will later transfer their credits to an out-of-State institution.....	1	0	0	3	1	0	2	0	0	0	0	0	0	0	0
7. Opportunity for students to remove deficiencies in entrance requirements.....	0	0	0	2	2	0	1	3	1	0	2	0	0	0	0
8. Facilities for experimentation and research with method or content of teaching subjects.....	2	0	1	3	0	1	1	0	0	6	1	2	0	0	0

<sup>1</sup> B = Of primary importance in both summer session and regular year.  
<sup>2</sup> S = Of primary importance in summer session and secondary importance in regular year.  
<sup>3</sup> R = Of secondary importance in summer session and primary importance in regular year.

The only differences found were that summer sessions placed a slightly greater emphasis on "professional courses meeting the requirements for the extension of teachers' certificates" and "opportunity for in-service teachers to obtain further professional work." The agreement on the purposes which pertained to the administrative pattern of the summer session and the regular year is significant. There is evidence that the summer session is being organized as an integral part of the regular academic year.

As an indication of changing purposes, directors of summer sessions were asked to state the changes in demand for certain types of work

in the summer sessions of 1931 as compared with the summer sessions of 1926. Three mutually exclusive categories were used: (1) No noticeable change; (2) increasing demand; and (3) diminishing demand. The returns are distributed in table 3.

TABLE 3.—Number of institutions reporting no noticeable change, increasing demand, or diminishing demand for the several types of work offered in summer sessions from 1926 to 1931

Types of summer session work done since 1926	65 universities			137 colleges			28 junior colleges			84 teachers colleges			19 normal schools		
	No noticeable change	Increasing demand	Diminishing demand	No noticeable change	Increasing demand	Diminishing demand	No noticeable change	Increasing demand	Diminishing demand	No noticeable change	Increasing demand	Diminishing demand	No noticeable change	Increasing demand	Diminishing demand
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Undergraduate work for credit.....	15	35	10	28	100	2	8	16	1	22	57	3	4	11	1
2. Graduate work for advanced degrees.....	2	55	0	2	35	1	0	0	0	1	19	0	1	2	0
3. Make-up courses for "incompletes" or "failures" from the regular year.....	29	8	17	63	27	24	13	7	1	41	8	24	9	1	4
4. Courses which meet requirements for teachers' certificates without examination.....	20	27	11	31	62	17	4	19	2	16	30	27	3	3	3
5. Professional courses for in-service teachers, supervisors, principals, and superintendents.....	11	49	1	34	62	6	6	8	0	22	54	3	3	14	0
6. Liberal arts and science courses of general type, e.g., political economy, anthropology, etc.....	25	28	2	46	46	3	13	3	0	27	32	3	5	3	0
7. Special cultural courses in which museums and similar agencies are utilized.....	25	5	3	28	3	1	6	1	0	25	14	3	4	1	0
8. Field trips in geology and geography.....	23	13	6	26	12	2	4	2	0	29	22	1	5	6	0
9. Supervised foreign travel.....	7	4	5	7	0	5	3	0	0	13	3	2	1	1	0
10. Music education.....	18	24	3	29	37	8	3	10	3	24	32	3	8	4	0
11. Physical education, health, and sports.....	14	30	4	18	33	5	4	11	0	13	50	2	5	5	1
12. Library training.....	7	23	3	13	29	0	2	7	1	16	36	3	6	3	0
13. Research and experimentation.....	9	34	0	8	20	0	2	1	0	13	19	1	2	0	0

The table should be read as follows: Of the 65 universities reporting, 15 (column 1) indicated no noticeable change in demand for undergraduate work for credit; 35 (column 2) indicated an increasing demand, and 10 (column 3) indicated a decreasing demand. The difference between the total of the cases in all 3 columns opposite a given type of work and the number of institutions reporting represents either no answer or no indicated consideration in the case of "undergraduate work for credit" for the universities, 65 less (15 plus 35 plus 10) equals 5 no answers or no indicated consideration for that purpose. Read the data opposite each type of work under each type of institution in the same manner.

The summer session offers a better opportunity for adaptation to changing needs than does the work of the regular academic year. Many summer session directors reported an increasing demand for undergraduate work for credit. An exception is noted in universities which reported a slight decrease. Colleges, universities, and teachers colleges reported, however, a greatly increased demand for graduate work. The increasing demand for professional education courses reported indicates that there will continue to be a place in summer school programs for this type of work. Competition among teachers will probably increase the demand for professional courses as long as an oversupply of certificated teachers exists. The general increase in

demand for graduate work during the summer session denotes a willingness on the part of teachers to secure more preparation than the minimum required for certification.

There was an increased demand for work in music education, physical education, library training, and research and experimentation. The absence of any extensive decrease in demand for summer session work in the several types of institutions indicated that summer sessions were continuing to serve the needs of students.

Because of its short duration and the absence of tradition, the summer session offers opportunities for experimentation which are difficult to obtain in the regular academic year. Unless attention is given to these opportunities, the summer session will unnecessarily limit its possibilities of service. The opportunity to experiment with educational methodology and educational content has apparently not yet been fully used in summer sessions. Adaptations of offerings and emphasis upon the practical values of the professional courses are elements in the summer session organization which may well be further stressed.

## CHAPTER II

# CALENDAR, ENROLLMENTS, AND FINANCIAL AND BUSINESS POLICIES

### SUMMER SESSION CALENDAR

The length of summer sessions is not uniform. The introduction of the 4-quarter system established 12 weeks as the length of each quarter including the summer session when operated as a fourth quarter. Summer sessions are attended primarily by teachers. The belief that teachers should not engage in study throughout an entire summer after a year of teaching has tended to retain short summer sessions. The longer sessions have usually been divided into two terms with unit courses in each of the terms for the benefit of teachers electing to attend only one term.

Table 4 shows the opening dates of 408 summer sessions in 1931 and the percentage of institutions having summer sessions of 6 weeks, 8 weeks, 9 weeks, 10 weeks, and 12 weeks.

TABLE 4.—*Percent of institutions with summer sessions of various lengths, listed according to opening date, 1931*

Opening date	6 weeks	8 weeks	9 weeks	10 weeks	12 weeks	Total
1	2	3	4	5	6	7
May (last week).....	0.05	16	3.0		2.5	2.4
June 1-5.....	3.5	16	22.7		28.1	17.6
June 8-12.....	14.2	12	43.9	48.1	40.5	27.0
June 15-19.....	18.9	28	25.7	18.5	25.6	23.0
June 22-26.....	27.8	12	3.0	7.4	3.3	14.2
June 29-July 3.....	19.8	8	1.5			8.8
July 6.....	13.0	4				5.6
July (last week).....	2.3	4				1.2
Total number of institutions.....	100	25	66	27	121	408

June is the month for summer session openings regardless of the length of the session offered. Less than 3 percent of the institutions opened their summer sessions before June and less than 7 percent opened later than June. Fifty percent of all the institutions opened their summer sessions either the second or the third week in June. A greater flexibility in the opening of the shorter session is permitted without conflict between the closing date and the opening of the fall term in the public schools; the longer sessions often run until the last week in August, leaving little time for the teacher in service to return to his position for the opening of the school year. Furthermore, the

summer meetings of the National Education Association usually conflict with summer sessions. Since the majority of institutions begin their summer sessions after the first week in June, and most public schools with 10-month terms close during the first and second week in June, there is no interval of time in which in-service teachers may attend both the N.E.A. meetings and the regular summer term. Where travel distances permit, the institutions should make adjustments in their summer session calendars for teachers who wish to attend the meetings. The adjustments provided by institutions in California during the summer meeting of the N.E.A. at Los Angeles in 1931 exemplified a practical coordination of their summer sessions with the N.E.A. meetings.

More than two fifths of the 408 institutions offered 6 weeks summer sessions and approximately 30 percent offered 12 weeks; 6 percent of the institutions offered 8 weeks; 16 percent, 9 weeks; and 7 percent 10 weeks.

Table 5 shows the varying lengths of summer session for each type of institution. These data indicate that there was not a pronounced tendency for any type of institution to have any one length of summer session.

TABLE 5.—Percent of institutions of different types with summer sessions of various lengths, 1931

Type of institution	Number of cases	6 weeks	8 weeks	9 weeks	10 weeks	12 weeks
1	2	3	4	5	6	7
Universities.....	100	45.0	8.3	16.5	6.4	23.8
Colleges.....	163	35.9	4.8	22.5	7.9	28.0
Teachers colleges.....	89	46.0	3.3	6.7	3.3	40.4
Normal schools.....	28	39.3	7.1	14.3	10.3	28.6
Private training or technical schools.....	19	47.3	15.7	5.3	5.3	26.3
Percent of total.....		41.4	6.1	16.2	6.6	29.6

#### SUMMER SESSION ENROLLMENTS

Summer session enrollments affect the summer session organization in numerous ways, and the organization affects enrollments. Rapid growth in enrollment has in many instances, taxed the facilities of the institutions. The complex nature of the student body has demanded a wide range of offerings. Increased standards for teacher certification in several States have led large numbers of in-service teachers to attend summer sessions, and in some cases specific types of work have been prescribed for these teachers. Unhampered by tradition, summer sessions have frequently been organized with novel features<sup>1</sup> which attracted many students.<sup>1</sup>

<sup>1</sup> Ratcliffe, Ella B. *Summer Educational Opportunities; Novel Features of University and College Summer Sessions*. Washington, U.S. Government Printing Office, 1932. (Office of Education, Pamphlet No. 37.)

TABLE 6.—Rank of States determined by comparison of summer enrollments in education with the total enrollment in the summer sessions in each State

State	1926		1931		Increase	Decrease
	Percent	Rank	Percent	Rank		
1	2	3	4	5	6	7
Alabama.....	81.3	8	76.4	18		10
Arizona.....	61.9	37	97.0	1	36	
Arkansas.....	78.3	10	90.6	4	6	
California.....	62.4	36	48.3	45		9
Colorado.....	72.5	20	64.8	34		14
Connecticut.....	89.5	2	88.8	6		
Delaware.....	80.9	9	77.4	16		4
District of Columbia.....	29.2	49	44.0	47	2	7
Florida.....	68.6	26	69.2	27		
Georgia.....	57.5	42	62.6	37	5	1
Idaho.....	82.9	7	88.2	7	(1)	
Illinois.....	49.7	46	54.6	39	7	
Indiana.....	69.2	25	71.9	25	(1)	
Iowa.....	61.7	38	56.1	40		2
Kansas.....	64.5	34	68.3	30	4	
Kentucky.....	69.7	24	72.3	24	(1)	
Louisiana.....	72.6	19	63.0	36		17
Maine.....	84.9	6	91.0	3	3	
Maryland.....	64.7	33	66.1	31	2	
Massachusetts.....	50.2	45	41.8	48		3
Michigan.....	65.4	32	64.9	41		9
Minnesota.....	53.0	44	52.9	43	1	
Mississippi.....	65.7	31	76.5	17	14	
Missouri.....	68.2	28	76.4	20	8	
Montana.....	86.1	4	66.0	52		28
Nebraska.....	66.4	30	78.4	14	16	
Nevada.....	67.6	29	84.0	9	20	
New Hampshire.....	57.8	41	69.1	28	13	
New Jersey.....	49.6	47	38.7	49		2
New Mexico.....	75.9	13	85.3	8	5	
New York.....	53.8	43	82.1	44		1
North Carolina.....	76.5	12	81.3	11	1	
North Dakota.....	89.9	1	83.2	10		9
Ohio.....	71.0	22	68.4	29		7
Oklahoma.....	62.7	35	76.4	19	16	
Oregon.....	75.4	15	73.4	23		8
Pennsylvania.....	74.0	18	70.0	26		8
Rhode Island.....	89.2	3	95.9	2	1	
South Carolina.....	69.7	40	79.8	12	28	
South Dakota.....	71.5	21	79.0	13	8	
Tennessee.....	85.1	5	90.4	5	(1)	
Texas.....	60.8	39	65.6	33	6	
Utah.....	70.3	23	64.6	35		12
Vermont.....	44.7	48	45.5	46	2	
Virginia.....	75.6	14	78.3	15		1
Washington.....	74.8	16	62.5	38		12
West Virginia.....	74.1	17	76.3	21		4
Wisconsin.....	68.4	27	52.9	42		15
Wyoming.....	77.7	11	76.3	22		11

<sup>1</sup> No change.

The number of students in summer sessions in the various States has been reported annually since 1925 by the National Education Association.<sup>2</sup> Table 6 gives the ranks of the States on the basis of the proportion of the number of students taking courses in education to the total number of students enrolled in summer sessions in 1926 and

<sup>2</sup> Published annually in the November issue of the Journal of the National Education Association.

1931. In 1926 the range was from 29.2 to 89.9 percent. In 1931 the range was from 38.7 to 97 percent. From 1926 to 1931, 4 States did not change their relative rank and 16 States increased or decreased their rank by fewer than five steps.

The enrollments for the summer sessions of 321 institutions in 1931 are given in table 7. The range and median for matriculated undergraduates, matriculated graduates, unclassified students, and total enrollments are shown for each type of institution.

The data show wide variations in the summer session enrollments in all types of institutions. Colleges and junior colleges had the smaller summer school enrollments. The median enrollment in normal schools was approximately one-third the median enrollment in universities; the median enrollment in teachers colleges was approximately two-thirds. The median enrollment of matriculated undergraduates in universities was less than the median in teachers colleges but materially greater than the medians in the other types of institutions. The number of matriculated graduate students reported indicates that the universities devoted considerable attention to graduate work during the summer session.

TABLE 7.—Range and median enrollment in the summer sessions of the various types of institutions in 1931

Classification of enrollments	65 universities <sup>1</sup>		137 colleges <sup>1</sup>		28 junior colleges		84 teachers colleges <sup>1</sup>		19 normal schools <sup>1</sup>	
	Range	Median	Range	Median	Range	Median	Range	Median	Range	Median
1	2	3	4	5	6	7	8	9	10	11
Matriculated undergraduates.....	0- 2,950	575	0-1,500	125	24-3,555	91	7-3,400	618	22-1,050	200
Matriculated graduates.....	0- 6,145	265	0- 626	28			0-1,477	35	0- 320	60
Unclassified students.....	0- 4,312	180	0- 804	38	0- 40	7	0- 563	25	0- 270	17
Total summer session enrollments.....	44-14,016	950	10-1,800	190	24-3,605	93	35-3,504	638	137-1,050	325

<sup>1</sup> No data for 3 universities, 4 colleges, 4 teachers colleges, and 1 normal school.

<sup>2</sup> Normal school graduates with less than 4 years' work.

An analysis of the sequence of courses required for graduate degrees for in-service teachers showed that a rotation of offerings was most frequently used by universities, colleges, and teachers colleges which provided graduate offerings in their summer sessions. A partial program of courses required for graduate degrees was offered one summer and the remaining required courses were offered the following summer. The next most frequently used plan was a complete offering in each summer session of all courses required for graduate degrees. A limited number of institutions provided substitute "equivalent" courses in the summer session for some of the graduate courses required in the

regular year, and a negligible number permitted the completion of required graduate courses not offered in the summer session by class-extension. Six universities reported no graduate courses in the summer session. One hundred and two colleges reported no graduate degrees in summer sessions, although 53 of these reported graduate students in attendance in the summer of 1931. Seventy-three teachers colleges reported no graduate degrees, although 30 of these enrolled graduate students in the 1931 summer session.

Some criticism has been voiced concerning the completion of the requirements for graduate degrees wholly in summer sessions. A tabulation of the limitations on the amount of summer session work which could be applied toward graduate degrees showed that the master's degree requirements could be satisfied wholly by attendance upon summer sessions in practically all the universities, colleges, and teachers colleges which offered work toward that degree. Only 3 universities and 7 colleges reported that the master's degree requirements could not be satisfied by attendance upon summer sessions. Practically the reverse in policy was followed with respect to the satisfaction of the requirements for the doctor's degree. Among all the institutions which offered work toward the doctorate in summer sessions, only 6 universities stated that the requirements could be wholly satisfied in summer sessions. In the majority of institutions where graduate courses were provided in the summer session, students were allowed to complete a limited part of the required work for advanced degrees in institutions other than the institution granting the degree. The amount of required work which would be accepted from other institutions was usually restricted to one-fourth or less.

A specified time limit for the completion of the requirements for graduate degrees was not found to be general. Among the institutions which specified time limits for the completion of the requirements, the median for the master's degree was 4.6 years and the median for the doctor's degree was 5.5, with a range of 1 to 10 years for the master's degree and a range of 3 to 10 years for the doctor's degree.

The data in table 6 show a large proportion of the summer session students enrolled in courses in education. According to the purposes stated in table 1, most of the institutions provided extensively for teachers in their summer offerings. Table 8 shows the percentage of teachers among the undergraduates and graduates in the summer session enrollments of 1931 and the proportion of the total enrollment who came from sources outside the State. According to the medians for normal schools and teachers colleges, the undergraduate enrollments were composed almost entirely of pre-service and in-service teachers. The proportion of pre-service and in-service teachers in the undergraduate enrollments in universities, colleges, and junior colleges was materially less, the medians being 56.5, 69, and 60 per-

cent, respectively. The proportion of pre-service and in-service teachers in the graduate enrollments was distinctly large in all types of institutions having graduate students. The median percentage was 80 or more in all the types of institutions. Graduate work in the summer session is obviously taken predominantly by teachers.

The data in table 8 indicate that in the summer of 1931 the universities had the greatest proportion of nonresident students (students from outside the State); the median percent which nonresidents were of the total enrollment was approximately 20. The enrollments of the colleges, junior colleges, teachers colleges, and normal schools were composed largely of resident students. The universities offered most of the graduate work; approximately four-fifths of their graduate students in summer sessions were teachers, many of whom came from outside the State.

TABLE 8.—Median percentage of teachers in summer session enrollments, 1931

Type of enrollment	65 universities		137 colleges		28 junior colleges		84 teachers colleges		19 normal schools		
	Median	No data	Median	No data	Median	No data	Median	No data	Median	No data	
	1	2	3	4	5	6	7	8	9	10	11
Undergraduate, preservice, and in-service teachers.....	56.5	34	69.0	45	60.0	4	86.0	25	96.0	8	
Graduate, preservice, and in-service teachers.....	80.0	23	86.7	97			88.7	59	97.1	12	
From outside the State.....	19.5	20	4.5	38	1.9	9	3.2	18	3.0	5	

A distribution of institutions on the basis of the ratio of undergraduate enrollment to graduate enrollment shows 2 universities with no undergraduates; 38 with more undergraduates than graduates, the average ratio being 3 undergraduates to 1 graduate student, and 12 with more graduates than undergraduates, the average ratio being 2.9 graduates to 1 undergraduate. Of the colleges with graduate students, 46 had more undergraduates than graduates, the average ratio being 19 undergraduates to 1 graduate; 5 colleges reported more graduates than undergraduates, the average ratio being 5.6 graduates to 1 undergraduate. Of the teachers colleges with graduate students, 21 had more undergraduates than graduates, the average ratio being 40 undergraduates to 1 graduate; 4 teachers colleges reported more graduates than undergraduates, the average ratio being 3.3 graduates to 1 undergraduate.

#### POLICY-FORMING BODIES OF SUMMER SESSION

Attention has been directed previously to the problem of coordinating the work of the summer session with that of the regular year. The extent to which continuity of policy is guaranteed rests primarily

with the stability of the body which determines policies. Prevailing practices in the determination of policies were ascertained for the several types of institutions. In all types of institutions, the determination of summer session policies was vested most frequently in the same body which determined policies in the regular year. The next most frequent practice in all types of institutions was the determination of summer session policies by the regular staff members who taught in the summer session. In a few cases the determination of policies was vested in the entire summer session faculty, both regular and visiting. These practices indicate that considerable stability and continuity in summer session policies is not only possible but probable. Whether such practices tend to make summer schools resemble too closely the work of the regular year depends upon the extent to which the summer session adheres to the special purposes for which it was established.

#### GENERAL FINANCING AND ADVERTISING POLICIES OF THE SUMMER SESSION

The support of summer sessions has been a difficult problem during the rapid growth of enrollments and the increased demand for greater variety of offerings. General practices of financial support, as reported in 1931, for the separate types of institutions are shown in table 9.

TABLE 9.—General financing policies of the summer session, 1931

Financing policy	65 univer- sities	137 colleges	28 junior colleges	84 teach- ers col- leges	19 nor- mal schools
1	2	3	4	5	6
Self-supporting.....	37	89	23	11	13
Not self-supporting.....	18	31	3	46	3
Part of regular year budget.....	2	1	1	21	3
No data.....	8	16	1	6	3
More than meet expenses.....	30	53	10	7	-----
Do not meet expenses.....	20	70	13	39	10
No data.....	5	14	5	33	0
Balance used for summer session expansion.....	11	9	3	2	-----
Balance applied to budget of regular year.....	19	44	6	4	-----
Balance used for other purposes.....	10	0	1	1	-----
Deficit made up from regular year income.....	26	49	6	32	6
Deficit made up from other sources.....	3	8	5	4	3
No data.....	-----	6	4	42	11

Summer sessions in private institutions were in almost all cases expected to be self-supporting. State-supported institutions have developed summer sessions on the basis of both self-support and state-support. Few summer sessions in any of the several types of institutions were supported from the budget of the regular year. The number of universities in which summer sessions more than met expenses was equal to the number in which they did not. In all other

types of institutions the number of the summer sessions which did not meet their expenses was greater than those which met expenses. The usual practice in making up the deficit in summer sessions was to balance the deficit from the budget of the regular year.

Among the institutions which more than met expenses of the summer session, the balance was most frequently applied to the budget of the regular year. Few of the institutions applied the excess earnings toward expansion of their summer sessions. The universities did this more frequently than any other type of institution.

The absence of regular financial support for the summer session and the necessity of being self-supporting have created a need for advertising.

Table 10 shows the primary purposes of summer-session advertising in 1931 as indicated by the directors in the several types of institutions. The purpose most frequently listed was "to obtain more students." The second most frequent purpose was very similar, "to secure new groups of students." "To create good will" was third in frequency. Summer-session advertising seemed in general to be directed toward expansion of enrollment. Most of the institutions in their advertising of summer sessions expected to serve three or more of the purposes listed in table 10. Nine institutions, including all types, reported "no advertising" for their summer sessions.

TABLE 10.—Primary purposes of summer-session advertising in various institutions

Primary purposes of advertising	65 uni- versities	137 colleges	28 junior colleges	84 teach- ers col- leges.	19 normal schools	Total
1	2	3	4	5	6	7
Obtain more students.....	45	97	21	53	9	226
Secure new groups.....	33	56	12	28	11	140
Create goodwill.....	26	43	10	39	4	122
Serve State teachers.....	1	4	1	3	0	9
Stimulate professional growth.....	0	2	0	2	0	4
Announce courses.....	0	7	0	11	4	22
Miscellaneous.....	1	0	1	1	0	3
No data.....	5	15	1	9	2	32
No advertising.....	2	4	0	2	1	9

TABLE 11.—Number of institutions which indicated 1 or more purposes in summer-session advertising

Number of purposes	65 uni- versities	137 colleges	28 junior colleges	84 teach- ers col- leges	19 normal schools	Total
1	2	3	4	5	6	7
1.....	19	47	12	26	6	110
2.....	25	52	12	31	8	128
3.....	14	19	3	15	2	53
4.....	0	0	0	1	0	1
No data.....	5	15	1	9	2	32
No advertising.....	2	4	0	2	1	9

Table 12 shows to what student groups the summer-session advertising was directed. In-service teachers of the State were cited most frequently as a group to which advertisements were directed, and former students of the summer sessions constituted the second most frequently mentioned group. Advertisements were directed to students of the regular year, high-school graduates, and alumni by 30 to 50 percent of the institutions. The comparatively large percentage of nonresident students in universities may have been the result of the advertising policy of those institutions, since two-thirds of the universities directed their advertising to students outside the State. More than 75 percent of all the institutions directed their advertisements to three or more of the groups listed in table 12.

TABLE 12.—Student groups to which summer-session advertising was directed

Student group	65 uni- versities	137 colleges	28 junior colleges	84 teach- ers col- leges	19 normal schools	Total
1	2	3	4	5	6	7
Alumni.....	22	33	6	37	6	104
Out-of-State students.....	40	21	4	7	3	75
Former summer students.....	56	92	16	64	8	236
High-school graduates.....	14	46	19	42	7	128
In-service teachers of State.....	57	110	19	75	14	296
Students of regular year.....	36	69	14	40	5	164
School administrators.....	2	4		3		9
High-school failures.....			1			1
Miscellaneous.....		1		1		2
No data.....	2	15	2	4	2	25
No advertising.....	2	4	0	2	1	9

Table 13 gives a distribution of the different types of institutions according to the summer session features emphasized in their advertisements. The three factors emphasized most frequently were unique or special educational features, professional standing of the staff, and climate. Library facilities and environment adapted for special types of field work were also frequently stressed in advertisements. Approximately 65 percent of the institutions included in their advertisements for the summer session three or more of the features listed in table 13.

The mediums employed for advertising the summer sessions are shown in table 14. Special bulletins on the summer session were employed most frequently. Catalogs, local newspapers, and State educational magazines were also frequently used. Directors were asked to rank the advertising mediums according to effectiveness and cost. On the basis of the average rankings given, the several advertising mediums for summer sessions were arranged in the following descending order of effectiveness: Special bulletins, circular letters, catalogs, State educational magazines, local newspapers, posters, public addresses, national professional magazines, general national magazines, and radio broadcasts.

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Expenditures for advertising were an important item in most summer-session budgets. Table 15 gives the data on the expenditures for advertising in 1931. Size of the institution, number of individuals reached, and number and type of advertising mediums employed explain the wide variations in budgets for advertising.

TABLE 13.—Number of institutions which featured various elements in summer-session advertising

Element featured	65 universities	137 colleges	28 junior colleges	84 teachers colleges	19 normal schools	Total
1	2	3	4	5	6	7
Unique of special educational features.....	44	70	11	48	7	180
Environment adapted to special types of field work.....	22	25	4	17	7	75
Climate.....	30	45	11	36	11	133
Library facilities.....	27	32	5	22	6	92
Professional standing of staff.....	46	69	10	44	9	178
Low cost.....	1	6	2	1	1	11
Convenient location.....	1	5	1	0	0	7
General opportunities.....	5	9	2	10	3	29
Courses for certificates.....	0	6	1	4	0	11
Credits for degrees.....	0	9	0	4	0	13
Miscellaneous.....	0	1	2	1	0	3
No data.....	6	22	6	16	3	53
No advertising.....	2	4	0	2	1	9

TABLE 14.—Number of institutions employing each advertising medium

Advertising medium	65 universities	137 colleges	28 junior colleges	84 teachers colleges	19 normal schools	Total
1	2	3	4	5	6	7
National professional magazines.....	22	14	0	5	2	43
State educational magazines.....	33	46	3	44	12	138
National magazines, general type.....	8	8	3	2	0	19
Local newspapers.....	41	83	18	41	9	192
Radio broadcasts.....	9	14	3	4	1	31
Public addresses.....	15	33	8	20	2	78
Special bulletins.....	45	93	14	57	11	220
Catalogs.....	46	70	17	54	9	196
Posters.....	24	31	4	13	4	76
Circular letters.....	3	12	2	6	4	27
Miscellaneous.....	5	14	1	5	0	25
No advertising.....	2	4	0	2	1	9
No data.....	3	14	4	6	1	28

<sup>1</sup> Work of field man, program advertisements, departmental leaflets, high-school annuals, college papers.

TABLE 15.—Expenditures and number of mediums for advertising in summer-session, 1931

Item	46 universities	89 colleges	17 junior colleges	53 teachers colleges	14 normal schools	219 all combined
1	2	3	4	5	6	7
Total expenditures for advertising.....	\$78,656.88	\$34,461.13	\$5,997.22	\$24,749.54	\$2,735.10	\$146,599.87
Range of expenditures.....	\$11-	\$5-	\$5-	\$50-	\$-	\$-
Average expenditure per institution.....	\$9,391.50	\$2,900.00	\$3,600.00	\$4,000.00	\$776.00	\$9,391.50
Average number of mediums used per institution.....	\$1,709.93	\$387.20	\$352.78	\$463.09	\$195.36	\$669.41
No data.....	4.5	3.7	3.1	3.7	3.5	3.3
	19	48	11	31	5	114

Universities spent more on the average for advertising and used a greater number of advertising mediums than any other group of institutions. Colleges, junior colleges, and teachers colleges spent about the same average amount for advertising and used about the same number of different mediums.

The foregoing evidence concerning purposes of advertising, groups to which advertisements were sent, types of advertising mediums employed, and the financial outlay for advertising shows enough diversity in practice to indicate the need for a more thorough study of the advertising problem in summer sessions.

## CHAPTER III

### THE SUMMER SESSION STAFF

A comparison of the staff of the summer session with the staff of the regular year as reported in catalogs indicated a change of staff for summer sessions in most of the institutions. The higher percentage of teachers in the student enrollment of the summer session increased the demand for professional courses for teachers and decreased the demand for some courses of the regular year. Thus, instructors of the regular year whose courses were not offered in the summer session were often not retained on the summer session staff. Where increased professional offerings were given, additional instructors were secured from other institutions and from public-school positions.

Dr. Avent, in his study of summer sessions in State teachers colleges, recommends the employment of instructors from public-school systems in the following terms:

It would seem most desirable that the teaching staff of the summer session should represent as many types of experience with the public-school system as are being looked forward to by students attending such summer sessions.<sup>1</sup>

This recommendation could also apply to members of the summer session staff selected from the regular staff as well as the members who are considered visiting instructors.

The selection of the staff for the summer session where the courses vary from the courses of the regular year depends upon the purposes of the summer session, the degree of continuity of the work with that of the regular year, and the number of courses which are offered solely in the summer session. The practices reported in the selection of summer staff members from the regular year staff varied widely. If the courses of the regular year were offered in the summer session, the most frequent practice was to permit the instructors of these courses, if they so desired, to teach in the summer session. In some institutions, however, the instructors of the regular year were not permitted to teach every summer, even though they might desire to do so. In few instances were staff members of the regular year required to teach every summer, or alternate summers, or two summers with leave of absence the third summer. A few institutions reported the practice of equitable rotation and selection on the basis of qualifications for teaching the subjects offered. In one institution, instructors were required to teach three summers and were allowed the fourth summer off with pay.

<sup>1</sup> Avent, J. E. *Summer Sessions in State Teachers Colleges*. Richmond, Va., William Byrd Press, Inc., 1925. p. 137.

The employment of some visiting instructors in summer sessions has been the practice in most institutions in recent years. Table 16 gives a percentage distribution of the regular faculty and the visiting faculty of the summer session for 1931. The approximate medians show: In universities, 78 percent of the total summer session staff was from the staff of the regular year; in colleges, 84 percent; and in teachers colleges, 83 percent. Colleges and teachers colleges in general employed a greater percentage of regular staff members in their summer sessions than did universities. Only 9 institutions out of the 145 tabulated employed a greater proportion of visiting instructors than staff members from the regular year.

TABLE 16.—*Distribution of institutions according to the proportion of the regular faculty and the visiting faculty to the total summer session faculty, 1931*

Percent (range)	50 universities		54 colleges		41 teachers colleges		145 all combined	
	Regular	Visiting	Regular	Visiting	Regular	Visiting	Regular	Visiting
1	2	3	4	5	6	7	8	9
0.....		2		12		7		21
1-4.9.....		2		2		2		6
5-9.9.....		2		1		4		7
10-14.9.....		6	1	11		6	1	23
15-19.9.....		6	1	5		4	1	15
20-24.9.....		10		3		7		20
25-29.9.....		4	1	4		4	1	12
30-34.9.....		8		6		1		15
35-39.9.....		4		4		1		9
40-44.9.....	1	4		1	1	1	2	5
45-49.9.....	1			1		2	1	3
50-54.9.....		1	2	1	2		4	2
55-59.9.....	3	1				1	3	2
60-64.9.....	4		5		1	1	10	1
65-69.9.....	5		4		1		10	
70-74.9.....	6		4	1	6		16	1
75-79.9.....	9		2		5		16	
80-84.9.....	7		8		5		20	
85-89.9.....	6		9	2	5	1	20	3
90-94.9.....	4		3		4		11	
95-99.9.....	2		2		3		7	
100.....	2		12		7		21	

Data concerning the types of institutions and public-school positions from which visiting instructors were secured for the summer sessions of 1931 are presented in table 17. More visiting instructors in universities came from other universities than from any other type of institution or position; the same practice obtained in teachers colleges. Approximately a third of the visiting staff in each group of institutions were secured from public-school positions. Universities secured staff members from institutions outside the State in greater proportion than colleges and teachers colleges; more than three fifths of the visiting instructors in universities came from outside the State. Colleges employed a greater proportion of visiting instructors from sources within the State than did either teachers colleges or universities.

The educational qualifications of staff members of the summer session have been considered one index of the quality of the work

offered. The relatively large percentage of staff members from the regular year could not be criticized on the basis of educational qualifications without reflection on the work of the regular year. As a means of comparing the summer session staff with that of the regular year, the educational qualifications (in terms of highest earned degree) of the regular and visiting staff members in the summer sessions of 1931 are shown for each group separately and combined in table 18.

TABLE 17.—Number of visiting instructors secured from within the State and from outside the State for the summer session of 1931

Source	44 universities			48 colleges			23 teachers colleges			
	With-in	Out-side	Total	With-in	Out-side	Total	With-in	Out-side	Total	
	1	2	3	4	5	6	7	8	9	10
Universities.....	26	281	307	11	33	44	25	52	77	
Colleges.....	62	147	209	23	18	41	14	22	36	
Junior colleges.....	2	2	4	1	1	2	3	1	4	
Teachers colleges.....	23	33	56	1	8	9	5	8	13	
Normal schools.....	16	10	26	3	3	6	8	7	15	
City training schools.....		1	1	4		4				
Private training schools.....	20	38	58	4	8	12	4	6	10	
Superintendency.....	48	27	75	20	3	23	31	11	42	
Principalship.....	29	24	53	20	2	22	21	1	22	
Supervisory.....	85	71	156	26	5	31	28	11	39	
Classroom teaching.....	85	70	155	48	14	62	41	17	58	
Miscellaneous.....	87	66	152	23	7	30	20	16	36	
Total.....	483	769	1,252	183	102	285	200	152	352	
No data.....			95			48			65	
Total visitors.....	483	769	1,347	183	102	333	200	152	417	
Number of cases, no visitors.....			2			12			7	
Number of cases, no data.....			4			6			1	
Percent of total visiting staff.....	33.6	61.4		64.2	33.8		56.8	43.2		

TABLE 18.—Percent of regular and visiting members of summer session faculties holding Ph.D., M.A., A.B., and no degree, 1931

Type of institution	Number of institutions	Total number of persons	Percent					
			Ph.D.	M.A.	A.B.	No degree	Un-known	
	1	2	3	4	5	6	7	8
<b>REGULAR</b>								
Universities.....	50	4,209	44.0	34.0	16.3	5.4	0.3	
Colleges.....	54	1,144	28.9	41.8	20.5	7.9	0	
Teachers colleges.....	36	2,076	15.2	50.4	25.3	8.0	1	
<b>VISITING</b>								
Universities.....	150	1,366	33.2	33.5	17.6	14.6	1.1	
Colleges.....	54	337	20.5	38.0	19.3	17.2	5.0	
Teachers colleges.....	36	376	17.5	41.2	22.1	15.4	2.6	
<b>COMBINED</b>								
Universities.....	50	5,635	41.4	33.9	16.6	7.6	.6	
Colleges.....	54	1,481	20.9	40.9	20.3	10.0	1.9	
Teachers colleges.....	36	2,452	15.6	49.0	25.6	9.1	.7	

1 3 institutions with no visiting instructors.  
 2 12 institutions with no visiting instructors.  
 3 7 institutions with no visiting instructors.

The difference between regular staff members and visiting staff members in terms of educational qualifications (on the basis of highest earned degree) was relatively small. In universities and colleges the percentage of visiting staff with the various degrees was slightly less than the percentage of regular staff in each degree group. In the teachers colleges the percentage of the visiting staff with the doctorate was slightly greater than the percentage of regular year staff. Master's and doctor's degrees were held by a greater percentage of the summer staff in universities than in colleges and teachers colleges. Approximately two thirds or more of the entire staff in each group of institutions held either the master's or doctor's degree as the highest earned degree.

The median teaching loads in terms of clock-hours per week were tabulated for separate types of institutions. Universities, colleges, teachers colleges, and normal schools had almost identical median teaching loads—14.2 to 14.7 clock-hours per week. The median for junior colleges was approximately 3 clock-hours more. The majority of institutions made no differentiation in teaching loads between graduate and undergraduate instruction in the summer session. Where teaching loads were differentiated, the teaching load for graduate instruction was usually 3 to 5 hours less than the teaching load for undergraduate work. A few cases were reported in which teaching loads were reduced for instructors engaged in student counseling work. The general practice, however, showed no adjustment in teaching load for counseling work.

## CHAPTER IV

# CURRICULUM TRENDS, AND SUMMER SESSION TRAINING SCHOOLS

### TRENDS IN SELECTED SUMMER SESSION CURRICULA

Course offerings in summer sessions are determined in large part by the current demand for different types of work. The Survey of Land-Grant Colleges and Universities revealed several factors which restrict development of summer sessions and others which encourage expansion of summer educational programs.<sup>1</sup> The demands of students furnish the basis for the expansion of summer-session programs in most instances. Development is most often restricted by administrative and fiscal matters.

Table 3 on page 407 indicates a change in demand for certain types of work in summer sessions during the 5-year period from 1926 to 1931. Similar changes with reference to subject-matter fields are revealed in tables 19 and 20. The data were obtained from the summer-session catalogs for the summers of 1926 and 1931. Twelve universities and colleges and 12 teachers colleges in all sections of the United States were selected by the Survey staff for the study. The following institutions were selected:

#### *Universities and colleges*

University of California, Berkeley.  
University of North Carolina, Chapel Hill.  
University of Chicago, Chicago, Ill.  
University of Iowa, Iowa City.  
University of Pittsburgh, Pittsburgh, Pa.  
Oberlin College, Oberlin, Ohio.  
University of Minnesota, Minneapolis.  
Florida State College for Women, Tallahassee.  
William and Mary College, Williamsburg, Va.  
Columbia University, New York, N. Y.  
Harvard University, Cambridge, Mass.  
University of Vermont, Burlington.

<sup>1</sup> Klein, Arthur J. Survey of Land-Grant Colleges and Universities. Washington, U.S. Government Printing Office, 1930. (Office of Education, Bulletin, 1930, No. 9, vol. 2.) P. 410-414.

*Teachers colleges*

San Jose State Teachers College, San Jose, Calif.  
Colorado State Teachers College, Greeley.  
Kansas State Teachers College, Emporia.  
Iowa State Teachers College, Cedar Falls.  
Western State Teachers College, Kalamazoo, Mich.  
Ball State Teachers College, Muncie, Ind.  
North Texas State Teachers College, Denton.  
East Central State Teachers College, Ada, Okla.  
George Peabody College for Teachers, Nashville, Tenn.  
Eastern Kentucky State Teachers College, Richmond.  
State College for Teachers, Albany, N. Y.  
State Teachers College, Indiana, Pa.

Six fields of instruction were selected for this study of courses; namely, biology, commerce, history, English, music, and education. On the basis of the catalog description of the courses, each course was classified under major headings as shown in tables 19 and 20. In addition to the courses listed in the catalogs under education, all courses in other departments which were described as professional in content were transferred to education. Because of indefinite and meager descriptions in some cases, no claim is made that all the courses were properly grouped. The classification employed, however, was consistently followed and will, therefore, indicate trends and make comparisons between groups possible.

Table 19 shows the number of courses offered in each major division for each of the six departments selected. The data are arranged according to the two groups of institutions, and the gross number of courses in each division of each college department is shown for the summer sessions of 1926 and 1931. By this arrangement, the percentage of increase or the percentage of decrease from 1926 to 1931 can be determined for each division in each department in both groups of institutions, and certain trends can thus be indicated.

*Biology department.*—All the major divisions in the biology departments of teachers colleges showed a decided increase in the number of courses from 1926 to 1931. Offerings in zoology increased to a greater extent than those in biology, botany, or bacteriology. In the offerings in three of the divisions of work in the biology departments, the change was less marked in universities and colleges than in teachers colleges. Biology remained unchanged in the number of offerings; botany, bacteriology, and zoology offerings increased slightly. The most distinct increase in biology offerings in both groups of institutions was on the graduate level.

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TABLE 19.—Number of courses offered in 6 separate college departments in 18 universities and colleges and 12 teachers colleges for the summer sessions of 1928 and 1931

Courses offered	Universities and colleges		Teachers colleges		Percent of change from 1928 to 1931			
	1928	1931	1928	1931	Universities and colleges		Teachers colleges	
					Increase	Decrease	Increase	Decrease
1	2	3	4	5	6	7	8	9
<b>BIOLOGY DEPARTMENT</b>								
Biology.....	14	14	20	20			45.0	
Botany and bacteriology.....	50	61	38	45	22.0		18.4	
Zoology.....	54	59	15	32	9.3		113.3	
Graduate courses in biology.....	10	20	2	6	100.0		200.0	
<b>COMMERCE DEPARTMENT</b>								
Survey.....			1					
Auditing.....	30	29	27	34		3.3	25.9	
Principles of economics.....	130	134	40	47	3.1		17.5	
Economic history.....	9	13	1	3	44.4		200.0	
Secretarial training.....	25	22	61	77		12.0	26.2	
Graduate courses in commerce.....	3	12	2	3	300.0		50.0	
<b>HISTORY DEPARTMENT</b>								
General orientation.....	8	5	2	3		37.5	50.0	
American.....	63	80	54	63	27.0		16.7	
Ancient.....	12	11	5	9		8.3	80.0	
English.....	16	16	8	5				37.5
European.....	39	47	24	30	20.5		25.0	
The Far East.....	2	3	0	1	50.0		100.0	
The World War.....			2	1				50.0
Research.....			1	4				300.0
Graduate courses in history.....	7	20			185.7			
<b>ENGLISH DEPARTMENT</b>								
General survey.....	3	4	11	10	33.3			9.1
Composition and grammar.....	50	45	38	42		10.0	10.5	
Debate.....	1	2	3	0	100.0			100.0
Dramatics.....	11	20	10	20	81.8		100.0	
Journalism.....	14	18	6	8	28.6		33.3	
Language.....	7	3	2	4		57.1	100.0	
Literature.....								
American.....	20	25	15	25	25.0		66.7	
English.....	104	118	49	72	13.5		46.9	
General.....	47	53	45	61	12.8		35.6	
Speech.....	28	43	36	49	53.6		36.1	
Graduate courses in English.....	14	15	1	5	7.1		400.0	
<b>MUSIC DEPARTMENT</b>								
General survey.....	3	4	0	2	33.3			
Appreciation.....	12	20	30	25	66.7			16.7
Performance technique.....	55	74	76	71	34.5			6.6
Theory of music.....	39	69	44	55	78.9		25.0	
Research.....	1	1	1	4			300.0	
Graduate courses in music.....	1	5	1	4	400.0		300.0	
<b>EDUCATION DEPARTMENT</b>								
Survey (introduction).....	6	9	4	6	50.0		50.0	
General education.....	352	401	284	356	12.9		25.4	
Elementary education.....	182	167	174	221		8.3	27.0	
Higher education.....	6	9	9	7	50.0			22.3
Psychology (survey).....	15	20	16	13	33.3			18.8
Psychology (education).....	73	77	66	73	5.5		10.6	
Rural education.....	7	6	51	47		14.3		7.8
Secondary education.....	165	194	127	152	11.5		19.7	
Junior high school.....	23	30	21	26		12.0	71.4	
Senior high school.....	82	51	45	49		1.9	8.9	
Research.....	6	10	6	4	66.7			25.8
Graduate courses in education.....	279	373	23	98	33.7		181.8	

*Commerce department.*—Among the several divisions of work in the commerce departments in universities and colleges, economic history and graduate courses in commerce showed significant increases in the number of offerings. Courses in auditing and secretarial training decreased slightly. In all the divisions of commerce in teachers colleges, the number of offerings increased.

*History department.*—In universities and colleges increases occurred in American history, European history, the Far East, and graduate courses. The most significant increase was in graduate courses in history. A decrease occurred in the offerings in general orientation and ancient history. In the teachers colleges the offerings in all undergraduate courses in history except English history and courses on the World War increased. These institutions offered no graduate work in history.

*English department.*—With the exception of composition, grammar, and language, all divisions of English in universities and colleges showed increased offerings. The increase in teachers colleges was relatively large. A slight decrease was noted in courses of the general survey type; and the few offerings in debate in 1926 had completely disappeared in 1931.

*Music department.*—Courses in music in universities and colleges increased consistently in all divisions. The greatest difference between the two groups of institutions in the offerings in the six selected departments was noted in music. While the increases in music courses were relatively large in universities and colleges, the music offerings in teachers colleges were not large, and there were decreases in certain divisions.

*Education department.*—The increases in the number of offerings in different divisions of education in both groups of institutions were approximately the same. Offerings in elementary, rural, and junior high school education decreased in universities and colleges. A slight decrease occurred in senior high school offerings. Decreases also occurred in the offerings in higher education, psychology (survey), rural education, and research in teachers colleges and normal schools. Probably the most significant increase in both groups of institutions was in the field of graduate courses in education. In teachers colleges this may have been due in part to the recent addition of work toward the master's degree in several teachers colleges. In spite of the large number of courses in education and the many accusations that the work in education dominates the summer session offerings, records show that some divisions in the other departments made equal or greater increases in the number of courses offered.

*Graduate courses.*—A tabulation of the entire offerings in each division of each college department according to undergraduate, graduate, and total courses is shown in table 20. On the basis of the total

offering in each department, no department in either group of institutions had a decrease in the number of courses offered on the undergraduate or graduate level. Teachers colleges expanded their offerings in undergraduate courses in all departments except music to a greater extent than did universities and colleges. With the exception of education the number of offerings on a strictly graduate level in both groups of institutions were too few to allow conclusions to be drawn. The increases in graduate offerings in education in both groups of institutions indicate a demand for those courses on the part of teachers. The same may be said concerning the content subjects.

TABLE 20.—Number of undergraduate, graduate, and total courses offered in 6 college departments in 12 universities and colleges, and 12 teachers colleges for the summer sessions of 1926 and 1931

Department	Universities and colleges		Teachers colleges		Percent of increase from 1926 to 1931	
	1926	1931	1926	1931	Universities and colleges	Teachers colleges
1	2	3	4	5	6	7
<b>TOTAL UNDERGRADUATE COURSES BY DEPARTMENTS</b>						
Biology.....	118	134	73	106	12.6	45.2
Commerce.....	196	202	130	161	3.1	23.8
History.....	140	162	96	116	15.7	20.8
English.....	285	331	215	291	16.1	35.3
Music.....	109	167	150	153	53.2	2.0
Education.....	887	964	803	964	7.6	20.0
<b>TOTAL GRADUATE COURSES BY DEPARTMENTS</b>						
Biology.....	10	20	2	6	100.0	200.0
Commerce.....	3	12	2	3	300.0	50.0
History.....	7	20	—	—	185.7	—
English.....	14	15	1	5	7.1	400.0
Music.....	1	5	1	4	400.0	300.0
Education.....	279	373	33	93	33.7	181.8
<b>TOTAL GRADUATE AND UNDERGRADUATE COURSES BY DEPARTMENTS</b>						
Biology.....	128	154	75	112	20.6	30.0
Commerce.....	199	214	132	164	7.9	24.2
History.....	147	182	96	116	23.8	20.8
English.....	299	346	216	296	15.7	38.0
Music.....	110	172	151	157	56.4	4.0
Education.....	1,166	1,327	836	1,057	13.8	26.4

### SUMMER SESSION TRAINING SCHOOLS

Provisions for observation, demonstration, experimentation, and practice teaching in training or laboratory schools during the summer session have been made by many institutions. Certain difficulties arise in the provision of training-school facilities in the summer session which are not present to an equal extent during the regular year. Some of these difficulties are: The short term of 6 weeks; small enrollments in the training school and consequently few pupils for each

teacher; classes which do not present typical conditions; operation on half-day basis and, therefore, restricted opportunity for work in the training schools; inability to provide classes in all the grades; and overcrowding of observation classes.

Tables 21, 22, and 23, give data concerning training-school facilities in the summer sessions of 1931. Fifty-five percent of the institutions which reported had training schools. A greater proportion of universities, teachers colleges, and normal schools operated training schools than did colleges and junior colleges. Of the 142 institutions which reported no training schools, 81 indicated a need for such facilities. Some institutions with training schools indicated a need for additional facilities. The greatest need expressed was for additional rural training-school facilities.

TABLE 21.—Number of institutions which had training-school facilities and number which did not have training-school facilities in the summer session of 1931

Training-school facilities	65 univer- sities	137 colleges	28 junior colleges	84 teach- ers col- leges	19 normal schools	333 total
1	2	3	4	5	6	7
Yes.....	37	49	7	66	13	172
No.....	26	76	18	16	6	142
No data.....	2	12	3	2	—	19

TABLE 22.—Number of institutions which had no training-school facilities and indicated a need for training-school facilities of various types

Division needed	26 univer- sities	76 colleges	18 junior colleges	16 teach- ers col- leges	6 normal schools	142 total
1	2	3	4	5	6	7
Elementary.....	9	20	10	5	2	56
Secondary academic.....	11	33	4	3	—	51
Special subjects.....	6	12	2	2	—	22
Rural.....	3	9	2	3	—	17
No data.....	12	28	8	7	4	61

TABLE 23.—Number of institutions which had training-school facilities and indicated a need for additional training-school facilities of various types

Division needed	37 univer- sities	49 colleges	7 junior colleges	66 teach- ers col- leges	13 normal schools	172 total
1	2	3	4	5	6	7
Elementary.....	4	8	—	4	—	16
Secondary academic.....	4	9	1	13	2	29
Special subjects.....	4	7	2	7	1	31
Rural.....	5	12	2	18	1	38
No data.....	25	25	4	40	10	104

Other studies have shown the number of training schools in operation during summer sessions. Dr. Avent reported training schools in 28 of the 54 State teachers colleges in his study of 1922.<sup>2</sup> More recently, Dr. Jarman reported training schools in summer sessions of State universities as follows:

Of the 29 institutions with cooperative programs submitting data, 8 indicated that high-school facilities were available for observation and directed teaching during the summer, and that the same directed teaching standards were maintained during the summer session as during the regular session. Three of these institutions, however, indicated that the subject-matter fields in which directed teaching could be done were more limited during the summer session. It was indicated that 21 of these institutions did not have high-school facilities available for directed teaching during the summer session. Eleven out of 20 of the State universities which support university high schools operate these schools during the summer session. In other words, 55 percent of the State universities which control schools on the secondary level operate these schools during the summer session, whereas only 28 percent of the State universities dependent upon cooperative arrangements have high-school facilities available.<sup>3</sup>

A campus school controlled by the institution appears more frequently than a training school in affiliated schools during the summer session, according to Dr. Jarman's report. Table 24 shows the number of institutions concerned in the present study which had (1) campus training schools, (2) affiliated training schools only, and (3) both campus and affiliated training schools. Approximately 63 percent of the institutions with training schools in the summer session had campus schools only. The percentage is increased to 80 when the number with campus and affiliated training schools is included. Only 20 percent of the institutions which operated training schools in the summer session depended entirely upon affiliated schools for such facilities.

TABLE 24.—Number of institutions with campus schools only, with affiliated schools only, and with both campus and affiliated schools

Type of training school	37 universities	40 colleges	7 Junior colleges	66 teachers colleges	13 normal schools	173 total
1	2	3	4	5	6	7
No training facilities.....	26	76	18	16	6	143
No data.....	2	12	3	2		19
Campus schools only.....	17	29	5	46	11	108
Affiliated schools only.....	9	15	1	8	1	34
Both campus and affiliated schools.....	11	5	1	12	1	30

<sup>2</sup> Avent, J. E. *The Summer Sessions in State Teachers Colleges as a Factor in the Professional Education of Teachers*. Richmond, Va., William Byrd Press, Inc., 1925. P. 206.

<sup>3</sup> Jarman, A. M. *A Study of Laboratory Schools Connected with Departments, Schools, and Colleges of Education in State Universities*. Doctor's thesis. Ann Arbor, Mich., University of Michigan, 1932. Pp. 60-61.

TABLE 25.—Divisions of training school employed in summer sessions of 1931 according to type of institutions and type of teachers educated

Type of teachers	37 universities				49 colleges				7 junior colleges			
	Campus only	Affiliated only	Campus and affiliated	All types combined	Campus only	Affiliated only	Campus and affiliated	All types combined	Campus only	Affiliated only	Campus and affiliated	All types combined
1	2	3	4	5	6	7	8	9	10	11	12	13
Elementary only.....	4	1	-----	5	12	3	-----	15	4	1	1	6
Secondary only.....	1	3	-----	4	5	3	-----	10	-----	-----	-----	-----
Special subjects only.....	-----	-----	-----	-----	1	1	-----	2	-----	-----	-----	-----
Elementary and secondary.....	6	4	2	12	5	6	1	12	-----	-----	-----	-----
Elementary and special.....	1	-----	2	3	-----	-----	-----	-----	-----	-----	-----	-----
Elementary and rural.....	-----	-----	1	1	-----	-----	-----	-----	1	-----	-----	1
Elementary, secondary, and special.....	3	1	6	10	5	2	-----	7	-----	-----	-----	-----
Elementary, secondary, special, and rural.....	1	-----	-----	1	1	-----	-----	1	-----	-----	-----	-----
Secondary and special.....	1	-----	-----	1	-----	-----	-----	2	-----	-----	-----	-----
Total.....	17	9	11	37	29	15	5	49	5	1	1	7

Type of teachers	66 teachers colleges				13 normal schools				172 total			
	Campus only	Affiliated only	Campus and affiliated	All types combined	Campus only	Affiliated only	Campus and affiliated	All types combined	Campus only	Affiliated only	Campus and affiliated	All types combined
1	14	15	16	17	18	19	20	21	22	23	24	25
Elementary only.....	16	3	2	21	8	-----	1	9	44	8	4	56
Secondary only.....	-----	-----	-----	-----	-----	-----	-----	-----	6	6	2	14
Special subjects only.....	-----	-----	-----	-----	-----	-----	-----	-----	1	1	-----	2
Elementary and secondary.....	13	3	5	21	-----	-----	-----	-----	24	13	8	45
Elementary and special.....	3	-----	-----	3	1	-----	-----	1	5	-----	2	7
Elementary and rural.....	1	-----	-----	1	2	-----	-----	2	4	-----	1	5
Elementary, secondary, and special.....	7	1	3	11	-----	1	-----	1	15	5	9	29
Elementary, secondary, and rural.....	1	1	-----	2	-----	-----	-----	-----	1	1	-----	2
Elementary, secondary, special, and rural.....	4	-----	1	5	-----	-----	-----	-----	6	-----	1	7
Secondary and special.....	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	2	3
Special and rural.....	1	-----	-----	1	-----	-----	-----	-----	1	-----	-----	1
Elementary, special, and rural.....	-----	-----	1	1	-----	-----	-----	-----	-----	-----	1	1
Total.....	46	8	12	66	11	1	1	13	108	34	30	172

Table 25 gives a distribution of the institutions with different types of training-school facilities according to the types of teachers for whom training-school work was provided in the summer session of 1931. One-third of all the institutions with training schools had facilities for elementary teachers only. Out of the 172 institutions with training schools, 152 had facilities for elementary teachers, 45 had facilities for both elementary and secondary teachers, and 29 had facilities for elementary, secondary, and special-subject teachers. Only 14 colleges and universities provided training-school facilities for secondary teachers only, and half of those used affiliated schools.

Opportunity for training-school work in the field of rural teaching was distinctly lacking, though the data in tables 22 and 23 reveal a conscious recognition of the need for this type of work on the part of summer-school directors.

The training-school activities needed during the summer session depend upon the kinds of students in attendance. If the students registered for work in the training schools are experienced instead of inexperienced teachers it will alter the type of work which should be provided in the training school. For experienced teachers, observation and demonstration work may be more profitable than practice teaching; and experimentation, properly controlled, may be more profitable than any other type of training-school activity.

The extent to which different types of work were offered in the training schools in different types of institutions is indicated in table 26. The practices in different types of institutions varied only slightly. Observation in the training school was offered by a greater proportion of the institutions than any other type of activity.

The length of time that training schools are operated in summer sessions may alter the type and scope of its activities. A tabulation of the time the training schools were in operation during the summer session of 1931 is presented in table 27. The actual number of clock-hours training schools were in operation in institutions with sessions of 5 weeks or less is relatively small. The average number of clock-hours training schools operated in institutions with 6-week sessions is equivalent to 1 school month of the regular year. Institutions with summer sessions of 7 to 12 weeks operated their training schools an average of approximately 235 clock-hours, which is equivalent to 8 school weeks in the regular year.

TABLE 26.—Activities in various divisions of training schools in institutions equipped with campus schools only, with affiliated schools only, and both campus and affiliated schools

Division	Universities					Colleges				
	Number of cases	Observation	Demonstration	Experimentation	Practice teaching	Number of cases	Observation	Demonstration	Experimentation	Practice teaching
1	2	3	4	5	6	7	8	9	10	11
<b>108 CAMPUS SCHOOLS ONLY</b>										
Elementary.....	15	13	14	3	6	23	19	17	3	19
Secondary academic.....	11	8	7	1	7	16	12	7		12
Special subjects.....	5	1	2	1	2	7	4	2		4
Rural.....						1				
<b>34 AFFILIATED SCHOOLS ONLY</b>										
Elementary.....	7	6	3	1	3	11	11	7	3	9
Secondary academic.....	8	6	3		7	11	8	5	1	9
Special subjects.....	2	2	1			3	2	1		2
Rural.....	1	1								
<b>30 CAMPUS AND AFFILIATED SCHOOLS</b>										
<b>Campus:</b>										
Elementary.....	9	7	7	4	4					
Secondary academic.....	4	1	2	1		5	2			3
Special subjects.....	6	1	3	1		1				
Rural.....	1									
<b>Affiliated:</b>										
Elementary.....	6	4	3	1	2	1				
Secondary academic.....	5	4	4	1	5	3	1	1		1
Special subjects.....	5	3	1	1	2	2	1			1
Rural.....	1	1	1							

Division	Junior colleges					Teachers colleges				
	Number of cases	Observation	Demonstration	Experimentation	Practice teaching	Number of cases	Observation	Demonstration	Experimentation	Practice teaching
1	12	13	14	15	16	17	18	19	20	21
<b>108 CAMPUS SCHOOLS ONLY</b>										
Elementary.....	5	5	3		3	45	37	26	7	36
Secondary academic.....						25	22	21	5	22
Special subjects.....						15	10	10	3	11
Rural.....	1	1				7	5	5	1	4
<b>34 AFFILIATED SCHOOLS ONLY</b>										
Elementary.....	1	1			1	8	7	7	3	7
Secondary academic.....						5	4	4	2	5
Special subjects.....						1				
Rural.....						1				1
<b>30 CAMPUS AND AFFILIATED SCHOOLS</b>										
<b>Campus:</b>										
Elementary.....	1	1	1	1	1	11	11	10		10
Secondary academic.....						3	3	3	1	3
Special subjects.....						4	3	3		3
Rural.....										
<b>Affiliated:</b>										
Elementary.....	1	1	1	1	1	8	5	5	1	7
Secondary academic.....						3	3	3		3
Special subjects.....						3	2	2		3
Rural.....						2	2	2		1

TABLE 26.—Activities in various divisions of training schools in institutions equipped with campus schools only, with affiliated schools only, and both campus and affiliated schools—Continued

Division	Normal schools					Combined				
	Number of cases	Observation	Demonstration	Experimentation	Practice teaching	Number of cases	Observation	Demonstration	Experimentation	Practice teaching
1	23	23	24	23	26	27	28	29	29	31
<b>108 CAMPUS SCHOOLS ONLY</b>										
Elementary.....	11	9	9	3	9	99	83	79	16	73
Secondary academic.....						52	42	35	6	41
Special subjects.....	1	1	1		1	28	16	15	4	18
Rural.....	2	2	2	1	2	14	8	7	2	6
<b>84 AFFILIATED SCHOOLS ONLY</b>										
Elementary.....	1	1	1	1		28	26	18	8	20
Secondary academic.....	1	1	1	1		25	19	13	4	21
Special subjects.....	1	1	1	1		7	5	3	1	2
Rural.....						2	1			1
<b>80 CAMPUS AND AFFILIATED SCHOOLS</b>										
<b>Campus:</b>										
Elementary.....	1	1	1		1	22	20	19	5	16
Secondary academic.....						12	6	5	2	6
Special subjects.....						11	4	6	1	3
Rural.....						1				
<b>Affiliated:</b>										
Elementary.....	1	1	1		1	17	12	10	2	4
Secondary academic.....						16	11	10	1	14
Special subjects.....						10	6	3	1	6
Rural.....						3	3	3		1

TABLE 27.—Number of clock-hours the various divisions of the training school were in operation in the summer sessions of 1931

Length of session	Elementary			Secondary academic			Special subjects			Rural		
	Number of cases	Range	Average	Number of cases	Range	Average	Number of cases	Range	Average	Number of cases	Range	Average
1	2	3	4	5	6	7	8	9	10	11	12	13
5 weeks or less.....	11	40-150	75	5	15-75	83	2	36-45	40	1	120	126
6 weeks.....	82	70-180	114	31	90-210	118	14	60-210	121	7	90-180	129
7-12 weeks.....	43	105-399	220	43	100-480	263	8	120-360	233	1	480	480
Total.....	136		143	79		193	24		152	9		167

The amount of time training schools operate during the summer session is directly related to the number of critic teachers and pupils who are available. A tabulation of the number of critic teachers in different divisions of training schools gave the following distribution: The median number of critic teachers in the elementary department of 125 training schools was 4.3; in secondary academic departments of 73 institutions, 4.7; in 25 institutions with special-subject departments, 2.3; and in 11 institutions with rural departments, 1. A typical training school with only four critic teachers could provide for only a limited number of students in any of the usual training activities.

The ratio of college students to critic teachers in observation and demonstration work is presented in table 28. The median number of students per critic teacher was not large in any of the several types of institutions. Colleges had a larger median number of students per critic teacher than any other type of institution.

The median ratio of students doing practice teaching to critic teachers in universities was 2 to 1; the medians for all the other types of institutions ranged from 4.5 to 5.5 students per critic teacher. A few institutions in the college and teachers college groups reported from 10 to 30 student teachers per critic. Practice teaching under such conditions would be very meager.

TABLE 28.—*Distribution of institutions according to the ratio of college students to critic teachers in training schools in the summer sessions of 1931*

Number of students to one critic	Universities	Colleges	Junior colleges	Teachers colleges	Normal schools	Total
1	2	3	4	5	6	7
1-5.....	1	5	1	11	3	21
6-10.....	1	5	1	3		10
11-15.....	2	1	1	4	1	9
16-20.....				4	1	5
21-25.....	2	2		1		5
26-30.....		2		2	1	5
31-35.....		2		3		5
36-40.....		2	1			3
41-45.....	1					1
46-50.....	1			1	1	3
51 or more.....		4	1	1		6
Median.....	15	22.5	13.5	11.2	13.5	13.5

The ratio of training-school pupils to college and normal-school students in observation, demonstration, and practice teaching is shown in table 29. The medians for the different types of institutions were approximately the same. While in a few cases there were as many as 5 college students to 1 training-school pupil, in general, there were approximately 3 training-school pupils to 2 college students in observation, demonstration, and practice work. A distribution of the ratios of training-school pupils to practice teachers indicated an average of 5 training-school pupils for each practice teacher.

TABLE 29.—*Distribution of institutions according to the ratio of training-school pupils to normal-school and college students in observation and demonstration and practice teaching in the summer sessions of 1931*

Number of pupils to 1 student	Universities	Colleges	Junior colleges	Teachers colleges	Normal schools	Total
1	2	3	4	5	6	7
1 or lower.....	5	8	2	10	2	27
1.1-2.....	1	5	1	7	2	16
2.1-3.....		4	1	2		7
3.1-4.....	1	2	1	4		8
4.1-10.....		2		4	1	7
10.1-31.....	1	2		3	2	8
Total.....	8	23	5	30	7	73

## CHAPTER V

# SUMMARY AND RECOMMENDATIONS

### SUMMARY

*I. Purposes of the summer session.*—1. Universities, colleges, and teachers colleges generally emphasize provisions for securing the bachelor's degree as one of the principal functions of summer sessions.

2. Professional interest and higher certification standards for certain kinds of teachers, supervisors, and administrators have increased the demand for summer session courses offered on a graduate level. While graduate courses leading to advanced degrees are offered only in a limited number of colleges, it is significant that 11 teachers colleges reported curricula which lead to the master's degree and all of these institutions indicated that the work was considered as of primary importance in their summer sessions.

3. From the results of this investigation, it seems that the summer session is tending very rapidly to become another term or quarter in the regular year's work of the various institutions of higher education. The only significant differences between the purposes of the regular year's work and those of the offerings in summer sessions were found in the slightly greater emphasis in summer sessions upon "professional courses meeting the requirements for the extension of teachers' certificates", and "opportunity for in-service teachers to obtain further professional work."

4. A measure of the trends in demands for certain types of work in summer sessions over the 5-year period from 1926 to 1931 revealed: (a) A general increasing demand for undergraduate work for credit (in universities a decrease was indicated which was compensated for, however, by a greatly increased demand for graduate work); (b) an increasing demand for professional education courses in all types of institutions; (c) some indication that the upgrading function of summer sessions will soon reach a point of saturation on the basis of present certification standards; and (d) a continuing demand for music education, physical education, library training, and research and experimentation, unless the curtailment of public-school service in these subjects during the present period of revisions for economy should reduce the demands for work in these fields.

*II. Summer session calendar.*—Institutions with the 4-quarter system generally have an equivalent amount of time for the summer session as they have for each quarter of the regular year. 6-, 8-, 9-, and 10-

week sessions were reported, respectively, by 41, 6, 16, and 7 percent of the institutions while only 30 percent reported the 12-week session.

*III. Summer session enrollments.*—1. Published data for the years of 1926 and 1931 show a decided increase during that period in the proportion of teachers in summer sessions who were taking courses in education. This increase was not maintained in the summer of 1932.

2. Rotation of courses for graduate students who attend successive summers was found to be the most frequent practice among universities, colleges, and teachers colleges which offer graduate work. The next most frequently followed plan was a complete offering of required graduate courses each summer session.

3. Requirements for the master's degree can be satisfied wholly through attendance upon summer sessions in practically all of the institutions which offer work for that degree. Requirements for the doctorate cannot be met by attendance during summer sessions only. Institutions which grant the doctorate usually permit the completion of a limited portion of the requirements for an advanced degree in other institutions although the acceptance of such transfer is usually restricted to one-fourth or less of the total requirement, especially in the case of the master's degree.

4. A specified time limit for the completion of the requirements for advanced degrees was not reported as a common practice.

5. Pre-service and in-service teachers constituted approximately three-fifths of the undergraduate enrollments in summer sessions. The proportion of pre-service and in-service teachers in the graduate enrollments indicated definitely that graduate work in the summer sessions is mainly an offering for teachers.

6. With the exception of universities, enrollments in summer sessions were drawn almost wholly from the State in which the institutions are located.

*IV. Policy-forming bodies of summer sessions.*—At the time this study was made the determination of summer-session policies was vested most frequently in the same body that determines policies in the regular year.

*V. General financing policies of summer sessions.*—1. State support of summer sessions has not been established to any great extent. While some State support was extended to State institutions, the majority of summer sessions were expected to be self-supporting.

2. With the exception of the universities, the majority of all the types of institutions did not meet expenses. Half of the universities reported a balance beyond the expenses of the summer session in 1931.

3. Usually, any balance from the summer session reverted to the funds for the regular year. Deficits in summer sessions were usually met by funds from the budget of the regular year.

*VI. Advertising the summer session.*—1. In conformity with the practice of self-support, practically all institutions resorted to advertising for their summer sessions. The purposes of their advertising were generally directed toward an expansion of summer enrollments as indicated by such objectives as "to obtain more students", "to secure new groups of students", and "to create goodwill."

2. Advertising was most frequently directed to the in-service teachers in the State in which the institutions were located. Former students of summer sessions, students of the regular year, high-school graduates, and alumni were on the summer-session mailing lists of 30 to 50 percent of the institutions. Only in the case of universities was the advertising directed in any appreciable extent to prospective students outside the State.

3. Summer-session features which were most frequently emphasized in advertisements were: (a) Unique or special educational features, (b) professional standing of the staff, and (c) local climate.

4. Special summer-session bulletins were employed most frequently as an advertising medium, and catalogs, local newspapers, and State educational magazines were employed in many cases. Special bulletins and circular letters were rated as being the most effective mediums for advertising.

5. Universities spent more on the average and used a greater number of advertising mediums than the other types of institutions. In consideration of all the problems of advertising for summer sessions, the diversity of practices warrants further evaluation of the needs and means of advertising.

*VII. The summer-session staff.*—1. The purposes of the summer session, the degree of continuity of the work with that of the regular year, and the number of courses which are offered solely in the summer session determined the practices in the selection of summer-session staff members.

2. Usually instructors of courses in the regular year were permitted to teach their courses if they are offered in the summer. Some institutions did not permit instructors to teach in the summer session every year; a few institutions required instructors to teach two summers with leave of absence the third summer. Equitable rotation and selection on the basis of qualifications were employed where the offering is limited in the summer.

3. The ratios between the regular faculty and visiting faculty for the total summer-session staff on the basis of approximate medians were: Universities, 78 percent regular staff; colleges, 84 percent regular staff; and teachers colleges, 83 percent regular staff. Approximately one-seventh of the institutions employed no visiting faculty.

4. Universities and teachers colleges secured their visiting-faculty members most frequently from other universities. Approximately

one-third of the visiting staff in each group of institutions came from public-school positions.

5. Universities secured visiting instructors from sources outside the State in which they are located to a greater extent than did teachers colleges and colleges.

6. Only slight differences appeared between the educational qualifications (highest earned degree) of regular staff and of visiting staff. Approximately two-thirds or more of the entire staff in each group of institutions held either the master's or the doctor's degree.

7. The median clock-hour teaching load per week was approximately the same in all types of institutions (14.5 clock-hours) except junior colleges where the median was 3 clock-hours greater. Differentiation in teaching load between graduate and undergraduate courses was not generally indicated.

*VIII. Courses offered in selected college departments.*—On the basis of summer offerings in 6 fields in 12 selected universities and colleges and 12 teachers colleges and normal schools, the following trends were noted for the 5-year period from 1926 to 1931:

*Biology.*—All major divisions of biology increased in offerings in teachers colleges and normal schools. Offerings in zoology exceeded the offerings in biology, botany, and bacteriology. In universities and colleges, biology offerings remained unchanged while offerings in botany, zoology, and bacteriology increased slightly. The most significant increase in both groups of institutions was in the offerings in biology on the graduate level.

*Commerce.*—Economic history and graduate courses in commerce in universities and colleges increased. Auditing and secretarial training offerings decreased. An increase in all the commerce offerings in teachers colleges and normal schools was noted.

*History.*—Offerings in American, European, Far East, and graduate history courses were indicated for universities and colleges. Increases were shown in all undergraduate history courses in teachers colleges and normal schools except courses in English history and World War. No graduate courses in history were noted in these institutions, whereas in universities and colleges the most significant increase in history offerings was on the graduate level.

*English.*—With the exception of composition, grammar, and language, all divisions of the English offerings increased, especially in teachers colleges and normal schools.

*Music.*—Courses in music increased in universities and colleges in large proportions; the music offerings in teachers colleges and normal schools were not large, and significant decreases in certain courses were noted.

*Education.*—Decreases in the offerings in rural, elementary, junior high school, and senior high school were shown in universities and

colleges. Teachers colleges and normal schools indicated a decrease in the offerings in higher education, psychology, rural education, and research. Increases in the offerings in graduate work were shown for both groups of institutions.

A tabulation of the entire offering by departments in each group of institutions indicated no decrease in the number of courses offered on the undergraduate or graduate level in either group of institutions. The expansion of undergraduate offerings in all departments except music in teachers colleges and normal schools was greater than the same offerings in universities and colleges. The increase in graduate offerings in education in both groups of institutions was significant.

*IX. Summer session training school.*—1. Fifty-five percent of the institutions reporting had training schools in operation in the summer sessions of 1931. The proportion of universities, teachers colleges, and normal schools having training schools in operation was greater than the proportion of colleges and junior colleges.

2. Approximately 63 percent of the institutions with summer training schools employed campus schools only. Only 20 percent of the summer training schools were affiliated off-campus schools.

3. One third of all the institutions with summer training schools had facilities for elementary teachers only, although 89 percent of the institutions had facilities for elementary teachers and one or more other types of teachers. Approximately one sixth of the universities and colleges with summer training facilities provided for secondary teachers only, and half of those used affiliated off-campus schools.

4. Observation in the training school was offered by a greater proportion of the institutions than was any other type of activity.

5. The median number of critic teachers in elementary departments in summer training schools was 4.3; in secondary departments, 4.7; in special subject departments, 2.3; and in rural departments, 1.

#### RECOMMENDATIONS

1. Summer sessions should continue to be organized so as to permit and facilitate the up-grading of teachers in service on both the undergraduate and graduate level. Courses should be provided which will meet the requirements for degrees and also for advanced certification.

2. Summer sessions, as they become more generally used by resident students for shortening the time to secure any degree, should be made more an integral part of the regular year's work—not merely an addition.

3. Summer sessions should make provisions for courses which will develop special interests and abilities of teachers. These may be professional needs which have developed "on the job" or they may be personal interests which are only indirectly related to teaching. The opportunity to give part of the summer period to personal de-

velopment will probably result in extending the period of continued development for teachers. To the extent that this need is met, it will probably put a premium upon either larger summer schools in which a great many courses are offered or upon small schools in which highly specialized courses are offered in only one or two fields of concentration.

4. There is evident opportunity for economy in the operation of summer sessions by the rotation or alternation of required courses for specific degrees or diplomas.

5. To the extent that the summer session becomes an integral part of the regular year there should be less need for making it self-supporting and for the rather intensive advertising that is often used for the summer session and not for the regular year's work.

6. When courses are offered in summer session which are also offered during the regular year it is approved practice to have the same instructor teach them as does during the regular year. This should be especially true of required and highly technical or specialized courses.

7. Summer sessions serving experienced teachers, should emphasize training-school facilities for demonstration rather than for practice.

8. Summer sessions should take advantage of their unique opportunities to develop short units of highly specialized and technical instruction varying in length from 2- or 3-day conferences to more formal units of 1 or more weeks. These should be designed to fit the in-service development needs of specific groups of teachers and administrative officers. These regular units may often be scheduled so as to be supplemented by units of regular courses.

# PART 6

## PART VI: GRADUATE WORK IN THE EDUCATION OF TEACHERS<sup>1</sup>

### CHAPTER I

## CONTROL, DEVELOPMENT, AND PRESENT SCOPE OF GRADUATE WORK

### INTRODUCTION

The object of this study is to afford a general view of graduate work in universities and colleges in the United States in relation to the training of teachers. This report presents:

1. A classification of the groups of institutions that offer graduate work in education.
2. The development of courses in education on the graduate level from 1900 to 1930 in 12 typical institutions devoted to the preparation of teachers.
3. The views of heads of undergraduate schools of education and heads of graduate departments of education regarding important changes that have affected both graduate and undergraduate work in education.
4. The new degree of Doctor of Education.

### CONTROL OF GRADUATE WORK IN EDUCATION

There are 142 colleges, universities, and teachers colleges that offer courses in education on the graduate level leading to the master's degree, or to the master's degree and the doctor's degree. There are four types of control or administration of graduate work in education.

The first type includes institutions where all graduate work in education is under the general control of the graduate school. There are 107 institutions of this type, 57 publicly controlled and 50 privately controlled.

The second type includes institutions where graduate work in education is partially under the control of the graduate school and partially under the control of the school of education or an equivalent unit. There are 13 institutions of this type, 4 publicly controlled and 9 privately controlled.

The third type includes institutions where graduate work in education is entirely under the control of the school of education or similar

<sup>1</sup> This report was prepared for the Survey by Dr. Walton C. John, senior specialist in higher education, of the United States Office of Education.

unit. There are 8 institutions of this type, 4 publicly controlled and 4 privately controlled.

The fourth type includes teachers colleges. There are 14 of these, 13 of which are under public or municipal control.

*Types of advanced degrees.*—Types of advanced degrees offered for work in the field of education and the number of institutions which offered each of the degrees listed are shown in table 1.

TABLE 1.—Number of publicly controlled, privately controlled, and independent universities, colleges, and teachers colleges granting various degrees

Type of university or college	Number of institutions	Number of institutions granting:						
		Master of arts	Master of science	Master of arts in education	Master of science in education	Master of education	Doctor of philosophy	Doctor of education
1	2	3	4	5	6	7	8	9
Publicly controlled.....	65	40	38	7	9	11	27	8
Privately controlled.....	63	58	16	6	7	12	30	12
Teachers colleges.....	14	9	4	0	1	2	2	0
Total.....	142	107	58	13	17	25	59	20

Among the publicly controlled universities and colleges, the number of institutions offering the master of arts degree and the number offering the master of science degree is nearly the same. The number of privately controlled institutions offering the master of science degree is proportionally much smaller than the number of publicly controlled institutions offering that degree. This is due in part to the fact that many of the land-grant colleges offer only the master of science degree. The privately controlled schools, on the other hand, emphasize the traditional master of arts degree. In the independent teachers colleges the master of arts degree predominates.

There is not much difference between the publicly controlled and privately controlled institutions in the number that offer the doctor of philosophy degree. The doctor of education degree is found to a greater extent in the privately controlled universities and colleges.

Perhaps the most interesting development in graduate work in recent years has been the creation of the new degree of doctor of education. This degree is now offered by 22 institutions.

#### THE DEVELOPMENT AND PRESENT SCOPE OF COURSES IN EDUCATION OFFERED ON THE GRADUATE LEVEL

Attention is given in this section to the characteristics and growth of subjects or courses in education offered on the graduate level since the year 1900, as found in a group of 12 institutions which may be considered typical to a certain extent. These institutions are the

University of California, Stanford University, University of Chicago, University of Illinois, Indiana University, University of Iowa, Harvard University, University of Michigan, University of Minnesota, Teachers College, Columbia University, Ohio State University, and George Peabody College for Teachers.

After a careful study of the catalogs of these institutions it was found possible to classify the courses offered under nine subject groups as follows: (1) Principles and philosophy of education; (2) history of education; (3) educational sociology; (4) educational psychology; (5) educational tests and measurements; (6) educational administration; (7) educational supervision; (8) educational methods; (9) seminar and research courses.

The courses listed under the first 8 subject groups do not include seminar and research type courses offered in those groups. These are all brought together without reference to these classifications under the ninth subject group.

The years selected for comparison were 1900-1901, 1910-11, 1915-16, 1920-21, 1925-26, and 1930-31.

Two tabulations of the courses according to the above classifications were prepared from the catalogs for each of the years specified; the first listed all graduate courses in education open to both graduate and undergraduate students, and the second listed all courses open only to graduate students.

These tables were submitted to the officers in charge of graduate work in education in these institutions with the exception of Teachers College, Columbia University. The tables were criticized and returned by all institutions to which the lists were sent with the exception of George Peabody College for Teachers.

After the necessary corrections were made, the tables were summarized in two forms: The first shows the growth in the number of courses in each subject group of two general types—those open to both graduates and undergraduates and those open to graduates only; the second shows the relation of non-research and seminar-research types of courses.<sup>1</sup>

*Increase in the number of graduate courses in education.*—Table 2 shows for the 12 institutions under discussion, over a period of 30 years, the changes in the number of graduate courses in education, including courses open to both graduates and undergraduates and courses open to graduates only, for the nine subject groups. Fol-

<sup>1</sup> The basic tables for all the institutions except Teachers College, Columbia University, were prepared by Ethel Smith, of the Graduate School of the American University; the tables for Teachers College, Columbia University, were prepared by Leon K. Bryner, of the same school. The writer wishes to express herewith his appreciation for their painstaking work.

Following is a summary of the changes taking place between 1900 and 1930, as revealed by these data:

1. Courses offered in the several subject groups:

- (a) Courses in principles and philosophy of education decreased from 15 to 5 percent of the total number.
- (b) Courses in history of education decreased from 20 to 3.5 percent of the total number.
- (c) Courses in educational sociology decreased from 1.5 to 1 percent of the total number.
- (d) Courses in educational psychology increased from 5 to 7 percent of the total number.
- (e) Courses in tests and measurements increased from less than 1 to 5.7 percent of the total number.
- (f) Courses in administration increased from 1.2 to 23 percent of the total number.
- (g) Courses in supervision increased from 4 to 27.5 percent of the total number.
- (h) Courses of the seminar or research type increased from 14 to 21 percent of the total number.

TABLE 2.—Number of graduate courses in education from 1900 to 1930, according to subject groups

Courses	Year					
	1900-01	1910-11	1915-16	1920-21	1925-26	1930-31
1	2	3	4	5	6	7
Principles and philosophy of education:						
For graduates and undergraduates.....	11	22	28	30	55	47
For graduates only.....	10	10	12	7	31	41
Total.....	21	32	40	46	86	88
History of education:						
For graduates and undergraduates.....	20	31	34	20	35	37
For graduates only.....	8	5	16	9	14	21
Total.....	28	36	50	29	49	58
Educational sociology:						
For graduates and undergraduates.....	2	2	5	10	8	8
For graduates only.....	0	1	4	6	14	8
Total.....	2	3	9	16	22	16
Educational psychology:						
For graduates and undergraduates.....	4	28	22	31	51	60
For graduates only.....	3	5	22	18	35	50
Total.....	7	33	44	49	86	110
Tests and measurements:						
For graduates and undergraduates.....	1	2	8	33	56	80
For graduates only.....	0	1	4	14	36	43
Total.....	1	3	12	47	92	93
Administration:						
For graduates and undergraduates.....	4	38	71	136	194	194
For graduates only.....	12	12	28	50	74	177
Total.....	16	50	99	186	268	371
Supervision:						
For graduates and undergraduates.....	4	8	14	26	48	51
For graduates only.....	1	5	9	13	21	49
Total.....	5	13	23	39	69	100
Methods:						
For graduates and undergraduates.....	11	41	96	177	202	234
For graduates only.....	22	3	38	45	119	217
Total.....	33	44	134	172	321	451
Seminar and research:						
For graduates and undergraduates.....	11	16	17	34	55	50
For graduates only.....	8	20	78	98	174	209
Total.....	19	42	95	132	229	349
Total:						
For graduates and undergraduates.....	68	158	295	466	704	731
For graduates only.....	64	68	206	260	518	908
Grand total.....	132	226	501	726	1,222	1,639

2. The percentage of courses open to graduates only compared with those open to graduates and undergraduates:

(a) Courses in the principles and philosophy of education decreased from 48 to 47 percent.

(b) Courses in the history of education increased from 29 to 36 percent.

2. The percentage of courses open to graduates only compared with those open to graduates and undergraduates—Continued.

- (c) Courses in educational sociology increased from none to 50 percent.
- (d) Courses in educational psychology increased from 43 to 45 percent.
- (e) Courses in tests and measurements increased from none to 46 percent.
- (f) Courses in administration decreased from 75 to 48 percent.
- (g) Courses in supervision increased from 20 to 49 percent.
- (h) Courses in methods increased from 33.3 to 48 percent.
- (i) Courses of the seminar or research type increased from 42 to 86 percent.
- (j) The total number of courses for all subject groups increased from 48 to 54 percent.

3. General trends:

- (a) The principal increase in the number of courses in the principles and philosophy of education took place between 1920 and 1925.
- (b) The courses open to both graduates and undergraduates in the history of education increased quite steadily during the entire period. Courses open to graduates only, in this field, fluctuated considerably in number with a sharp increase between 1920 and 1930.
- (c) The greatest increase in courses in educational sociology took place between 1915 and 1920. But there has been a reduction in the number of these courses since 1925.
- (d) The principal increases in the number of courses in educational psychology appeared between 1900 and 1910 and between 1920 and 1925. There was marked increase in courses in this field open to graduates only between 1910 and 1915 and between 1920 and 1930.
- (e) The greatest increase in the number of courses in tests and measurements appeared between 1920 and 1925.
- (f) The growth of courses in administration has been exceedingly rapid for each period; however, no increase appeared in the number of these courses open to both graduates and undergraduates between 1925 and 1930.
- (g) The increase in courses in supervision was relatively slow until the period between 1915 and 1920. Between 1925 and 1930 there was a doubling of these courses open to graduates only.
- (h) The increase in the number of courses in methods has been extraordinary for the entire period, and particularly so between 1920 and 1930.

## 3. General trends—Continued.

- (i) The increase in the number of courses of the seminar or research type has also been extraordinary, particularly between 1920 and 1930.
- (j) The increase in the number of all courses, from 132 in 1900 to 1,636 in 1930, is indicative of the increasing emphasis on the professional training of the teacher; and the growth in the number of courses open to graduates only is indicative of higher standards of training through a general upgrading of educational courses on the graduate level.

*Increase in the number of graduate courses of the nonresearch and seminar or research type.*—Table 3 shows the increase in the number of graduate courses in education of two types of courses—nonresearch and seminar or research.

The growth in the number of the nonresearch courses open to both graduates and undergraduates was very great, increasing from 57 in 1900 to 681 in 1930. The courses open to graduates only showed an increase almost as great, from 56 in 1900 to 606 in 1930. The increase in all courses of this type during the 30-year period was more than tenfold.

The growth in the number of seminar or research type courses was also significant. Courses of this type open to graduates and undergraduates increased from 11 to 50 between 1900 and 1930; in 1925–26 there were 55 courses of this type available. The increase in the number of seminar or research courses open to graduates only was very much greater, from 8 in 1900–1901 to 299 in 1930–31. The total number increased eighteenfold during the 30-year period.

TABLE 3.—Number of graduate courses in education of the nonresearch type and of the seminar or research type

Years	Number of non-research courses	Number of seminar-research type of courses	Total
<b>A. Open to both graduates and undergraduates:</b>			
1900-1901.....	57	11	68
1910-11.....	172	16	188
1915-16.....	278	17	295
1920-21.....	432	34	466
1925-26.....	649	55	704
1930-31.....	681	50	731
<b>B. Open to graduates only:</b>			
1900-1901.....	56	8	64
1910-11.....	42	26	68
1915-16.....	128	78	206
1920-21.....	162	98	260
1925-26.....	344	174	518
1930-31.....	606	299	905
<b>C. Total:</b>			
1900-1901.....	113	19	132
1910-11.....	214	42	256
1915-16.....	406	95	501
1920-21.....	594	132	726
1925-26.....	993	229	1,222
1930-31.....	1,287	349	1,636

Of the courses open to both graduates and undergraduates in 1930-31, 7 percent were of the seminar or research type and 93 percent were of the nonresearch type. Of those open to graduates only, 33 percent were seminar or research and 67 percent were nonresearch. Of the total number, 23 percent were of the seminar or research type and 77 percent were of the nonresearch type.

*Increase in advanced degrees in education.*—Attention is called in the accompanying tables and chart to the increase in the number of advanced degrees granted by the 12 institutions that have been studied with respect to the growth in graduate courses in education. The degrees in education under consideration are the M.A., M.S., master's degree in education or equivalent, the Ph.D. with major in education, and the Ed.D.

For this group of institutions the growth in the number of master's degrees in which education was the field of major interest was almost phenomenal, beginning with 31 in 1900 and reaching 3,231 in 1930. From 1910 through 1930, there was a doubling or more in the number of master's degrees in the field of education for each 5-year period.

The increase in the number of Ph.D. degrees with major in education was particularly evident after 1920. The increase in the number of Ed.D. degrees during the same period was less marked and particularly between 1925 and 1930.

In 1930, the percentage of advanced degrees in education was distributed as follows: Master's degrees, 95 percent; Ph.D. degrees, 4.5 percent; and Ed.D. degrees, .06 percent.

TABLE 4.—Number of advanced degrees in education granted, including the M.A., M.S., of master's degree in education or equivalent, the Ph.D. with major in education, and the Ed.D.<sup>1</sup>

Institution	Number of master's degrees granted						Number of Ph.D. degrees granted					Number of Ed.D. degrees			
	1900	1910	1915	1920	1925	1930	1900	1910	1915	1920	1925	1930	1920	1925	1930
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
University of California.....	1	4	8	20	43	69	0	0	0	2	6	2	0	2	7
Stanford University.....	0	6	9	24	31	98	0	0	1	1	5	4	0	0	3
University of Chicago.....	0	15	27	30	82	97	1	1	3	4	5	5	0	0	0
University of Illinois.....	0	4	8	6	31	74	0	0	2	2	1	3	0	0	0
Indiana University.....	0	4	7	5	31	119	0	0	0	0	1	0	0	0	0
State University of Iowa.....	4	5	6	10	45	98	1	0	1	1	10	14	0	0	0
Harvard University.....	3	7	21	65	105	160	0	0	2	0	1	0	5	15	2
University of Michigan.....	0	0	0	0	47	137	0	0	0	1	4	6	0	0	0
University of Minnesota.....	0	2	1	10	15	45	0	0	0	1	6	6	0	0	0
Teachers College, Columbia University.....	23	81	275	454	1,379	1,969	1	14	9	12	20	25	0	0	0
Ohio State University.....	0	5	11	11	56	147	0	0	0	0	9	30	9	0	0
George Peabody College for Teachers.....	0	0	20	33	116	273	0	0	0	2	13	14	0	0	0
Total.....	31	134	303	678	1,680	3,231	15	3	24	28	124	168	5	17	13

<sup>1</sup> Data for this table furnished by officials of the institutions.  
<sup>2</sup> Data were not available for years 1900-1909.

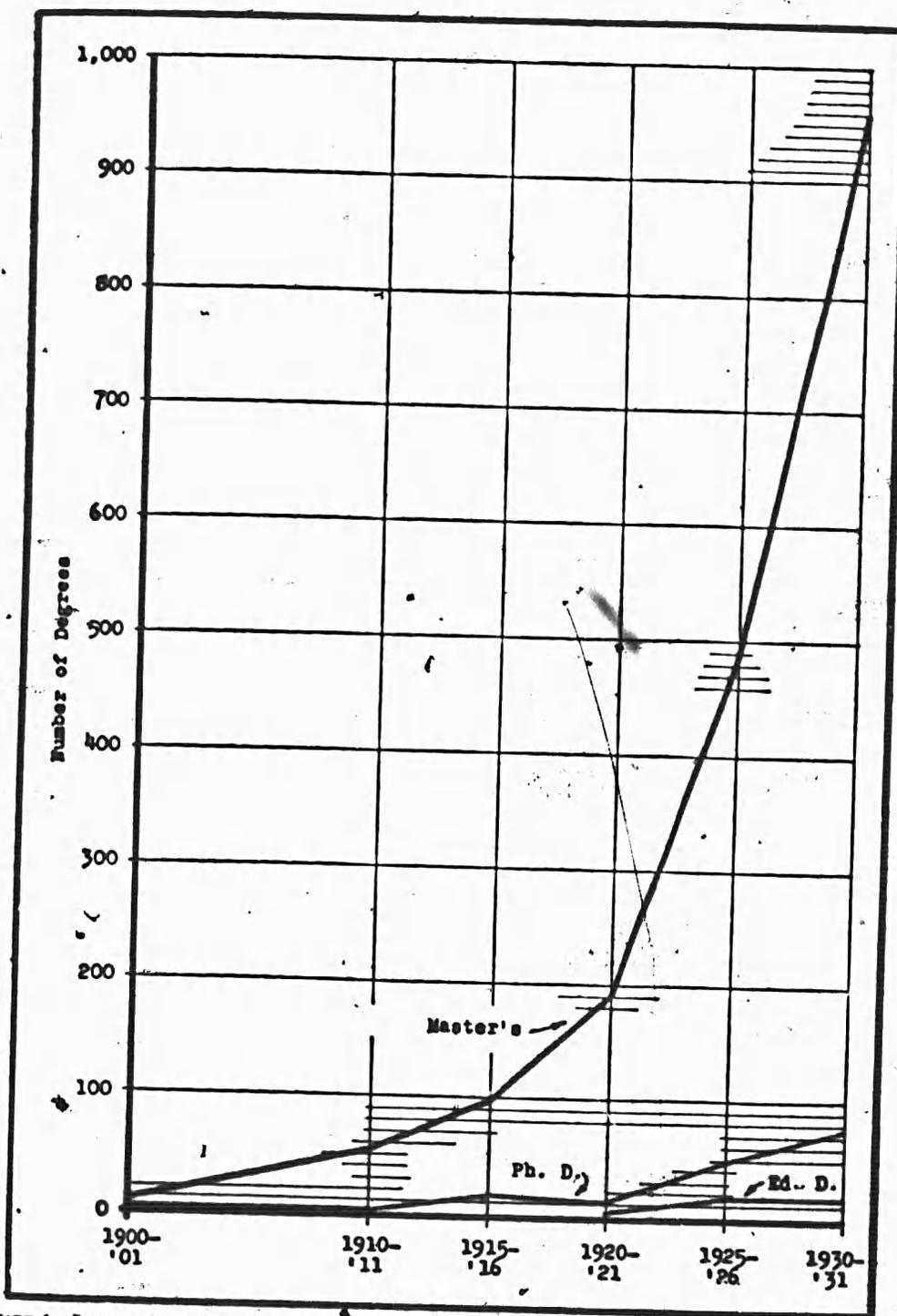


CHART 1.—Increase in the number of master's degrees in the field of education; increase in the number of Ph.D. degrees, with major in education; and Ed.D. degrees, for the years indicated, in 10 typical institutions. (Columbia University and George Peabody College for Teachers not included.)

## CHAPTER II

### VIEWS OF AUTHORITIES ON MUTUAL INFLUENCES OF THE GRADUATE SCHOOL OF EDUCATION AND THE UNDERGRADUATE SCHOOL OF EDUCATION

In order to ascertain to what extent graduate schools of education have contributed to the changes that have been taking place within recent years in undergraduate schools of education or teachers colleges, an inquiry covering 13 questions was sent to a number of deans of colleges of education, heads of departments of education in liberal arts colleges, and presidents of teachers colleges. Replies were received from 38 institutions: University of Colorado; Colorado State Teachers College, Greeley; University of Cincinnati; University of Virginia; Stanford University; Cornell University; University of California; University of Illinois; Harvard University; Boston University; New York University; Washington University, St. Louis, Mo.; Yale University; Ohio State University; University of Minnesota; Lehigh University; University of Missouri; University of Wyoming; University of Maryland; University of Akron; Bucknell University; Iowa State College; Kansas State Teachers College, Emporia; University of New Hampshire; Western Reserve University; West Virginia University; University of Pittsburgh; University of Pennsylvania; Teachers College, Columbia University; the University of Washington; University of Oregon; University of Florida; Pennsylvania State College.

The opinions of these officials concerning the influence of the graduate school of education or of faculty members whose primary interest is in graduate work in education in bringing about the changes in undergraduate colleges of education and teachers colleges are indicated in table 5.

According to the opinions submitted, the graduate school had some influence in the changes that took place in undergraduate colleges of education. Of the aggregate replies received, 377 in number, 100 indicated that the graduate school had a negative influence on the changes, 151 that it had little influence, 94 that it had considerable influence, and 32 that it had great influence. The greatest influence of the graduate school of education was indicated in connection with question 10; that is, in encouraging the use of special techniques such as statistical methods in the undergraduate school of education.

TABLE 5.—Extent of influence of the graduate school of education in bringing about specified changes in undergraduate schools of education

Changes that have taken place in undergraduate colleges of education and teachers colleges	Number of institutions indicating extent of influence			
	Negative influence	Little influence	Considerable influence	Great influence
1	2	3	4	5
1. Increase in enrollments due to the number of unemployed teachers.....	8	16	6	2
2. Increase in enrollments of students that are graduates of high school only.....	15	11	3	1
3. Increase in enrollments due to admission to junior year of college of education of graduates of 2-year normal schools.....	11	11	6	1
4. Requiring certain scholarship average above a mere passing grade for admission to the college of education.....	5	14	7	4
5. Use of more selective devices for admission to the college of education.....	3	13	12	2
6. Increase in the extent of professional education courses required for graduation.....	11	12	5	1
7. Decrease in the extent of professional education courses required for graduation.....	14	9	2	2
8. Increase in the extent of academic courses required for graduation.....	5	14	9	4
9. Decrease in the extent of academic courses required for graduation.....	12	8	1	1
10. Facility in the use of special techniques such as statistical methods.....	0	13	12	6
11. Use of comprehensive examinations.....	9	9	10	4
12. The development of independent study plans, honors courses, tutorial instruction, etc.....	5	15	7	2
13. Tendency of graduates to go directly into graduate work without experience in the field.....	5	12	14	2

*Opinions of heads of departments of education.*—Thirteen similar questions were sent to the heads of departments of education in graduate schools in order to obtain their views as to any significant influence that the changes taking place in the undergraduate school or college of education had on graduate work in education within the past 10 years. Nineteen responses were obtained from the following institutions: Ohio State University; Yale University; Boston University; Colorado State Teachers College, Greeley; Kansas State Teachers College, Hays; Iowa State College; Western Reserve University; University of New Hampshire; University of Akron; University of Missouri; George Washington University; West Virginia University; University of Pittsburgh; University of Pennsylvania; Teachers College, Columbia University; University of Washington; University of Oregon; University of Florida; and Pennsylvania State College.

The opinions of these officials concerning the influence of the changes which have and are taking place in the undergraduate colleges of education on graduate work are shown in table 6.

TABLE 6.—Extent of influence of the undergraduate school of education in bringing about specified changes in graduate schools of education

Changes that have taken place in undergraduate school of education	Number of institutions indicating extent of influence			
	Negative influence	Little influence	Considerable influence	Great influence
1	2	3	4	5
1. General increase in enrollments of students.....	1	8	6	3
2. Increase in enrollments of teachers already holding teachers' certificates.....	0	7	10	2
3. Increase in enrollments due to admission to junior year of college of education of graduates of 2-year normal schools.....	6	6	3	1
4. Requiring certain scholarship average above a mere passing grade for admission to the college of education.....	5	5	5	0
5. Use of more selective devices for admission to college of education.....	2	9	3	2
6. Increase in the extent of professional education courses required for graduation.....	4	7	3	0
7. Decrease in the extent of professional education courses required for graduation.....	7	3	3	0
8. Increase in the extent of academic courses required for graduation.....	2	5	3	2
9. Decrease in the extent of academic courses required for graduation.....	8	3	0	0
10. Facility in the use of special techniques such as statistical methods.....	4	7	5	3
11. Use of comprehensive examinations.....	6	5	5	1
12. The development of study plans, honors courses, tutorial instruction, etc.....	5	8	3	0
13. Tendency of graduates to go directly into graduate work without experience in the field.....	1	6	7	0

From these replies it would appear that the heads of the departments of education in graduate schools believed that the changes indicated as having taken place in the undergraduate college of education influenced graduate work in education. Of the 200 replies in the aggregate, 51 indicated that the changes in the undergraduate school of education had had a negative influence, 79 indicated little influence, 56 considerable influence, and 14 great influence. The changes for which the greatest influence was reported were: The general increase in enrollments of students; the increase in enrollments of teachers already holding teachers' certificates; facility in the use of special techniques such as statistical methods; and the tendency of graduates to go directly into graduate work without experience in the field.

*Recommended changes in undergraduate work.*—In connection with the foregoing inquiries, both groups of officials were requested to indicate what changes they could suggest in undergraduate work in education that might improve graduate work in education. The replies from the heads of undergraduate units of education are summarized herewith.

The views of the heads of graduate departments of education concurred on the whole with the heads of the undergraduate units of education.

From a general standpoint, attention is called to the need of a sound philosophy of education. More responsibility should be placed on the student. There is need also for a clearer definition of important basic courses for teachers which would become the foundation for graduate work in education. Higher standards of scholarship are demanded, and a careful weeding out of incompetent students should take place before they enter upon graduate study. Less deductive and more inductive study is required.

Those replying to these questions believed that the undergraduate program of education should be built on a deeper and more general foundation; that 2 full years or more of academic work should be required before the professional courses in education are begun; that there should be a sufficient background of biology, sociology, and economics; and that professional courses should be limited to the last 2 years of the undergraduate school or might be deferred until the graduate school years.

The opinions were also given that professional courses should be reduced in number and the amount of such work required should be between 9 and 12 semester-credits rather than 18.

Some experience in research was thought desirable, preferably in cooperation with the professor.

Teaching experience should be required before the student takes up graduate work in education. At least 1 year was recommended.

The methods courses should be integrated with the work in observation and practice teaching.

Additional suggestions for improvement include better library facilities, the giving of tests in the use of the English language to students looking forward to graduate work in education and greater care in the selection of teachers.

### CHAPTER III

## DOCTOR'S DEGREES IN EDUCATION

Fifty-nine universities and colleges in the United States offer work in education leading to the Ph.D. degree, and of these institutions 22 offer work leading to the degree of doctor of education. They are the University of California; Stanford University; University of Southern California; George Washington University, Washington, D.C.; Indiana University; Harvard University; Boston University; Boston College; Johns Hopkins University; Washington University, St. Louis, Mo.; Rutgers University; New York University; University of Buffalo; Teachers College, Columbia University; University of North Dakota; Western Reserve University; University of Oklahoma; University of Oregon; Pennsylvania State College; University of Pittsburgh; Temple University; and West Virginia University.

The principal characteristics of the degree of doctor of education as compared with those of the Ph.D. degree are summarized herewith.

*Purpose.*—The general purpose of the Ed.D. degree as indicated by approximately half of the institutions under consideration may be stated as follows:

1. It emphasizes high-grade constructive studies in the field of education.
2. It emphasizes the mastery of professional subject matter rather than the carrying on of original research.
3. It emphasizes the organization of educational materials for the purpose of testing educational theory and practice in the school.
4. It is more interested in practical problems than in those that are theoretical.

The Ph.D. degree appears to emphasize what may be termed scholarship in the historical, theoretical, or pure science aspects of education. It also may be concerned with the development of new techniques as well as new knowledge.

*Types of Ed.D. degrees.*—Four institutions have set up two types of Ed.D. degree.

At Stanford University is found the school administrator type and the master teacher type; at the University of Southern California, the administration-supervision-counselor type and the master teacher type; at the University of Oklahoma, the master teacher type and the master administrator type; and at the University of Oregon, the school administrator type and the high-school principal type. In each case one of the main objects is the preparation of school administrators, and the other objective in three cases is the preparation of

master teachers. Only one institution gives particular attention to the high-school principal.

*Admission to candidacy.*—The procedure in obtaining admission to candidacy to the Ed.D. degree differs from the corresponding procedure for the Ph.D. primarily with respect to the emphasis on foreign language requirement, the requirement of teaching experience, special knowledge of the technique of educational research, and in certain cases preliminary demonstration of ability to undertake graduate work.

*The foreign language requirement.*—In general, the foreign language requirement for the Ed.D. degree is contingent upon the need for one or more languages in connection with the study of the problem at hand. Sixteen of the 17 institutions submitting data on this topic reserve the right to require an examination in foreign languages if necessary. In only 1 of the 17, are 2 foreign languages required; 1 of these may be French or German. Three institutions prescribe one foreign language. In 2 institutions, a language is optional with one or more tool subjects such as statistics, educational methods, or research methods. For the Ph.D. degree with major in education, a reading knowledge of French and German is required in all but 3 institutions; in 2 of these, 2 languages are required, one of which must be French or German. In 1 case the statistics or other tool subjects of research may be substituted for the language requirement.

*Teaching experience.*—Ten institutions of this group indicate that teaching experience is required before the candidate can obtain the Ed.D. degree. In 3 cases, a record of successful teaching experience is required before the student can take up work in the graduate school toward the Ed.D.

In 1 school, 1 year of successful teaching experience is required. In 2 schools, 2 years of successful classroom or administrative experience is expected, and in 1 case 1 of these years of experience must have been obtained after receipt of the A.B. degree.

Two other institutions require at least 3 years of experience in teaching or educational administration. In 1 of these institutions, at least 1 of these years must follow admission to candidacy and 1 must follow the completion of the normal school or college course; that is, before admission to the Ed.D. course of study. In another school at least 4 years of teaching or equivalent educational service is a prerequisite; and in another, at least 6 years of teaching or administration is necessary.

*Program of study.*—The programs of study for the Ed.D. in those institutions which do not have two types of doctor's degrees in education do not differ to any great extent in their organization from the program set up for the Ph.D. with major in education. In certain cases the professional program of study for the Ed.D. is considered to be of equal importance with the dissertation, or of greater importance.

# PART 7

## PART VII: EDUCATIONAL PHILOSOPHIES HELD BY FACULTY MEMBERS IN SCHOOLS FOR THE PROFESSIONAL EDUCATION OF TEACHERS<sup>1</sup>

### CHAPTER I

#### THE MAJOR ISSUES AND THEIR MEANINGS

##### INTRODUCTION

Today, when many are discussing the place of the schools in social reconstruction, it is worth while to discover how the educational profession is thinking on some of the more crucial social and educational issues. Particularly strategic is that portion of the profession which instructs and oversees the professional education of prospective teachers. What these leaders believe has a wide radius of influence; for their students preside in the classrooms of the Nation's schools, and administer organized education in practically every locality in the country. What these teachers of teachers think on crucial questions is of large importance to the present and future welfare of our country.

There are, at any time in a Nation's life, some beliefs and practices remaining relatively steady and unchanging while other beliefs and practices are changing under the impact of new conditions. There are always the relatively constant elements and at the same time relatively changing elements. Correspondingly the people themselves experience conflicts. To keep an equilibrium of the constant and the changing is evidently one of society's most difficult tasks. There will be those who fear change; they prefer to abide solidly by the old way. Again there are those who not only welcome change but make a fetish of it and become suspicious of any constant just because it is old and unchanging. Thus there are the extreme conservative and the extreme liberal. All the way between these two extremes people are to be found distributed. Where, on such a scale, are the teachers and the teachers of teachers to be found when current questions of large import are put to them?

For instance, the stress of depression has made the western world conscious of its "individualism" in social and economic matters of

<sup>1</sup> This part was prepared by Dr. R. B. Raup, associate professor of education, Teachers College, Columbia University. He was assisted in the preparation of the instrument by Francis E. Peterson, Director of Extension, Territorial Normal School, Honolulu, and Obid Williamson, professor of education, State Normal School, Cheney, Wash.

common concern. Are the leaders in the teaching profession alert to this issue? Apparently the doctrine of socialization proclaimed throughout the past generation has had some effect upon the members of this group. They respond to the language of social responsibility with readiness and force. Sixty-four percent reveal a strong belief in this direction. They would temper individuals to the claim of society.

When they are confronted with particulars, however, the case is not so clear. There is evidence that, although they would be willing to socialize conduct in general, they would not change things so much in particular in order to do it.

The meanings of this, as of many other related phenomena, deserve study. Later in these pages such study will be reported, a study made possible by the cooperation of the members of the teaching and administrative staffs of more than 70 institutions carrying on the professional education of teachers. This cooperation consisted in marking the statements on two instruments<sup>2</sup> and in filling out a personal data questionnaire. On each statement they marked their agreement or disagreement. The complete instruments are reproduced for reference purposes as appendix D and E.

The first instrument, Teachers Views on Some Problems in General Educational Theory, was so constructed as to be representative of the points on which educators of the country show wide differences of view. It falls into seven main parts. Each part represents a fundamental educational issue. Under each such issue are the statements (from 10 to 12) bearing upon it—statements which, when marked for agreement or disagreement, tend to reveal where the marker stands in beliefs upon its several aspects. The marker's position on the issue is in this manner judged not from one statement only but from his responses to 10 or more related statements. Experience with the instrument has revealed the wisdom of this device. The findings can be much more relied upon than they could otherwise be to reveal the mind of the marker.

Perhaps the chief service of this study will be in the opportunity it gives the profession to think together on matters of fundamental importance. One of the groups studied was made up of 27 professors and 3 graduate students in Teachers College, Columbia University. This group took what is here called the most "liberal" position among all the groups which voted on the issues. Is this position correct? While some think that it is, that is not the way in which the reader is asked to consider it. Instead, it should be considered as a proposition made by these 30 persons to their colleagues in America. It

<sup>2</sup> The instrument, Teachers Views on Some Problems in General Educational Theory, was prepared largely by two of the author's graduate students, Francis Peterson and Obed Williamson, who worked with him during the year 1930-31. The Harper instrument, A Social Study, was used with Dr. Manly H. Harper's generous permission and assistance. (See pp. 537-547.)

invites these colleagues to compare their own views with this proposed position. Each institution may be seen in relation to all other institutions and to the group of professors. Any instructor can compare his own views with these same totals by finding where he stands on the instrument as a whole or on any of its seven categories. Perhaps his views are better. He will know of the differences, however, and know of them more definitely than would have been possible without the report submitted. Thus the Survey becomes a challenge to thought and will have its true fruitage not in the mathematical accuracy of its ventured statements of fact, but rather in the degree in which it furthers the profession's deliberation toward more nearly adequate philosophies of education.

The matters of fact are not lightly dealt with. All the rigor possible has been exercised in the effort to get a correct picture, and the statements of "fact" have sought throughout to allow for every serious doubt in advance and to honor the reader's own reasonable skepticisms. Statements have been ventured only after the most careful checking. The phenomena of belief and point of view resist mathematical precision. They are impulsive, complex, dynamic. They are here operative through word-symbols and statements. The getting of significant relationships among them is at the same time a stimulus to them; and the very contact tends to speed the tendency of views to alter and adapt. Full recognition is given this point, for it is just this dynamic process which the Survey would further. If, therefore, the picture is nearly enough accurate to be a stimulus to a search by educators into some of their inmost beliefs; and to a vital exchange of view within the profession, the effort shall not have been in vain.

On the following pages are presented the seven main issues (categories) and a brief outline of the significance of each. After each presentation is recorded the vote of the total group and of the 30 professors on that section.

### THE MAJOR ISSUES AND THEIR MEANINGS<sup>1</sup>

#### A. STATIC-DYNAMIC

1. The purpose of education should be essentially to prepare boys and girls for the activities which make up, or which ought to make up, well-rounded adult life.
5. The most effective instruction results when the teacher aims primarily to prepare the child for successful adult life.
23. Upon the public schools of America must rest, as their dominant task, the guardianship and transmission of race heritage.
27. In this period of rapid change, it is highly important that education be charged with the task of preserving the established and enduring educational aims and objectives.

<sup>1</sup> Cf. later comment on the character of the titles.

40. Job analysis is a highly reliable technique for determining principles and objectives for the elementary school curriculum.
19. The best way to deal with such doctrines as communism is to teach positively the soundness of our economic system.
33. In the interest of social stability, the members of the new generation must be brought into conformity with enduring beliefs and institutions of our national civilization.
34. As science develops, it will some day be able to predict up to a very high degree of accuracy what a given individual will do in almost any particular situation.
43. Adult life changes so rapidly that it cannot safely be used to set the standards for the education of children.
48. With the extension of knowledge and the development of science, the element of uncertainty in life is being progressively decreased.
7. If the curricula of our teacher-training institutions are to be changed from their traditional academic basis, a survey of the school activities of teachers in the public schools should furnish us the basic materials for building the new curricula.
28. In any community where opinion is predominantly on one side of a certain question, the wise teacher will keep classroom discussion off that question.

Two ways of meeting change are patent. The first, as has been noted, fears and therefore tends to resist and to hate it. Threat of change is viewed as a potential evil. The second welcomes change as an omen of better things and will even institute measures calculated to bring more change. The former way, when it persists, marks what may be called the "static" outlook and disposition, the latter way marks the "dynamic." So prevalent is this difference of viewpoint and character that it becomes one of the seven main issue points. Stated thus in logical extremes, only a few persons would be found who subscribe to one or to the other extreme. The shades of difference are often fine. But it is not difficult to find wide and marked differences on such a scale, even though the extremes are rare. There is no doubt that some persons tend to register far over in the "dynamic" half of the scale, while others respond far into the "static" half. It is these differences which are of most interest and concern.

At least 6 well-known areas are to be noted in the 12 statements in this category. In 6 areas, that is, the teachers of teachers were given an opportunity to register either as "static" or "dynamic." One area is their belief regarding the general aims of education, covered by statements 1, 5, 23, 27, 33. A second is their conception of how aims and objectives should be determined, statements 40, 43, 7. Third, their notions regarding the function of the schools in relation to controversial matters, statements 19, 28. Fourth, their psycho-

logical theories, statement 34. Fifth, their metaphysical conceptions of man and nature, statement 48. Sixth, their beliefs regarding the powers of science as a method of thought upon social and educational problems, statements 34, 48. There are other areas, but it is noteworthy that these 6 are prevalent ones. The statements were gleaned from a wide and careful search of current educational thought. If an educator locates his views in these 6 areas no small part of his mental direction is thereby indicated; far from all of it, of course, but certainly a part which is highly significant in him as an educator in current times.

What does it mean to be "static" in these areas? "Dynamic?" Answers to these questions will be the surest route to understanding what may be indicated when the profession registers its views on this category. Space permits only the most skeleton-like sketch of these meanings. In the following parallel columns are indicated the two extreme points of view in this field, the *static* and *dynamic* ways of looking at the several questions.

It has been thought best to state the opposite extremes in practically all instances. Probably few persons hold to either extreme; but, on the other hand, all persons do distribute somewhere between these extremes, and can be located with fair accuracy in one half or the other of the scale. The use of such terms as "static", "academic", "traditional", etc., in naming the left-hand column, while more honorific and pleasing terms are employed for the right-hand column, does reveal the preference of the authors. But this is for purposes of emphasis on the proposition made and not to be calling people names. There is scarcely a reader who would be all on the left-hand side just as there is rarely anyone all on the right-hand side. Those responsible for this instrument, while much more on the right-hand side than on the left, are still indeed partly on the left, partly "static", "academic", "traditional." The names are most appropriate to the logical extremes, and serve thus to locate the issue rather than to locate and to indict persons. An individual may hold a position which runs far to the left on some of the issues and have an able defense in reason for it. There is no intolerance of him in the names used. Since the words do apply to the logical extremes and there are probably no persons to be found at the extreme on the left-hand side, no one should feel himself dubbed with an unsavory name. The assumption is made that all readers join the author in wishing to avoid the logical extreme on the left-hand side as a consistent position.

Note, too, that more elaboration is given in most cases to the points in the right-hand column. This is because it is the less well-known extreme. The left-hand points are usually so familiar that they need only be indicated for most readers.

*Static*

1. Prepare the child for an adult life little different from that which prevails now among his elders.
2. Prediction of life 20 years from now is feasible and safe.
3. Teach and learn for the future according to the present prevailing group view, even on matters clearly controversial in society.
4. The needs of adult years, not of childhood, are the proper focus of educational efforts with children.
5. Social stability requires the teaching of largely unquestioning loyalty to prevailing institutions, customs, and conventions.
6. Objectives in education are best determined by treating statistically those ways of doing things which are currently prevalent. Choices among them are made by counting jury votes.
7. Objectives are determined largely through a study of needs and activities within the present school system as currently operated.

*Dynamic*

1. Refuse to make solutions long in advance for those now being taught. What is adult now will in many and probably serious aspects not be "grown-up" 20 years from now.
2. Predict wherever possible, but change and the precarious in life make events unique as they come. To force a prediction is to fail in the effort and to deprive the current event of its unique due.
3. Have faith in aroused intelligence and teach and learn for the events in which the intelligence thus furnished can intrinsically operate.
4. Childhood has a personal right of its own and is not properly to be subordinated as such to largely unpredictable needs of adult years.
5. Strict conformity and unquestioning obedience are not the dynamic route to stability. Rather hospitality to difference as a possible improvement, and belief that social stability may often depend upon criticism and reconstruction.
6. All factual and concrete data and evidence are properly to be secured, but in and through this process is operating the only proper way in which purposes, ends, goals, objectives are ever formed—that is, the intrinsic interaction and integration of value judgments and decisions by those concerned in the whole undertaking.
7. If education and the profession are to fulfill a proper function in society, the aims and objectives of its endeavors must emerge primarily through participation in and study of the present social conditions. The ends thus formulated must be ends in and for the society of the times.

8. Psychology is primarily and finally a psychology of the individual; the individual conceived as having an original nature more or less independent of the surroundings of his birth and infancy. He should be studied for the laws of his behavior—laws which, when discovered, give sure keys to control of human learning and conduct. Study behavior by finding constants in parts of behavior, constants which will increase understanding and control of the whole conduct.
8. The individual is basically an interacting organism. The unity is a unity of organism and surroundings. Traits are as truly a part of the situation outside the organism as they are within the organism. Inasmuch as the social surroundings are so vital a part of the total situation, any psychology of the individual must be at the same time a social psychology. Disengaged parts of man's behavior may be found to have considerable constancy as such, but the conduct of man as a whole individual is another matter. It is in constant process of becoming, scarcely predictable to the point of scientific control. Real human control is a common undertaking, not the control of one person over the other.

The static-dynamic category better than any one of the others marks the character of the whole instrument. The categories overlap in meaning, unavoidably so, and indeed desirably so. A person's outlook on life and education is not a matter of categories; it is a fluid whole and eventually best understood as such. Analysis is for the purpose of making ourselves aware of those connections at which we may take hold to do something about the whole outlook; for only so do we seem able to bring intelligence to work upon the whole.

Following is the way the total number of educators voted on this major issue and as compared with the vote of the 30 professors:

	Static	Dynamic
Total group.....	Percent 61	Percent 39
Professors.....	33	67

### B. ACADEMIC—DIRECT LIFE

2. For the elementary school; I favor a curriculum which in large part represents an organization in terms of separate subjects.
6. The movement to substitute "activities" for "subjects" in the school curriculum will operate against the best interests of American education.
10. The remedy for the overcrowded curriculum in the elementary school is a program of carefully selected minimum essentials in the various subjects calling for greater mastery of fewer details.

16. Education should work toward the goal of teaching and learning things when the need for them arises in life experiences.
29. The pupil profits largely in the degree that there is logical organization of the materials of instruction presented to him.
3. Systems of uniform examinations given by boards of education in some States should be eliminated from the American public school.
12. Courses in the classics and in mathematics still remain among the most effective agencies of mental development in the students.
24. Telling children about the good behavior that is expected of them and urging them to follow precepts is a procedure justified by the results which it produces in conduct.
41. The finer phases of culture are best pursued for their own sake, and should, on the whole, be kept separate from matters of practical and vocational development.
52. The scholastic attainments of pupils as revealed by standardized achievement tests constitute a reliable basis upon which to rate the teachers of those pupils.
17. College-entrance requirements are too academic in character for the good of our secondary schools.
38. It is impossible to predict the adult needs of the contemporary school population with sufficient accuracy to justify an educational program based on minimum essentials of subject matter.

For nearly a generation there has been a steady conflict between the academic tradition and an emerging insistence upon an education which focuses in the core of current life experiences. The former educates by advancing the systematic disciplines in the grasp of the new generation, while the latter sees knowledge as functional and the organization of knowledge as unique for each learner, appropriate to the course of his own experience. This issue remains with the educational profession today, still unsettled in theory and utterly confusing to practice.

*Academic*

1. Proper education consists in having pupils learn something already systematically and logically arranged by others.

*Direct life*

1. Instead of subjects, this view finds the focus of the educative process in the events of intrinsic experience and thinks of knowledge and knowledge-organization as contributory, instrumental in the process. Knowledge and its organization are necessary indeed, but are gathered and formulated in the course of events, as much a product of the events as a precondition of their solution.

2. The first test of such education is retention of the subject matter used. The examination of subject matter retention is the incentive as well as the test of learning. Success in education is success with examinations. Promotion is according to such success.
3. There is transfer of learning from the study of subjects and the working of examinations to other kinds of function in the learner's life. To master the subjects is to school the mind for all of life. This must be an assumption of the academic view.
4. In addition to the assumption of transfer, is an evident belief that success in the academic endeavor (subjects and examination) correlates highly with ability for success in many important functions in private and public life, e.g., good judgment in social problems and decision, sagacity in political and diplomatic affairs, in business and the professions.
5. Culture inheres in the more or less formal acquisition of the race's organized knowledge. To be conversant in these disciplines is to be among the keepers of the best. To pursue them is the chief end of man. To attain therein is to be cultured.
2. The true test of educational procedure is the functional value of the knowledge acquired in connection with events in the life of the learner. Greater richness and mastery of oncoming events in life is the end of educational effort. All else, including the subject matters, is properly subordinate to this.
3. There may be some transfer, but it is not enough to justify the subjects-centered procedure. The indicated place to learn a thing is in direct connection with its actual functioning in experience. The best time to learn a thing is "just before it is used." Such is not always possible, but the direct-life view would approach it in all possible degrees.
4. Success with the subjects bespeaks an intellectual ability of a kind. It may correlate highly with other abilities or it may not. There is no assurance that it will. If an individual has such ability along with other traits not thus measured he will probably go far. The direct-life view maintains that the latter traits, attitudes, dispositions, and functional abilities are of primary importance, not incidental, and not an inevitable accompaniment of academic success. This view would stress the cultivation of the functional traits in the actual life-setting, and make the organized knowledge an emerging part of this process.
5. There is no proper separation of the cultural from the practical. To know the bearings of one part of a subject matter upon another part, of one subject upon another, does have merit, but devotion to such pursuits is secondary and eventually anemic. Far more essential is it to know the needs of current events and to be conversant with the race's accumulated knowledge, as it bears upon a responsible effort to bring these events to satisfactory resolution. This is the prime condition of being cultured.

6. The "subjects" program is essentially conservative in character. It considers it education's chief task to preserve the heritage by putting it at the disposal of the on-coming generations. No attention to the new must be allowed to preclude the fullness and accuracy of the transmission of past attainments. Education concerns itself properly with this transmission. The new social-cultural problems are for the mature, thus equipped. They are not for the immature in schools.
6. The conventional "subjects" education is held to give a savor of industrious respectability, while, in fact, invidious social distinctions tend thereby to be fostered, and the most needy events of current life go unattended by "better" and disinterested intellects. More often than not identified with a static attitude in social and educational matters, the "subjects" program persists, casting a spell of authoritarianism over education and constituting a block to due consideration of change. The organized knowledge is important, but only as a service congenial to the needs of the advancing, uncertain front of current events.
7. The social philosophy of the status quo is the one which prevails in the educational undertaking. If there is a conflict of philosophies in the present status of society the philosophy of education is the philosophy of the dominant group in society, usually the majority of the people.
7. When education is conceived as on the advancing front of a society and culture in the process of becoming, the philosophy of education is properly a ventured philosophy of a new society and culture. The new education—direct-life—is in the nature of the case, therefore, called upon to venture, in terms to be effective, the kind of society it wants. This is an inescapable implication of the direct-life focus of educational effort.

Any light that can be thrown upon the present status of thought regarding this issue becomes intensely significant. What do the teachers of teachers think in connection?

	Academic	Direct-life
	Percent	Percent
Total group.....	43	57
Professors.....	16	84

C. SCIENCE—PHILOSOPHY

18. For some types of problems in education, the philosophic and not the scientific method must remain permanently the guide to a solution.
21. We must come to rely chiefly upon scientific method to give us adequate educational objectives.
30. The increasing use of scientific method in the study of education will ultimately lead to the abandonment of philosophy of education.

44. Seeing that "natural philosophy" has been superseded by the exact sciences, we may expect that philosophy of education will eventually be superseded by the science of education.
25. The time will probably come when the major objectives of education will be determined by persons recognized as experts in the science of education.
45. General theory frequently fails to become operative in the teacher's practice because it is by nature so abstract as to prove functionally effective for only a few of the gifted students.
53. The success of exact science in achieving control and mastery of mechanical things is an indication of what may be expected when the methods of the exact sciences are applied to the fields of human and social phenomena.
9. The place given to specific techniques and measurements in the professional education of teachers today should be reduced rather than increased.
31. A course in general educational theory can be as close to the vital and immediate needs of the prospective teacher as is the provision for his technical training and supervised practice.
36. The need for courses in general educational theory in teacher-training institutions should gradually disappear as a growing science of education shall continually improve our techniques and objective tests and measures.
49. For the prospective teacher to have a good course in general principles of education and no specific training, would be better than for him to have only the technical specific training and no course in general principles of education. (Supposing he could have only one or the other, not both.)

This category is not easily named. The title employed is not an antithesis in fact. Only in emphasis can the conflict be said to exist. There is no such sharp distinction between science and philosophy as the title indicates. The real conflict indicated is that between extreme devotion to fact getting, usually by quantitative means, and on the other hand, belief in the more inclusive use of thought, finding not only facts but more nearly adequate purposes, policies, goals, and programs. Since the turn of the century there has been almost messianic hope and faith in the method of exact science, a hope that all phenomena would eventually yield through it to precise understanding and control. In this, education reflected the general trend in social sciences. If all energies could be devoted to getting the facts, somehow the judgments of purpose, policy, plan, aim, objective, would just come about and they would be right. Values and value judgments should eventually be precluded by exact knowledge. Man would be released for a life of understanding and control such as he had not before dreamed of, even control over man and society.

Science and technology have been the prevailing passion of the more scholarly students of the country's problems for most of a generation.

In education, the measurement movement and testing, together with a rigid adherence to science and objective observation in the psychology of the individual, have been the chief expressions of the scientific passion. A close second to these has been the desperate effort to determine educational objectives by counting items in the existing status of society. Much of good may eventually be reaped from this trend. But it has come about that these devices for measuring are being allowed to preclude the necessity for thinking through problems of psychology and education, especially in respect to questions of policy. There has been detailed answering of questions of fact, isolated fact, quantitatively demonstrable fact. But there has been only a minimum of thinking regarding what we are about, where we are going, how to keep values represented in plans and programs and yet keep them growing and adapting in changed conditions. Considerable study has been devoted to the business of thinking toward isolated fact, but there has been neglect of the business of thinking inclusively both toward those facts which will not respond to quantitative treatment and toward the formulations of purpose which release action in the service of an increasing number of human values.

This is the major issue under which the statements of the present category were assembled. Searching these statements, the issue is found showing itself in the following ways:

#### *Science*

1. All other modes of reflective thinking are gradually being replaced by the way of the exact scientist. As rapidly as his techniques may catch up, all thinking of the more inclusive, "theoretical" kind must give way.

#### *Philosophy*

1. The techniques of the exact scientist, particularly as they depend upon the advance of quantitative treatment, leave untouched the whole function of forming ends, programs, objectives, purposes, and policies. The method of fact getting is not the method of this function. Moreover the usual "objective" method of fact getting in exact science is not adequate to the needs for fact getting in all social and human phenomena. These facts elude the quantitative techniques; they require to be judged within the experience itself, intrinsically. They are not the appropriate subject matter for an extensive use of the usual "extrinsic" objective methods.

2. The facts, in educational science, will, when found, make decisions, policies, plans, etc., wiser and ever more adequate. First, last, and always—"get the facts."
2. Facts are always somebody's facts. and require therefore to be estimated in light of the philosophy of that person. The best that facts can do is to inform and check a process of preference and purpose which is prevailing. They do not and cannot form those purposes, preferred directions, and programs. This latter process must be studied and advanced in its own right. This is particularly important in this day when the aims of both the social and the educational process are being impelled into reconstruction.
3. The subject matters and the accumulating mass of techniques will greatly reduce the need for "theory" education of student teachers in normal schools and teachers colleges. Indeed, this is already the case.
3. All that has been said before in this column will have made it clear that to cut off the facilities for liberating the minds of teachers for the more inclusive thinking through of the functions of education and the profession is equivalent to gross neglect of the heart of the thinking process, while putting a defeating faith in but one partial phase of it.

An individual may examine his own views by trying his estimate of the statements under this category, and by comparing his position on the whole category with that of the whole number of educators who marked the instrument. How do the educators stand on this issue?

	Science	Philosophy
Total group.....	Percent 47	Percent 53
Professors.....	28	72

D. TRADITIONAL INDIVIDUALISM—SOCIALIZATION

4. In educating the youth of our country we have indeed put emphasis upon individual success, but we have done so with due consideration for social good.
22. The school should strive to develop in its pupils that hardy and rugged individualism which characterized early American life.
8. Each State should be free to order its own education without being obliged to heed the decisions of any system of national planning commissions.

26. With increasing interdependence within our national life, there is need for some type of central agency to effect a corresponding increase in unification of educational effort.
32. By means of a system of Nation-wide planning commissions, the United States should undertake deliberately to shape and give direction to the course of its social development.
39. The first concern of the teaching profession in America should be with the understanding and control of the forces that are making a new society.
42. The effectiveness of education should be determined more by general social conditions (such, for instance, as revealed through crime statistics) than by any apparent effect upon particular individuals.
14. It is sound practice to apportion State school funds to local communities according to the amounts those communities are already spending for their schools.
46. Without passing upon the merits of communism, we might find a valuable suggestion for us in Russia's current use of her public schools in carrying out a deliberately planned social program in the nation.
51. Any organization of education of higher official standing than that now represented by the Office of Education in Washington, D.C., would tend unduly to jeopardize the rightful control by States and local communities over their own education.

One of the oldest of social issues, this one, because of circumstances, happens now to be the youngest, the newest in point of emphasis. Western society is today having to reckon with its tradition of extreme individualism. So long as a receding frontier and an agricultural economy remained the rule among American people there was peculiar merit in the vigorous individual independence (or self-dependence) which marked their lives. When these conditions gave way to urbanized industrial communities and to our modern interdependence, the kind of individualism which had prevailed was compelled to yield ground. It has indeed yielded some ground, but as a practice it remains to cause much conflict and oftentimes ruin. Current economic maladjustment is in no small measure due to "individualism"—or to say the least, the prevailing kind of individualism definitely prevents getting together to order the existing economy for the correction of the most obvious maldistribution. Some kind of common, corporate arranging needs to be done if standards of living are to approach the clear possibilities of security and satisfaction. How such arranging and ordering shall be done is the chief point in question. Laissez-faire, competitive individualism evidently does not work. Dictatorial rule from above is unsavory. Fascism is proposed but not largely congenial in America. Proletarian class dom-

inance is advocated, but this, too, is not sufficiently representative here to gain momentum. Various sorts of schemes for planning are proposed, none yet with favor sufficient to bring it even near to adoption. The Government goes into business to the cry of keeping government out of business, while the whole country looks to the Government to do something toward bringing prosperity again. Thus is proclaimed in words an ancient individualism and advanced in deeds and in expectation a centralized control and regulation of our economy.

This is the conflict in society represented in the issue being considered. For which kind of social control are we educating? One scarcely knows. Some educate for one kind, some for another. But certain it is that education is mostly for the traditional kind in theory and in practice. Only here and there is the opposed theory being advanced in education, but it is increasing in spread and in emphasis. No one of the 7 major issues promises more acute conflict than this.

Several forms taken by the issue are to be noted in the statements.

#### *Traditional Individualism*

1. Staunch faith in a laissez-faire program in society and "rugged" independent individualism.
2. It is not the business of public education in the schools to concern itself with current social problems. Rather must the schools bring up a generation able to think, and let them, as adults, deal with the problems. The young cannot understand the problems of society with sufficient realizing sense to justify bringing such problems into the school.
3. Nothing savoring of increased centralization of social and educational control in the Nation should be harbored. This would be contrary to the local and individual self-determination which constitute the heart of our tradition as a Nation.

#### *Socialization*

1. "Rugged" individualism is no longer tenable; some new type of individualism must emerge, an individualism conceived in interdependence and taking corporate forms.
2. Educators, charged with bringing up a generation in the ideals of the country, find that these ideals are in conflict and confusion. They must have clearer ideals for society. Moreover, they know that the social environment educates more effectively than can the schools; that the educator, if he is to be effective must take some responsibility for urging and assisting in the redirection of this social environment. Both adults and the young must participate in this undertaking.
3. The times call for a centralized oversight and control commensurate with the developing interdependence in modern civilization. This view does not fear Government interference. It fears only unwise Government interference. Education, as does our society itself, requires intelligent coordination and effective planning.

From various angles there come arguments and influences pro and con on this question. The people fear centralization of control. But they also suffer without it. They cherish the freedom of local and individual initiative and judgment, but they keep strengthening our central organization, at times perhaps just to protect the locality. They have contrived to believe in State financial support of local education, hoping that it can be maintained without impairing local initiative and freedom. Groups interested in the promotion of social-economic coordination and planning vested with power of government, believe that education also will have to be planned, for the two cannot work at odds if the venture is to succeed. The votes on this issue are as follows:

	Traditional individualism	Socialization
Total group.....	Percent 36	Percent 64
Professors.....	25	75

#### E. HEREDITY,—ENVIRONMENT

54. It is misleading to believe that any one is a "born teacher."
57. Education may well be conceived as the unfolding of what is latent in the child.
60. Environmental influences, more than heredity, determine the differences in mental ability which children show.
63. The people of some nations possess on the average a greater native capacity for learning languages than do the people of some other nations.
66. Man's inborn tendency to fight makes it highly improbable that war can ever be entirely abolished.
69. As far as capacity for education is concerned, one race is practically as capable of higher civilization as another.
72. Classes in society are determined largely by conditions which are biologically inherent, hence social stratification must be accepted in any social order.
75. The source of economic competition is found in the trait of acquisitiveness in man's original nature.
78. Orphan infants adopted into very desirable homes sometimes turn out disappointingly. I consider that in most such cases original nature is probably a more potent factor than environment.
79. The dominance of the white race in the world today bespeaks a mental capacity superior to that of other races.

The title of this category tends to be misleading. The difference of view examined is not that between the strictly hereditarian and the strictly environmental determinist. In such words the issue can quickly become merely logical and essentially meaningless. The real point of issue is around that type of view which justifies a desired way of doing things in society by attributing it to hereditary and therefore unavoidable determiners. This is a well-worn resort of interests which for one or another reason cannot justify their beliefs and practices in the terms of actual social consequences. The resort to heredity is likely to come just when unhappy consequences put the belief or practice to a test. If the cause is beyond man's control, all responsibility for the consequences ceases. Then genuine self-searching gives way to condescending pity or philanthropy or some type of paternalism or melioration.

The opposed view does not deny hereditary influence. It believes rather that the disentangling of organism and environment in the so-called "original" traits meets with almost insurmountable difficulties. The refinements and subtleties of environmental influence are ever eluding detection, only to surprise the theorist who believes at last that he has found "original" nature. Moreover, whatever may eventually be shown to be "original" finds no significant expression except through interaction with a specific environment. However much influenced by capacity, the actual ability is in the patterns struck up in interaction with surroundings. So essential is this fact of interaction that the question is pertinent whether it may ever be possible to find "original" biologically inherited nature. The drift of all science today seems to be away from any such possibility.

At least, so long as there is an environmental influence not as yet examined in closest detail there is no justification in attributing whole personal and social superstructures to basic biologically, unchangeably inherited traits.

*Heredity*

*Environment*

The statements in this category make fairly obvious the several forms in which this issue comes up in education

*Heredity*

*Environment*

1. It is of utmost importance to discover the individual differences of learners in their capacities to learn and to use their minds, and to shape the educational program accordingly. These capacities may be discovered practically in their native limits. Once thus discovered they may be expected

1. What is found to be an individual's capacity is capacity for some function in interaction with some environment. The particular environment is therefore always to be reckoned into any particular capacity. The concept of original, native nature becomes thus less clearly a trait of the organism

to remain constant throughout the life of the individual.

2. For intelligent vocational guidance, it is essential to discover the inborn aptitudes of individuals and to develop them in occupations accordingly. The advancement of this program only awaits the development of tests which will discover the native aptitudes.
  3. Race and national differences are attributable to differences in innate capacity and inborn traits.
  4. Class differences, differences in economic level, crime, leadership in politics and business, and factors in culture such as war, competitive practices, the structure of social institutions, are all to be traced to independent of environment. Again, the constancy of such capacities is open to more and more serious question. While not denying differences in individual mental capacity among learners, this view does put more and more emphasis upon the environmental factor in estimating the possibilities of education. The way is thus cleared for giving as much if not more attention in education to the social-cultural surroundings in which the young grow up.
- There is no cultural superstructure which shall escape scrutiny for its educative effect on the young and mature alike.
2. The confidence that occupational choice can be given definite guidance by discovering "original" bent has been severely shaken. Again, there are some differences in original capacities for success in occupations, but they are so indefinite as to be in most cases the most vague and general sort of indicators of occupation. It is becoming recognized that the conditions in the occupational environment, e.g., the present occupational and employment situation, are most important objects of study for purposes of guidance and that interests of youth are exceedingly flexible and adaptable to the possibilities thus revealed.
  3. The differences between races and nations are finally not to be accounted for by inborn capacities but rather by conditions of environment. The identification of differences with essential biological inferiority is no longer a tenable practice or belief. The differences are, as whole race is compared with whole race, eventually surmountable.
  4. The belief that class differences and other persistent factors in culture are based on unchangeable original nature is essentially false. The problem is one of a whole situation including all the environ-

permanent native traits and capacities. To change society would require therefore that we change "original" nature which of course is impossible save by some eugenics program.

mental influences as well as biological differences. To rationalize human exploitation by assuming that original nature makes it necessary, is false and vicious in consequences.

Such is the heredity-environment issue. Its clarification means much in connection with the solution of some of society's most acute and serious problems. Sharp differences of belief here among educators are thus of utmost concern. Note how they stand on the issue

	Heredity	Environment
Total group vote.....	Percent 56	Percent 44
Professors.....	40	60

#### F. PASSIVE—ACTIVE

13. The school should instill obedience, for it is a condition of the highest type of leadership that "he who would command must first learn to obey."
15. The years of childhood should be thought of as being primarily a period of preparation for adult life.
20. Some children who are fully normal mentally are quite incapable of creative endeavor.
50. As a rule, drill should be introduced only in situations where the pupils feel a genuine need for it.
11. We should cease to put emphasis upon education in childhood for the deferred values of later life.
47. Little of value can be achieved in the education of children until they have learned obedience to those in authority.
55. I believe it is often desirable to subordinate the good in the child's present living to the greater good of his future adult life.
58. The school will fail to measure up to its responsibilities in reducing crime in the degree that it gives up its well-established principles of discipline to make way for greater pupil freedom.
64. In teaching such subjects as geography and history, I favor the following procedure: Pretest, teach, test the results, adapt the procedure, teach and test again to the point of actual learning.
67. Educational experts rather than classroom teachers should make the curriculum.
70. Children from the first school years on, should be given a genuine determining part in selecting the activities of their curriculum.
73. Coercion is necessary in schools because a good curriculum must call for the learning of many things whose values the young pupil cannot yet appreciate.

Of the seven categories none is quite as familiar to the educators as this one. For a generation, beginning with those years around

1900 when John Dewey's views began definitely to prevail over the Herbartian doctrine, the school people and the public have been made acquainted with the "active" emphasis in educational theory and practice. Traditions, however, have hung on with the result that the matter has been one of conflict and issue. Much that would class as "passive" prevails still in school programs. The meaning of this issue today may well be discovered by noting again the several forms which it takes as indicated in the statements. It thus becomes evident that here is practically another aspect of the "academic-direct life" issue considered above. The difference is one of approach, the latter having mainly to do with the question of where the content of the educative process shall focus, while this issue concerns itself primarily with method and attitude in the teacher-pupil, mature-immature, relationship. So integrally are the two aspects bound up in the whole process that only the persistent current tendency to think of them separately could justify their separation here.

*Passive*

1. The learner is best built into a desirable citizen by teaching him what he should know. The race by hard experience has learned much and put it into shape. The young should learn it so. The learner can be brought up to reproduce in his person the selected best out of the race's formulated experience.

2. It is neither just nor safe for society and the individual to wait upon the "active", self-initiated interest and attention of each in relation to all. Coercion and indoctrination are necessary.

*Active*

1. The learner is not to be thought of as passive to the intent of the educator. He is normally an active organizing agent. He makes over what is presented to him; he weaves it into his own unique pattern. It has still much that is held in common with others, but at the same time the pattern is unique for each individual. The common and the unique are not necessarily inimical. They are for mutual good. Both must be respected. The individual as a unique person is the final dynamic unit of society. This is the heart of educational aims and efforts.

2. The new form which is today being taken by the doctrine of coercion and indoctrination is to the effect that society cannot wait upon the free and active program. A new "tradition" must be brought about by coercion and indoctrination. To this form the "active" view responds with the belief and assertion that the alternatives have not all been tried. Having tasted freedom we shall probably not fall back. Having sensed the "active" nature of the learner we cannot deny it. Genuine "active" participation in control is the only defensible road ahead.

3. Authority and obedience are lost values in America. They must be reclaimed. Only on such basis can a genuine social character develop within the individual. No other feasible way is known.
3. Authority must stand, if at all, under free criticism and challenge. It must prove its worth in actual consequences. Obedience is not the key word of a dynamic social-moral situation; the key conception is rather an understanding consent in a setting of confidence and good will. The young will respond favorably to such an approach, if it is sincere and genuine. The real authority emerges in the process; it is not predetermined and fixed.
4. On the whole the social order and the schools are stable. They become reconstructive and "creative" only under the compulsion of a universally recognized need. Cultures change very slowly and in a way which man cannot predict, much less control. The teacher may well "stick to his knitting" and avoid assuming the role of savior of man and society. He is getting out of his proper field when he tackles "social reconstruction" instead of teaching the young the rich heritage which is theirs.
4. The most prevalent note in the new education is the "creative." The race has tasted the good in making things new by deliberate effort. Science has loosened the grip of dogma. New forms must be found. Industrialism has broken down old mores and new must be "built." To submit to forces, man has found, is not his highest possibility. He knows that he can conquer forces and shape them to preferred ends. He is just beginning to sense that he can perhaps make a society more to his liking. Again, esthetically, if things are not beautiful he is daring to make them so. Art, creative, is an essential part of the new education. Man is beginning to believe that he can make his work, his society—everything—more to his taste, more lovely, more beautiful. On this forefront of advance he finds the real heart of the educational program.
5. The curriculum and the school program should be made authoritatively and from above. Administrators and experts should be made responsible. Business has given us a good pattern, with its responsible executives and managers.
5. The teacher and the child sense most intimately the needs in education. No authority should preclude their spontaneity and initiative in rising to these needs and conceiving programs to meet them. Where a general course of study or curriculum is needed, the teacher should have responsible participation in their formulation. The proper leadership is not dictatorship, from the top down; it is rather an effective releasing of the directive powers within common deliberation and undertaking.

How do the educators stand on this issue?

	Passive	Active
Total group vote.....	Percent 68	Percent 47
Professors.....	37	78

G. SEPARATE MIND—NATURALISTIC VIEW

- 59. The individual is born with a mind which serves him throughout life as an agent for acquiring and retaining knowledge.
- 62. Mind is individual; that is, each person has his own mind, which is not only distinct from the minds of all other persons, but is also set apart from the world to be known.
- 65. In man's experience there are two realms: One an inner, characterized by mind; the other an outer, characterized by mere physical activity.
- 68. I consider that man has a twofold nature, consisting of body and soul.
- 56. To think of motive as a part of the act performed is truer than to think of motive as back of and impelling the act performed.
- 61. To believe that the spirit of man, like his body, is simply a part of nature is to deny him the possibility of enjoying the finer things of life.
- 71. To say that an individual has a soul is only to call attention to certain characteristics of his ways of feeling and acting as a human organism.
- 74. It is more true to say that the self is the habits acquired by the individual in the course of his life than to say that the self must be there to acquire the habits.
- 76. Man's faculty of reason is complete in itself apart from the subject matter upon which man applies his reason.
- 77. Moral principles come from a source outside ourselves, and as such should be the determiners of changing social conditions rather than determined by them.
- 35. In putting so much emphasis upon the psychology of habit and learning, we are failing to cultivate the human will which gives expression to the real self of the individual.
- 37. It is the influence and pressure of the social group which brings the individual to feel personally responsible, and there is no other source of such feeling of responsibility.

Here the point of the inquiry becomes more intimate. Philosophies are more directly approached, philosophies which have been ingrained in almost every thought of our lives through religious dogma. The issue is indeed fundamental. What the educator, what a people, believes basically concerning the nature of the individual is of utmost consequence. Viewing the astonishing reaches and possibilities of

the human mind, man has been put to it to locate himself in this world. Superior he does feel himself to be, largely because of his capacity to recall, to reflect, to comprehend, to project, to imagine, and to establish control over natural things. Whence this superior provision? In a word, the long current explanation, and still the prevailing one, is that man represents the spirit of knowledge, power, and wisdom which creates or at least holds sway over all of nature and the universe. Of course, this spirit tends to be thought of as personal. To man this personal spirit comes by in-breathing of a soul and mind, and guides him further by special revelation. Down through the centuries has come this belief in a mind separate from nature, yet operating within it, peculiarly in the human organism. A survey of current moral, legal, and conventional outlook and practice would quickly reveal the sway of this belief, perhaps still the most powerful determinant of conduct. In education, the same philosophy is prevalent; see it in notions of responsibility and discipline, in conceptions of the mind of the learner and thus of the curriculum and of educational method, in character objectives, in views and practices concerning the relations of the school in society. Throughout, there is a partial negation of the claim of human experience in the here and now to be judge of the course of action and conduct which affects it. There is an inclination to mysticism about causes and to authoritarianism in social control. Revelation becomes more sacred than experience, the past more the focus of attention than the approaching future. Tested knowledge and experimenting to learn are confined to the physical world. The social world has even today yielded only a little to the necessities of understanding. Why indeed should it, for belief has it that this is a world of minds, entities yielding not to accustomed ways of understanding.

The rise of a different view of the nature of man and his relations in the world has been therefore against odds. Persistent thought and understanding have brought a new type of belief—briefly, that man is part of nature, not a separate entity in mind and spirit. This view starts with the same wonder at man's superior provision in the world of things, but it finds explanation within this world rather than without. The advance of biology and physiology has made the body almost as great an object of wonder as the mind. Through the nervous system and the brain, through the realization of limitless interaction of organism and surroundings, through organismic patterns in behavior and through observation of close identity of organism and mind in the functions of thought, the gulf between mind and organism has become less and less possible of acceptance. Indeed the change is for many complete; man is nature in a form of expression; not superior to nature, but nature superior in its own creative advance.

Another contrast in view becomes evident. The nature of which man is part is a different nature from that of the traditional belief. The former is not fixed, not settled in either a recurring or a definitely unfolding pattern. It is advancing, precarious, with some relations more constant, some more yielding and passing. To this belief the wonders of nature do not cease, but become the greater with the vanishing of a mechanical explanation before the discovery of the fundamental fluidity and changeableness of the once supposedly fixed and permanent elements of matter. The farther man penetrates into nature's secrets the more it resembles the higher functions of his own being. Not separate from nature, but of nature itself is man.

For a convenient word, "naturalistic" has been chosen to designate this view. The issue then is clear. If one of these views prevails, a certain type of explanation of human conduct follows; if the other view prevails, an almost totally different understanding is the result. The statements under the category reveal in part the points at which this issue appears for educators today. The main ones are conceptions: (1) Of the learning process, (2) of social control, (3) of moral character and, (4) of the good life.

*Separate mind*

1. The mind acquires and retains knowledge, the self acquires habits, the faculty of reason is trained by the study of subjects. This is the basis of the "subjects" plan of education. The mind is filled with the subjects. The mind studies nature, and what is thus discovered is stored in the mind. Mind is here, nature is there.
2. Wrongdoing is to be attributed to a "wrong" spirit, a "wrong" mind. The malbehaving child is an unregenerate soul requiring to be will-

*Naturalistic view*

1. The activity of getting, arranging, and keeping knowledge is not done by the mind, it is the mind. The activity and the knowledge themselves are the mind. Mind, acquiring, retaining, and using are all just aspects and phases of one process of interaction. Learning is a forward, dynamic movement in which both learner and the thing studied are modified and shaped into a more or less harmoniously working unity. Education is, therefore, a process of becoming, a process involving the natural and social relationships of the learner. True learning means thus a continuous modifying of the surroundings and of the individual. One without the other is not true learning. There is no mind separate from this mutual, total process.
2. Society has learned that it is necessary to hold persons responsible for their conduct. But such responsibility is not attributable to

broken and converted. Responsibility rests with the mind and soul of the individual. Our accepted practices in cases of crime and discipline do not use these words, but they are nonetheless based upon such assumed beliefs.

3. The self motivates action and conduct. A good moral character is therefore achieved, if at all, by directing efforts and influences upon this motivating entity, the self, with its will.

an independent spirit, soul, or self. It is a sense developed in social relations. It becomes habitual. Society holds man responsible but may not properly heap upon him the weight of retributive reaction, for with most of that which gave form to his sense of responsibility he had little or nothing to do. The only reasonable dealing with misconduct is reconstructive. Reason leaves no ground whatever for retribution. The whole of discipline should turn not around "paying back" but around the largest possible rebuilding of a sense of social responsibility.

3. Motive is habitual. It is a part of learned ways of acting. It does not issue from some entity, such as the self. It is not there to begin with. It is acquired, for it is no more than the essential direction taken by the conduct itself. It may be obscure but it is no less an essential part of the action. Good moral character is to be achieved in this light by giving attention and effort to the conditions of interaction which issue in the conduct in question; by modifying the habits of individuals. This can, and does become an affair which can be carried on by the individual himself. He can become "creative" in moral conduct. His moral character does "emerge" in the process in some way; that is, it is not mechanically determined. It does, however, depend for its content and its direction not upon some separate entity or moral self, but upon the conditioning influence in the entire interacting situation. Character is more a matter of creating superior social, economic, political, and esthetic circumstances than a matter of instilling certain traits into the individual self.

4. The "good life" is to be judged more or less independently of what the current events, in man's experience, tell him is good. This makes "good" extraexperiential in any ordinary sense of the term experience. Good transcends all such, and is to be achieved in no little degree by denying the claims of the course of experience.
4. Good is registered in man's experience of consequences and in his sense of the whole, including all of those relationships of which he becomes aware from time to time. Failure to see matters in this way has led to highly questionable patterns in the race's culture taboos, asceticisms, separation of culture and the practical, of art and the world of production and distribution, of the creative from the routine in life. In brief, the result has been a series of unnatural dualisms in outlook upon man and nature which have excluded large parts of experience from participation in establishing and in enjoying the standards of good. In these terms, whole portions of society have been cut off from the good life, exploited by those who have claimed for themselves the brighter member of each such dualism.
5. Creative art is appropriate for the talented and the fortunate, and is conceived as pertaining essentially to the "fine" arts.
5. The whole individual and the whole of society are in need of that which expression in art brings of fullness in life. No phase of society's relations and activities should be conceived as not potentially artistic in character.

What views are educators today revealing on this basic issue? For this is indeed significant.

	Separate mind	Naturalistic view
	Percent	Percent
Total group vote.....	50	50
Professors.....	21	79

## CHAPTER II

### THE FINDINGS AND THEIR INTERPRETATION

In interpreting the findings made with the two instruments, the term "liberal" will be used as compared with the term "conservative". Generally, the "liberal" mark is that which indicates willingness to deviate from the status quo in theory and practice while the "conservative" mark indicates a disposition to abide by and (or) to defend this "status quo". There will be times when the author's own preferences will be evident, but at no time will they be intolerant of differing preferences. When, therefore, some are adjudged "liberal" and others conservative it is basically this objective relationship to the status quo of belief and practice which is indicated. Those thus designated, as well as others who may find themselves on the scales used, may therefore judge for themselves regarding the desirability of their positions. Where the author's convictions are revealed they are not of the character of dogmas, but rather propositions to the many others who think on the problems involved.

In setting forth the results of such a study it would be foolish to claim mathematical precision. Statistical devices have been used to make the study effective over wider ranges than would otherwise have been possible and to check against errors of judgment in drawing inferences from the data which came forth. But these are only helps to the frankly ventured study in what are not primarily matters of fact, but rather matters of purpose, policy, ideal, preference—in a word, matters of thought where human values conflict and must be resolved into integrations sufficient to guide conduct and practice in their common and mutual interest.

The reader is asked to conceive the report which will follow as the account of an effort to carry on something like interviews with the members of the faculties of more than 70 schools for the professional education of teachers. Many such persons have been interviewed in person, but it was, of course, impossible to meet personally the more than 2,000 instructors who did mark the instrument. The worth of such paper "interviews" depends largely upon the validity of the instrument. Its weakness is very keenly felt, but much experience with it gave finally no little confidence in its findings. The results show at least the larger differences of view operating in schools of education.

The findings will now be set forth in more detail.

I. On which of the seven major issues is the vote of the entire group most "liberal" and on which is it most "conservative"?

The even line in charts 1, 2, and 3 running from high to low represents the average of the entire group on all categories.<sup>1</sup> Height on

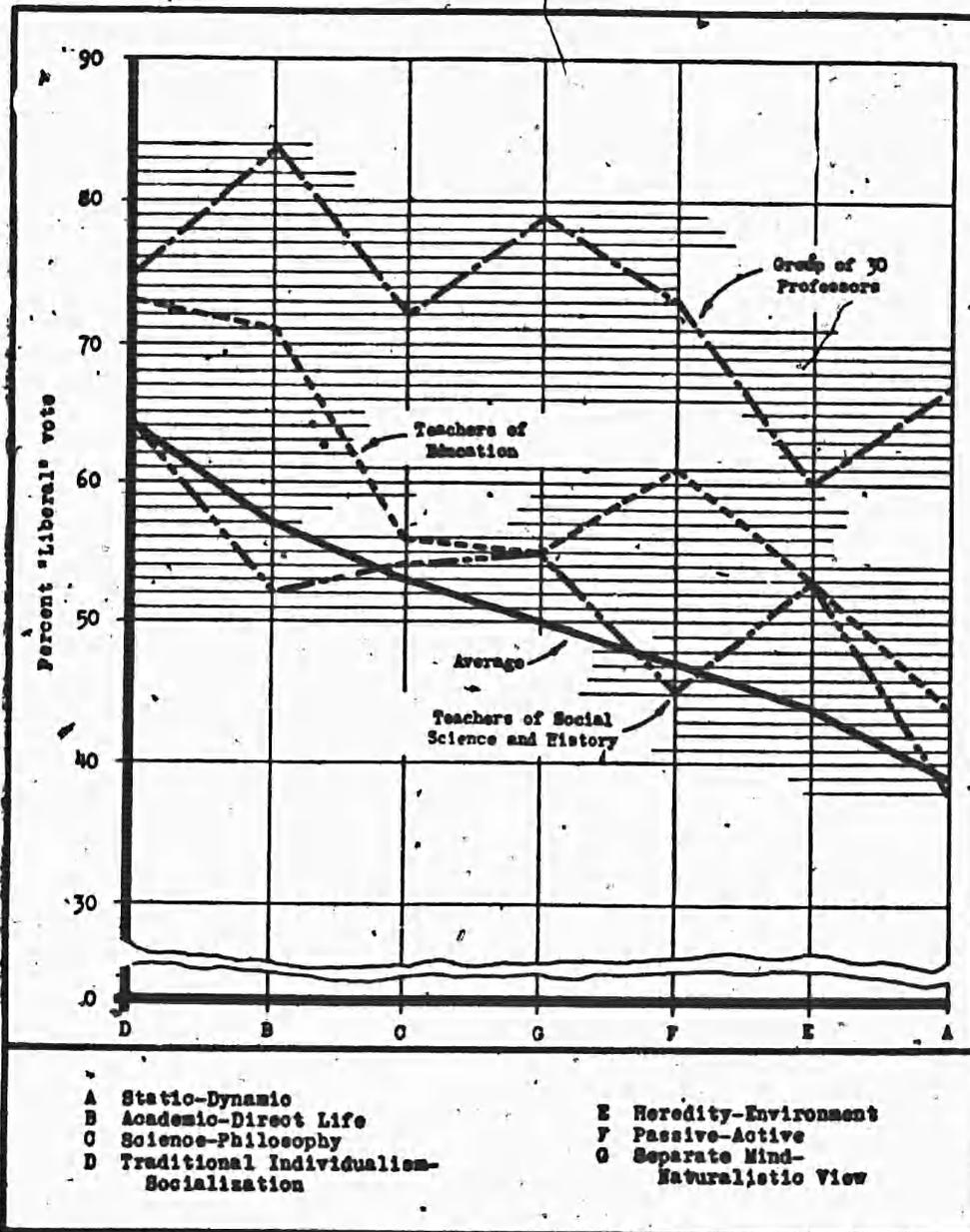


CHART 1.—The percentage of "liberal vote" on the seven main divisions of the instrument for the "30 professors", teachers of education and teachers of social science and history compared with the average of all who marked it.

the charts indicates the percent "liberal" vote. At the top is D, Traditional Individualism—Socialization. At the lower end is A, Static—Dynamic. The educators are in theory willing to give up extreme individualism in society and to look realistically upon the

<sup>1</sup> The reader will find it helpful to refer frequently to the statement of the meaning of the issues, A, B, etc., on pp. 461-485

advance of corporate, social, and economic relations. They are ready, in theory, for the school to concern itself with current, social, and economic forces and problems. In fact, centralization in social, economic, and educational matters on a national scale is not offensive to these educators' outlook. They seem prepared in mind for just such things. The patterns are apparently there.

Have the educators thought what this would mean? Perhaps not fully. There is no serious wrong in having thought-patterns ahead

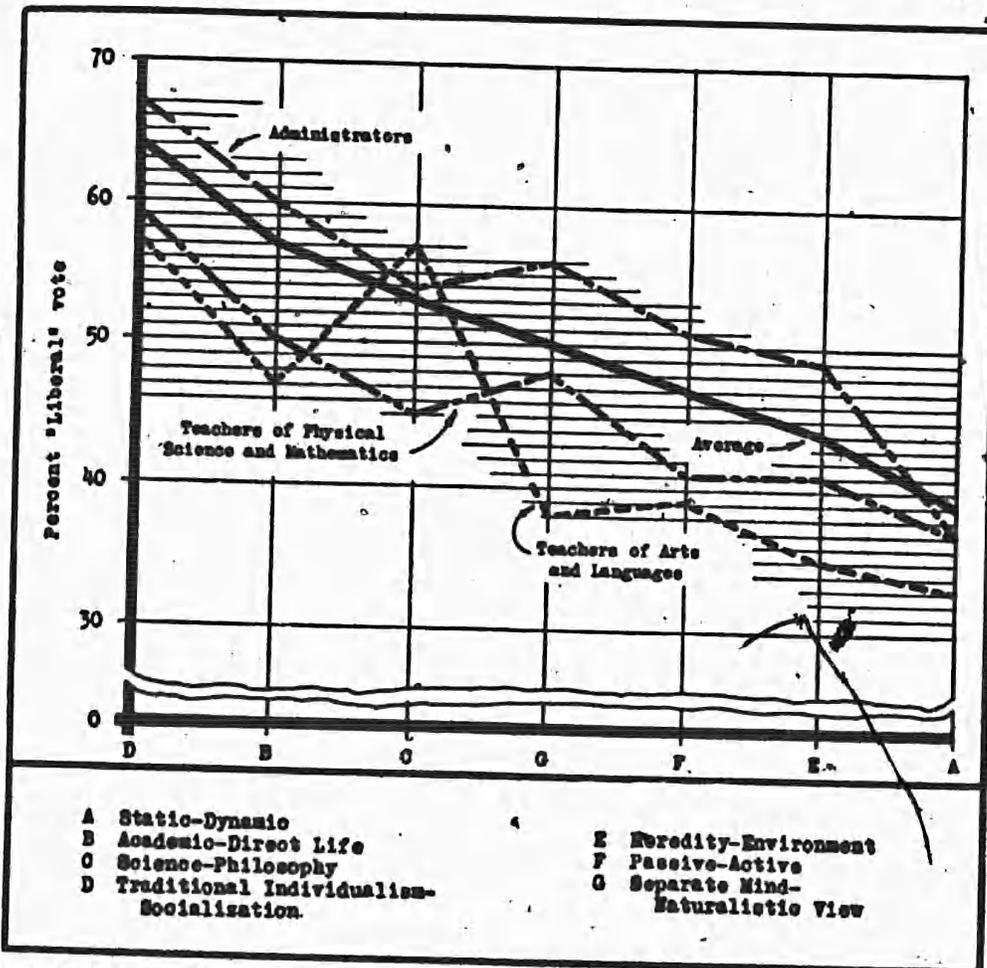


CHART 2.—The percentage of "liberal vote" on the seven main divisions of the instrument for administrators, teachers of physical science and mathematics, and teachers of arts and languages compared with the average of all who marked it.

of realization in action; that is one way in which the mind is very useful. But it is significant to learn to what degree ideal patterns have been thought through into the points of practice. The instrument provides no direct way to tell this as regards this category D, Traditional Individualism—Socialization. It does, however, give an opportunity in connection with the relation between category B, Academic—Direct Life, and category A, Static—Dynamic. Certainly these two issues are parallel. A "liberal" vote on one should

call for a "liberal" vote on the other. But they are almost at opposite ends of the line. Moreover, a "liberal" vote on category *D* would correspond very closely to a "liberal" vote on category *B*. The fact that these two are found together near the top of the line is not surprising, but it is surprising that the two should be at the extreme opposite end of the line from *A*. A close study of the statements in the categories will reveal that there are parts of category *A* which would require to be marked "liberal" if category *D* is so marked. Again, note that category *F*, Passive-Active, is distinctly in the

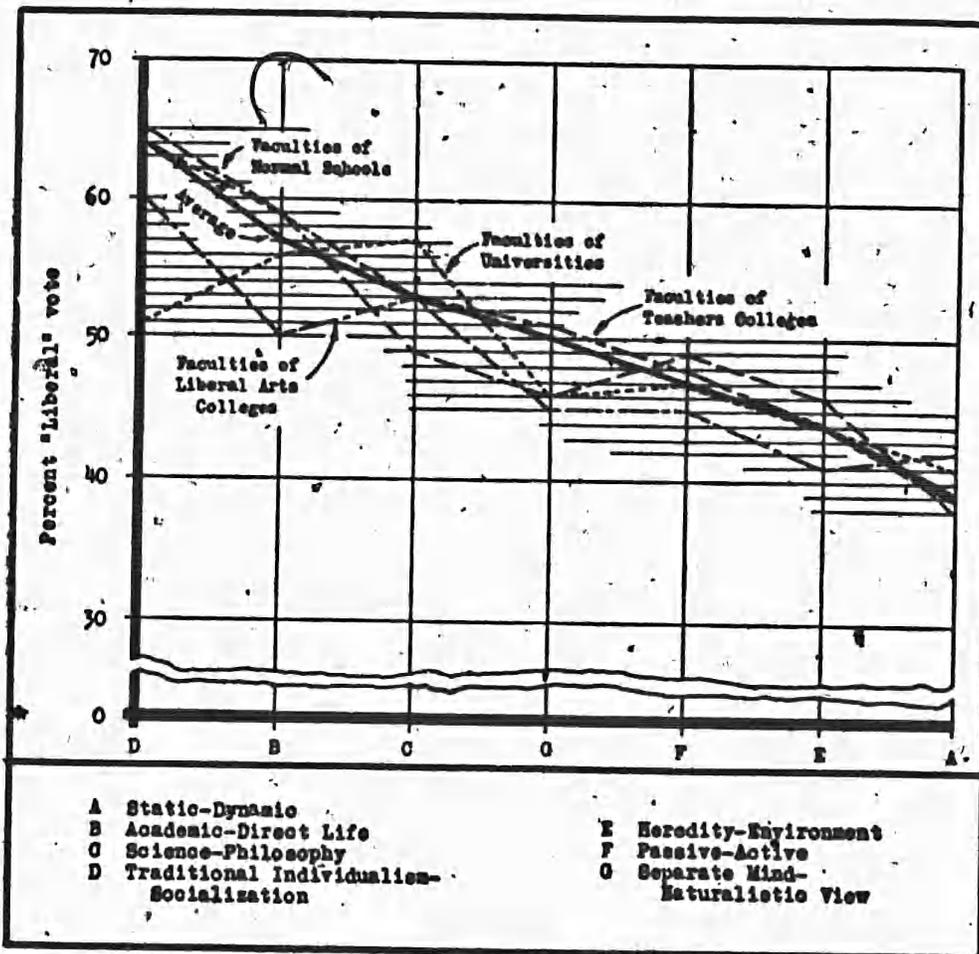


CHART 3.—The percentage of "liberal vote" on the seven main divisions of the instrument for the faculties of teachers colleges, normal schools, liberal arts colleges, and universities compared with the average of all who marked it.

lower part of the line. That *F* and *A* should be at the opposite end of the scale, or nearly so, from *B* and *D* is evidence for the belief that social and educational positions held theoretically have not been thought through to their meaning in connection with current educational practice. *A* and *F* tend to state the case more challengingly; that is, they make the reader realize that he is taking a position relative to something he is actually doing. *B* and *D* tend to be challenging more in terms of ideals. There are exceptions to this rule in both pairs of categories but the rule still holds.

This difference may mean one or both of two things: First, that the instructors have not thought through the matter adequately, as noted above and, second, that the dynamic conception of education has not been adequately developed. The fact that it does not command the following of so large a proportion of the educators is probably evidence of the second condition as well as of the first. The suggestion that comes, therefore, from this situation is that there is need both for more consistent and faithful thinking through of theoretical positions into the scene of practice and for the development of a keener realization of the demands which the developing social and educational vision actually does make upon the practice of today and tomorrow in the schools and in the community.

The fact that category *E* is near the lower end of the scale reveals the degree to which the educational profession is still bound by very doubtful views concerning the original nature of man, and concerning individual differences and especially race and class differences. To believe that such differences are so closely bound up with inevitable original nature is to base views upon a much-disputed doctrine. As indicated in earlier pages, this doctrine is very closely to be identified with the type of interest and outlook to which the educators, especially in categories *B* and *D*, appear quite willing to make known their opposition.

*II. Irrespective of categories, on which statements in the instrument was the total vote most "liberal"? And on which statements was it least "liberal"? The 10 most and the 10 least "liberal" have been noted as follows:*

#### MOST "LIBERAL"

26. With increasing interdependence within our national life, there is need for some type of central agency to effect a corresponding increase in unification of educational effort.
16. Education should work toward the goal of teaching and learning things when the need for them arises in life experiences.
39. The first concern of the teaching profession in America should be with the understanding and control of the forces that are making a new society.
18. For some types of problems in education, the philosophic and not the scientific method must remain permanently the guide to a solution.
30. The increasing use of scientific method in the study of education will ultimately lead to the abandonment of philosophy of education.

46. Without passing upon the merits of communism, we might find a valuable suggestion for us in Russia's current use of her public schools in carrying out a deliberately planned social program in the nation.
74. It is more true to say that the self is the habits acquired by the individual in the course of his life than to say that the self must be there to acquire the habits.
41. The finer phases of culture are best pursued for their own sake, and should, on the whole, be kept separate from matters of practical and vocational development.
3. Systems of uniform examinations given by boards of education in some States should be eliminated from the American public school.
17. College-entrance requirements are too academic in character for the good of our secondary schools.

## LEAST "LIBERAL"

23. Upon the public schools of America must rest, as their dominant task, the guardianship and transmission of the race heritage.
59. The individual is born with a mind which serves him throughout life as an agent for acquiring and retaining knowledge.
25. The time will probably come when the major objectives of education will be determined by persons recognized as experts in the science of education.
7. If the curricula of our teacher-training institutions are to be changed from their traditional academic basis, a survey of the school activities of teachers in the public schools should furnish us the basic materials for building the new curricula.
45. General theory frequently fails to become operative in the teacher's practice because it is by nature so abstract as to prove functionally effective for only a few of the gifted students.
21. We must come to rely chiefly upon scientific method to give us adequate educational objectives.
47. Little of value can be achieved in the education of children until they have learned obedience to those in authority.
78. Orphan infants adopted into very desirable homes sometimes turn out disappointingly. I consider that in most such cases original nature is probably a more potent factor than environment.
33. In the interest of social stability, the members of the new generation must be brought into conformity with the enduring beliefs and institutions of our national civilization.

73. Coercion is necessary in schools because a good curriculum must call for the learning of many things whose value the young pupil cannot yet appreciate.

Aside from the significance of these extreme votes on the statements themselves taken independently, one of the most interesting observations here is the number of apparent contradictions or inconsistencies. On practically the same points the group seems to be both pronouncedly liberal and pronouncedly conservative. Several pairs of statements will make this clear. For instance, 39 and 23, the one among the higher 10 and the other among the lower 10, both deal with the first concern or primary task of education. It is not easy to see how education could be at one and the same time concerned primarily as its dominant task with both the handing on of the race heritage and the understanding and control of forces that are making new society. Far from upbraiding his colleagues for this apparent inconsistency, the author wishes rather to share with them the serious problem which confronts education. Recent developments are making educators more conscious, positive, and articulate in their relation to current social conditions. This is undoubtedly the movement which will dominate educational interest for the next few years. There is no disposition to forsake the race heritage. But the emphasis in education is coming to be more upon the problems which today need solution than it is upon solutions which have been worked out to problems of past time. The proper relationship of the race heritage within the dynamic process is a serious problem which education faces. The vote on the instrument, as revealed in these two statements, is evidence of the confusion of thinking with regard to this problem.

Another such pair of statements is 74 and 59. The group largely contradicted itself again in this connection. The many meanings of this issue cannot be touched upon at this point. Just one will be considered. It seems as though educators have not taken seriously enough the naturalistic view of the individual which has been prevalent in educational psychology of the past quarter century. They cling to the belief in an inner nature more or less independent of the interacting natural scene in which the individual is a part, and so long as they cling to it they fail to get a clear picture of the dependence of the personality of the individual upon his social, cultural surroundings. They find themselves as a profession holding on to the conflicting positions. Again the seriousness is not in the differences of point of view, but rather in the conflict and confusion within points of view. There are, no doubt, values in both points of view. The misfortune is in keeping them consistently at conflict for lack of more thorough thought.

Statements 7 and 39 are interesting. How could educators be concerned primarily with the forces that are making a new society and

at the same time get their objectives mainly through a study of teachers' activities within the school system as it is running?

Note among the upper 10 statements numbers 18 and 30 and compare them with statements 21 and 25 in the lower 10. Here the reader is referred to the above discussion of category C, Science—Philosophy. The profession's confusion in the field of methodology is widespread. Note also the statement 45 in this connection. The disposition to exclude general educational theory from the courses in the education of teachers is another evidence of the difficulties in this field.

Compare statement 33 in the lower 10 with statements 39 and 46 in the upper 10. This apparent contradiction tends to reveal the confusion of a dynamic with a static way of achieving stability in society. At no point is it seen more clearly than here how different views of social control penetrate through and set up conflicts in ways of conducting education. Here again the profession may well share the difficult problems that face it. Educators cannot be conformist and absolutist and static and, at the same time, rise to the acknowledged task as an agency in a dynamic society.

Another interesting pair of statements is 16 and 73. Here is that persistent cluster of problems, subject matter and method, indoctrination and freedom, coercion and respect for the individual. It is not strange that the profession has voted at almost opposite extremes on this point, for it is one of the most persistent problems. It seems today to be settled only for those who are too sure that they are right. But here is evidence of the extent to which we can hold, at one and the same time, essentially contradictory positions.

The statement which receives the very highest "liberal" vote is number 26. It has to do with centralization and unification of educational effort. This is one of the most interesting discoveries of this study. Apparently educators do have little fear of the consequences of centralization. They have been accustomed to government control of their functions. Education has been essentially a "collective" undertaking in this country and nothing has seemed seriously to interfere with its development in this line. The fact that the educators do not rise against it may be attributed to too easy acquiescence on the part of the teachers. On the other hand, it might also be attributed to a type of centralization and control which is not and will not be cramping to the individual and to local effort. Again it is possible that this attitude on the part of the educators could be due to the fact that education has tended to become relatively innocuous as far as crucial current problems of the community and Nation are concerned. In all probability all three of these factors are operating in the production of the attitude revealed in the vote on this statement. It is impossible to say in what proportion they operate. But it is highly important in this day, when the functions of government are being so critically con-

sidered, that the educators are theoretically, at least, disposed as this vote would indicate.

Another statement which receives a high vote and on which apparently the group does not contradict itself is no. 41, in which the educators register their disapproval of separating the cultural from the practical. Whatever the actual practice may be, it does seem that the profession is given to this way of looking at things. Does it mean that the appreciative, the esthetic, creative aspects of the practical are being developed? Or does it mean that there is simply a negative attitude toward the old idea that mastery of a few subjects constitutes culture, as well as against the aristocratic notion of a cultured person? If it is either of the latter and not the former, the vote on this statement would reveal a need for reconstruction in the profession's attitude.

Note also that statement 3 receives a very "liberal" vote. If this group of instructors in the institutions for the preparation of teachers could have its way, there would be no uniform systems of State examinations.

### *III. What differences in educational theory exist among the various instructional groups within the institutions preparing teachers?*

The instructors in different teaching and administrative areas in the institutions were separated for comparison as to their views. These areas are: Teachers of education, arts and languages, social science and history, physical science and mathematics, and administrators. To these were added in the same tabulation those holding the degree of doctor of philosophy and those without any degree at all. Fifty in each of these classes were selected as a sampling and their positions compared.

With reference to the total instrument (see charts 1 and 2), the least "liberal" position on the instrument is shared by the arts and languages teachers and the physical science and mathematics teachers. They are decidedly on the conservative side, showing on their aggregate point score only a 43-percent liberal vote.

The most "liberal" position is held by the teachers of education, showing in the aggregate a 59-percent liberal vote.

The instructors with no degrees are next to the least "liberal" with 46 percent.

The remaining three classes, social science and Ph.D.'s and administrators, are about balanced between "liberal" and conservative, the administrators voting 53 percent "liberal", the others almost 50-50.

It should be stated that a 50-50 total vote on the whole instrument does not mean a 50-50 vote for each one or for any large proportion of the individuals. In fact, inspection reveals extreme "liberals" and extreme conservatives. The 50-50 vote or anything approximat-

ing it in individual cases is rare. In some of the classes of 50 persons each, such a balanced vote does not occur at all. When, therefore, the total is reported as approximately 50-50, the individuals as such are not being considered. It could mean only that the impact of the group, as a whole practically balances the conservatives and the "liberals." A comparison of the different classes in this respect is as follows: Of the teachers of education 19 were more conservative than "liberal" and 31 more "liberal" than conservative. Mentioning the conservatives first in each case, the remaining classes are as follows: Arts and languages, 39 and 11; social science and history, 28 and 22; physical science and mathematics, 36 and 14; Ph.D.'s, 30 and 19 (one, 50-50); and those with no degrees, 34 and 16. This makes it clear that the total vote is only a rough indicator of how individuals within each class are divided between "liberals" and conservatives.

Points of significance in this connection are as follows: The teachers of educational theory are as a group without competition in liberality of view. This will be discussed at more length in the next section. Evidently teachers of arts and languages and of physical science and mathematics are pronouncedly conservative. These being the two extremes, the suggestion comes that the subjects taught may have something to do with the degree in which the instructors come to hold thought-through positions on the issues of importance around which the survey has been conducted. This might lead to a reconsideration of the claims as to the degree to which the languages are liberalizing subjects and especially the degree to which the pursuit of physical sciences makes for openness of mind and liberality of attack upon the problems outside their own field. The instrument would indicate that mastery in both of these subjects may be accompanied by a low degree of sensitivity in all save those particular fields.

The social science and history teachers do not, as might perhaps have been expected they would, show much pronounced liberalism. Only 22 of the 50 are more liberal than conservative. As it was impossible to separate the history teachers from the teachers of the other social sciences, they cannot be sorted out for their liberalism or conservatism. Inspection of the table reveals that there are some few pronounced conservatives and pronounced "liberals" in the group but that the rest do not show extremes one way or the other. As will be noted later, this could scarcely mean just balanced judgment. It reveals rather that the implications of positions taken have not been thought through in connections much wider than the immediate subject matter. As can be clearly seen, this is a challenge to the teaching of the social sciences.

IV. Comparison of some classes of teachers with reference to their views on each of the seven categories

A. *Static—Dynamic.*—All classes of teachers and administrators vote on the conservative side of this issue. The teachers of education are the most liberal. The teachers of arts and languages and those with no degrees are the most conservative. Social scientists and physical scientists and Ph.D.'s are practically the same and midway between the two extremes mentioned.

This category is probably the most searching one of the seven. Some of the statements under it will be answered on the liberal side only by those who have made a far-reaching effort to think through their position into some of our most intimate areas of conduct and practice. For instance, it seems very natural to agree with statement no. 1 that education should seek primarily to prepare the child for well-rounded adult life. But many who have thought through this view in relation to usual practices find that it tends to defeat a proper respect for the individuality of the child as a child. So long as the emphasis is primarily upon preparation for adult life the consequences are not good for the young. A careful study of the whole category will reveal its penetration into these more hidden but powerful points of view. To be "liberal" here would mean to be liberal indeed.

B. *Academic—Direct life.*—Here is a relatively liberal total vote. The reader will recall the meaning of the issue as discussed above. It is significant, therefore, that practically all of the groups except the teachers of education show something approximating a 50-50 vote on it. The teachers of education are so much higher in liberal vote here as to indicate some large significance. This will be discussed in the latter part of the present section. Those with no degree showed a sufficiently more liberal vote to deserve remark. Their percentage was 58. The percentage of the teachers of education was 71.

C. *Science—Philosophy.*—The physical science and mathematics teachers are the only ones on the conservative side of this issue. This is to be explained without doubt by the disposition on the part of the teachers of science to uphold the claims of science. The category was established around the issue created by these claims. The method of exact science has achieved so much in our recent history that it has come to loom in bad perspective. This was discussed in the early part of the report. The teachers of science perhaps are most inclined to have their subject in this perspective. At least their vote on this category would seem so to indicate.

The most marked deviation from the usual here is the pronounced "liberal" vote of the arts and languages teachers. Although one might be ready to read too much into this fact, the suggestion does emerge that perhaps to the language and art people science is viewed as a good which becomes an evil whenever it tends to dampen the spirit

and to deaden appreciation and creative literary and other artistic effort. The reader can make his own judgement.

*D. Traditional individualism—Socialization.*—As indicated in previous pages<sup>2</sup> this category received the most liberal vote of all. Even the physical scientists believe that education must have something to do with intelligent promotion of social reconstruction, that education should be centralized and unified in the Nation. But even when all the classes of teachers were high on this category the teachers of education still maintained their relative position. They are higher than ever.

*E. Heredity—Environment.*—Here the teachers of education vote less "liberal" than on any one of the other categories except Static—Dynamic. They have a very small "liberal" majority. The teachers of arts and languages and the Ph.D.'s go strongly conservative on this issue.

*F. Passive—Active.*—Here again is shown the extreme conservatism of the Ph. D.'s and the languages and arts teachers. On no other category did views go to such extremes. Beliefs are evidently quite strong and pronounced on this issue. The Ph.D.'s were the most conservative, the teachers of education again the most "liberal." There is a difference of 22 points between the two. The remaining groups were very near to the Ph.D.'s.

*G. Separate mind—Naturalistic view.*—The unusual thing here was a definitely "liberal" vote of the Ph.D.'s. The teachers of education and the social science teachers are about equally "liberal." The no-degrees people are quite conservative.

The most significant point in the votes of the different classes of instructors is the uniformly more liberal position of the teachers of education. What is the meaning of this? Are approximately three fourths of the instructors in the institutions for the education of teachers carrying on without having thought through the serious educational and social issues of the times? Certainly it makes a difference what they think on these issues, for constantly they are taking positions on them in matters of educational practice, as an examination of the instrument will indicate. The issues are rife and the conflicts in practice and thought in this country and in the educational world are producing constant confusion. Is it wholesome, if it is true, that three fourths or more of the teachers of teachers in the country should be largely insensitive to many or most of these issues and conflicts? They all influence the student teachers. They all introduce their assumptions with regard to these questions into their modes of teaching and practice. They dominate in numbers and often in influence the schools of education and their policies. Apparently only the teachers of education show a significant group tendency to be aware of and to be

<sup>2</sup>See p. 489.

advised with regard to the bearings of these issues in education. Is it enough in schools of education to have but one department thus advised?

This does not mean, of course, that there are not many very well-equipped and "liberal" teachers in the other groups. But as groups the others have thought far less adequately with reference to these important matters.

What does this rating of a group of education teachers mean when it is considered that more and more today the subject-matter and technical courses are encroaching upon the time of faculty and students in the schools for the education of teachers? The courses in education tend to be reduced in time and in importance assigned them. There is no doubt that the problem here is a serious one. The courses in general education have not been and are not what they should be. But the "liberal" vote of their instructors is not therefore less significant. Is it possible that the shrinking of these courses in education is shutting the window which today admits most light into our schools of education and upon the problems with which they deal? Is the chief avenue to liberation, adaptation, and growth, being cut off by this means? The tendency to place increased emphasis upon the subject matter and technical lines and to reject the theoretical study of education does not promise well in this connection, if the findings here reported are correctly interpreted.

The administrators are the next most "liberal" group. On only two categories, Static—Dynamic, and Heredity—Environment, are they more conservative than liberal. The group stands half way between the teachers of education and the average of the other five groups. Or, again, they are 4 points above the average of all 7 groups, while the teachers of education are 10 points above the same total average.

*V. How each type of institution compares with the average vote of the total of the educators on the seven categories*

*Normal schools.*—This group of schools is above the average on three categories—Academic—Direct life, Heredity—Environment, Active—Passive. (See chart 3.) It equals the average on Individualism—Socialization and is below the average from 4 to 8 points on the remaining three categories. In its own exclusive field this group tends thus to be more "liberal" than the average, that is, in the field of educational curriculum and method.

*Liberal arts colleges.*—This group equaled the average on the Science—Philosophy category, was above the average on the Static—Dynamic category and between 6 and 15 points below the average on the remaining categories. Perhaps the most significant observation here is that this group is extremely conservative on matters pertaining to

the more or less exclusive business of education itself, that is, matters of curriculum, content, and method. The liberal arts colleges tend to be very conservative on the conception of the relation of man and nature, the Separate mind—Naturalistic view.

*Universities.*—This group equals the average on Heredity—Environment and on Passive—Active. It is above the average on Static—Dynamic and Science—Philosophy. It is below the average on one issue as much as 27 points, namely Individualism—Socialization.

*Teachers colleges.*—As has been pointed out above, there is a striking correspondence of this group with the total average. There is no deviation extreme enough to make a significant difference.

*Negro colleges.*—The colored schools equal the average on Individualism—Socialization. They are from 8 to 20 points below the average on all other categories. They are lowest on Academic—Direct life.

The fact that the averages of so many of these institutions are just below the average line of the whole group is indicative that there must have been many in each institution well above the line. This becomes clear upon inspection of tables and charts. There are indeed many outstanding "liberals" in all of the groups.

#### *VI. How the different institutions stand upon particular statements.*

*The charts have been inspected with a view to picking out those statements upon which there was extreme deviation by each type of institution from the average vote of all the institutions*

*Normal schools.*—On the following 3 statements the normal schools are from 14 to 25 points below the average in "liberal" vote.

30. The increasing use of scientific method in the study of education will ultimately lead to the abandonment of philosophy of education.

65. In man's experience there are two realms: One an inner, characterized by mind; the other an outer, characterized by mere physical activity.

19. The best way to deal with such doctrines as communism is to teach positively the soundness of our own economic system.

On 3 other statements the normal schools stand from 16 to 20 points more "liberal" than the average.\*

64. In teaching such subjects as geography and history, I favor the following procedure; pretest, teach, test the result, adapt the procedure, teach and test again to the point of actual learning.

79. The dominance of the white race in the world today bespeaks a mental capacity superior to that of other races.

52. The scholastic attainments of pupils as revealed by standardized achievement tests constitute a reliable basis upon which to rate the teachers of those pupils.

\* In each case where "average" is used, it means average "liberal" vote.

*Negro colleges.*—These schools go extremely high and extremely low from the average. On 3 statements they are from 52 to 70 points above the average.

48. With the extension of knowledge and the development of science, the element of uncertainty in life is being progressively decreased.
79. The dominance of the white race in the world today bespeaks a mental capacity superior to that of other races.
69. As far as capacity for education is concerned, one race is practically as capable of higher civilization as another.  
On 8 statements they are from 30 to 46 points below the average.
16. Education should work toward the goal of teaching and learning things when the need for them arises in life experiences.
6. The movements to substitute "activities" for "subjects" in the school curriculum will operate against the best interests of American education.
12. Courses in the classics and in mathematics still remain among the most effective agencies of mental development in the student.
29. The pupil profits largely in the degree that there is logical organization of the materials of instruction presented to him.
86. Man's inborn tendency to fight makes it highly improbable that war can ever be entirely abolished.
2. For the elementary school, I favor a curriculum which in large part represents an organization in terms of separate subjects.
35. In putting so much emphasis upon the psychology of habit and learning, we are failing to cultivate the human will which gives expression to the real self of the individual.
65. In man's experience there are two realms: One an inner, characterized by mind; the other an outer, characterized by mere physical activity.

*Liberal arts colleges.*—Here is a general tendency to be below the average. On 3 statements these institutions are from 18 to 20 points above the average.

25. The time will probably come when the major objectives of education will be determined by persons recognized as experts in the science of education.
23. Upon the public schools of America must rest, as their dominant task, the guardianship and transmission of the race heritage.
52. The scholastic attainments of pupils as revealed by standardized achievement tests constitute a reliable basis upon which to rate the teachers of those pupils.  
On 6 statements they are from 20 to 30 points below average.
32. By means of a system of Nation-wide planning commissions, the United States should undertake deliberately to shape and give direction to the course of its social development.

12. Courses in the classics and in mathematics still remain among the most effective agencies of mental development in the student.
24. Telling children about the good behavior that is expected of them and urging them to follow such precepts is a procedure justified by the results which it produces in conduct.
71. To say that an individual has a soul is only to call attention to certain characteristics of his ways of feeling and acting as a human organism.
63. The people of some nations possess, on the average, a greater native capacity for learning languages than do the people of some other nations.
47. Little of value can be achieved in the education of children until they have learned obedience to those in authority.
- Universities.*—On 7 statements the universities are from 16 to 35 points above the average. These are:
61. To believe that the spirit of man, like his body, is simply a part of nature is to deny him the possibility of enjoying the finer things in life.
77. Moral principles come from a source outside ourselves, and as such should be the determiners of changing social conditions rather than determined by them.
44. Seeing that "natural philosophy" has been superseded by the exact sciences, we may expect that philosophy of education will eventually be superseded by the science of education.
71. To say that an individual has a soul is only to call attention to certain characteristics of his ways of feeling and acting as a human organism.
20. Some children who are fully normal mentally are quite incapable of creative endeavor.
62. Mind is individual; that is, each person has his own mind which is not only distinct from the minds of all other persons, but is also set apart from the world to be known.
47. Little of value can be achieved in the education of children until they have learned obedience to those in authority.

On one statement the universities are 54 points below average. That is:

54. It is misleading to believe that anyone is a "born teacher."
- \* *Teachers colleges.*—The close correspondence of these institutions with the total leaves very few statements of outstanding deviation. There are two statements 8 points above average.
70. Children, from the first school year on, should be given a genuine determining part in selecting the activities of their school curriculum.
65. In man's experience there are two realms: One an inner, characterized by mind, the other an outer, characterized by mere physical activity.

On two statements they are 8 and 24 points below average.

69. As far as capacity for education is concerned, one race is practically as capable of higher civilization as another.
29. The pupil profits largely in the degree that there is logical organization of the materials of instruction presented to him.

*VII. Comparison of the positions of the 30 professors' group with the average position of the total group on several statements*

Note first the statements on which the total vote and the vote of the group of 30 professors agree.

*Strong agreement on the liberal side*

26. With increasing interdependence within our national life, there is need for some type of central agency to effect a corresponding increase in unification of educational effort.
39. The first concern of the teaching profession in America should be with the understanding and control of the forces that are making a new society.
41. The finer phases of culture are best pursued for their own sake, and should, on the whole, be kept separate from matters of practical and vocational development.

*Strong agreement on the conservative side*

1. The purpose of education should be essentially to prepare boys and girls for the activities which make up, or which ought to make-up, well-rounded adult life.
45. General theory frequently fails to become operative in the teacher's practice because it is by nature so abstract as to prove functionally effective for only a few of the gifted students.
59. The individual is born with a mind which serves him throughout life as an agent for acquiring and retaining knowledge.
60. Environmental influences, more than heredity, determine the differences in mental ability which children show.
62. Mind is individual; that is, each person has his own mind which is not only distinct from the minds of all other persons, but is also set apart from the world to be known.
78. Orphan infants adopted into very desirable homes sometimes turn out disappointingly. Consider that in most such cases original nature is probably a more potent factor than environment.

Following are statements on which the total vote and the vote of the 30 professors disagreed strongly, the professors being in each case the more "liberal."

††††† On a basis of a 100-point scale there is a difference of position on these statements of between 20 and 25 points.

21. We must come to rely chiefly upon scientific method to give us adequate educational objectives.
29. The pupil profits largely in the degree that there is logical organization of the materials of instruction presented to him.
47. Little of value can be achieved in the education of children until they have learned obedience to those in authority.
5. The most effective instruction results when the teacher aims primarily to prepare the child for successful adult age.
7. If the curricula of our teacher-training institutions are to be changed from their traditional academic basis, a survey of the school activities of teachers in the public schools should furnish us the basic materials for building the new curricula.
10. The remedy for the overcrowded curriculum in the elementary school is a program of carefully selected minimum essentials in the various subjects calling for greater mastery of fewer details.
13. The school should instill obedience, for it is a condition of the highest type of leadership that "he who would command must first learn to obey."
28. In any community where opinion is predominantly on one side of a certain question, the wise teacher will keep classroom discussion off that question.
64. In teaching such subjects as geography and history, I favor the following procedure: Pretest, teach, test the result, adapt the procedure, teach and test again to the point of actual learning.

There are several statements on which the vote of the professors was less "liberal" than that of the total:

36. The need for courses in general educational theory in teacher-training institutions should gradually disappear as a growing science of education shall continually improve our techniques and objective tests and measures.
53. The success of exact science in achieving control and mastery of mechanical things is an indication of what may be expected when the methods of the exact sciences are applied to the fields of human and social phenomena.
60. Environmental influences, more than heredity, determine the differences in mental ability which children show.
61. To believe that the spirit of man, like his body, is simply a part of nature is to deny him the possibility of enjoying the finer things in life.
78. Orphan infants adopted into very desirable homes sometimes turn out disappointingly. I consider that in most such cases original nature is probably a more potent factor than environment.

It has been discovered that, among all the categories, the one which most closely corresponds with the vote of the total group of educators on all the categories is G, separate mind—Naturalistic view. The correspondence here is marked. Moreover the difference in degree of correspondence between this category and others is marked. Only one other approaches it at all closely, that is category C, Science—Philosophy. Making allowance for possible errors of judgment here, it still may be said with strong evidence that this means that in this group the beliefs which persons hold with regard to the relation of man and nature constitute the best index of how they will stand on all of the other issues raised. The degree in which this is true should be cause for considerable thought with regard to our policies in the education of teachers.

The close correspondence noted does not mean that if an instructor has a well-thought-through position with regard to the relation of man and nature, he has thereby a guarantee that all other things will take proper shape. A truer interpretation would be that if he has a well-thought-through position on the relation of man and nature, the positions thus arrived at will, as he thinks through other situations and issues, tend to make for consistency.

### *VIII. An Estimate of Consistency*

By selecting several of the statements under each of the major categories and submitting them to a competent group of judges, it has been possible to get a fairly dependable basis for judging the degree of consistency of vote. Each judge was asked independently to record what he would regard a consistent vote on the seven sets of statements submitted to him. In this way it was possible to get several sets of statements which received practically a unanimous agreement of the judges as to what constituted a consistent vote on them. Taking as a sampling every tenth individual of the total of more than 1,500 instructors, it has been possible to arrive at some findings regarding consistency which are here ventured. After allowance has been made for the large chance of error, the following statements seem justified. According to the sampling nearly half, or 45 percent of all, contradict themselves no more than once in every five times they take a position on the issues raised by the instrument. More than a third, 37 percent of all, contradict themselves at least once in every three times they take a position on the issues raised, frequently more often than once in three times. The remaining 18 percent fall between the two groups mentioned.

Lack of consistency, as thus revealed, is not held up as the ultimate intellectual crime. It is viewed rather as a clue to the degree to which persons have to date thought through positions taken until they

see them in connection with other related things of importance. To see relations of what is thought and done is equivalent to being alive to the actual consequences of conduct. To be insensitive to these consequences is to be doing harm very often when the intention is to do good, and vice versa. In a word, there is a moral obligation to be sensitive to relationships. The only route to any adequate sensitiveness of this kind is careful reflective thought upon what we think and do and the consequences thereof. In this direction our best guide is the criterion of consistency. Lack of consistency is not a personal indictment, at least it is not so intended. It is rather a challenge to the profession to rise to its moral obligation and opportunity to see the relations of what it believes and does.

### *IX. The "Yes" Tendency*

Inspection of the markings on the instrument led the investigators to suspect a tendency to vote with the statement. If the statement is strongly positive, the person tends to mark it plus—"Sales resistance" is low. A study was made, therefore, on the basis that if there were no more tendency to say "yes" (plus) than "no" (minus) there would be approximately the same percent of liberal vote on the statements where liberal is plus and on the statements where liberal is minus. The calculation was so arranged that 100 would represent perfect resistance to the "yes" tendency. Anything over 100 reveals that much "yes" tendency. The findings follow: Professors, 106; universities, 129; liberal arts colleges, 139; teachers colleges, 142; normal schools, 144; Negro schools, 157.

The degree in which this tendency would modify the findings reported in the above sections has been studied. Due allowance for it, if such could be computed with accuracy, would probably make slight shifts in some relations, but not sufficient to change the broader differences of view to which the report has been limited.<sup>5</sup>

The "yes" tendency bespeaks probably an absence of critical viewpoint, active and alert for significant differences.

<sup>5</sup> For elaborate treatment of the validity of the instrument, see F. E. Peterson. *Philosophies of Education Current in the Preparation of Teachers in the United States*, ch. IV. New York, N.Y., Teachers College, Columbia University, 1933. (Contribution to Education No. 528.)

## CHAPTER III

### SOCIAL PHILOSOPHIES

It has been possible by use of the Harper instrument<sup>1</sup> to find the positions of faculty members on social, political, and economic questions, and to compare them with the educational views. On the score sheet published with this instrument is the following statement:

The study was scaled on the basis of the performance of graduate educators. The score is the number of propositions of the study that are marked on the non-conservative side—the higher the score the greater the extent of the individual's nonconservatism or liberalism in relation to the social problems involved. The study has been found to give a highly valid and reliable measure of social beliefs and attitudes as included in the trait conservatism—liberalism—radicalism. The statistical and other analyses have shown that the higher the score the greater the stability, the independence, the consistency, and the scientific attitude in thinking on issues such as those included in the study.

From the responses made to this instrument by approximately 3,000 educators from all kinds of positions in all parts of the country, Harper discovered a range for the groups studied of from 39 to 68 points on his scale of "liberalism."

It should be suggestive to locate on the same scale the groups studied in this survey, the instructors in schools for the professional education of teachers. The 530 instructors whose responses were secured by Peterson<sup>2</sup> made an average score of 57. This will be seen to be well above the "norm" for graduate educators in general and indeed fairly high on the scale. Responses from the larger number of instructors in this survey show an average score of 56.

What does it mean that the instructors rank as high as 57 on this instrument? Harper's own words, which he believes substantiated, may well be repeated here: "The higher the score the greater the stability, the independence, the consistency, and the scientific attitude in thinking on issues such as those included in the study." It is pleasing to find the instructors of prospective teachers ranking thus well up on the scale. But, is it not to be expected, or indeed required? Should these faculty members not be superior, since they are the teachers of others? The question comes to be rather, How shall this score be raised? The highest possible score is 79.

Again it has been possible to get, by rank method, the correlation between the votes of about 1,500 instructors on the two instruments,

<sup>1</sup> Harper, Manly H. *A social study*, New York, N.Y. Teachers College, Columbia University. From the "Directions Sheet" which may be secured along with the instrument.

<sup>2</sup> Peterson, Francis E. *Op. cit.*

Harper's social study and the one concerning teachers' views on some problems in general educational theory. This was found to be 0.69. Peterson had found a correlation of 0.70 for the group of 530 instructors. There is evidently some very significant relation between "liberalism" in connection with social, economic, political, religious questions, and "liberalism" on questions of educational theory. Although, as Peterson has clearly shown and as the findings of this study confirm, there are individual exceptions to this rule, they do indeed only prove the rule. By and large, a "conservative" or "liberal" vote on the education instrument justifies the expectation of a corresponding "conservative" or "liberal" vote on the Harper instrument, and vice versa.

The first impulse is to be impressed at the rather high correlation. On second thought, however, it becomes even more significant that the relationship is not nearer still to 1.00. Peterson has shown that the exceptions to the rule repay careful study. The distinction between 0.69 and 1.00 means considerable inconsistency between thinking on education and on social issues. So great an inconsistency tends to justify the inference that the instructors in schools of education are far from seeing public education as correlative with deliberate reconstruction, as an agency whose mission lies along the frontiers of social change. Educators are short by this large amount of being aware of what it means in terms of present-day social relations for them to be "conservative" or "liberal" on questions in their own special field. If anyone in American society is more responsible than others for avoiding "compartmentalization" of thought and interest, is it not the public educator and especially the teacher of teachers? While, therefore, the relation that is revealed in the figure 0.69 is encouraging, the fact that it is not higher shows a great task still ahead. For to divorce social from educational beliefs and interests is to misjudge present-day society and to overlook education's greatest opportunity. There must be a new education suited to new social conditions.

The following comment was recently made by Bishop Francis J. McConnell:

The majority of people up to the present have lived the sort of life determined for them, mostly from hand to mouth and from day to day, and to the great credit of the world this drudgery has been picked up and carried with so little complaint.

This has been done not with an idea to a final great outcome but merely to get through life as easily as possible.

We may well be thankful for the men in the religious, educational, and social spheres, who will not let things go.

Call them what you will, but these men keep alive the issues which otherwise would be dead.<sup>2</sup>

<sup>2</sup> Bishop Francis J. McConnell, to the graduates of Syracuse University, quoted from *The New Republic*, June 14, 1928.

What the bishop notes as true of the few has by change of circumstances become the mission of the many. Educators have come to realize that they cannot just "let things go." Social process must be planned, and unless the course of American society is to be resigned to dictators, education has the supreme task of bringing up generations, critical and planning, informed and aggressive in and for this this day and age. The educational interest must become more nearly identical with public interest, if the teachers of teachers are to rise to their opportunity.

# APPENDIX A

	INDEX OF EMPHASIS					
	300	250	200	150	100	50
f. Knowledge of subject matter (particularly in a special field).	U G X	J				
v. Education of teachers (knowledge, skills, and traits involved in differentiated curricula for prospective teachers).	T H					
c. Command of the fundamental processes (knowledge and skill involved in the tools of oral and written speech and number).	T H		U C J			
g. Liberal education (a general rather than a specialized education).			X U J O			
a. Training for physical efficiency and health throughout life.		C J U		X		
p. Scholarly and scientific attitudes (development of scholarly attitudes, interests, and ambitions, scientific inquiry into truth).		T		H		
l. Specific or professional and technical training to promote occupational or vocational efficiency.		X U C J				
w. Providing for the cultural development of prospective teachers (uncovering and guiding the latent talents of the students).	T H		U C J			
a. Attention to individual differences (in the interests, aptitudes, and abilities of students).		U C J				
j. Morality and character training (to assure judgment in terms of individual and social ideals).		T H				
b. Civic-social responsibility (acquaintance with the duties of citizenship and the promotion of an intelligent public opinion).		U C J				
r. Training for life needs (the more practical subjects).		T H				
q. Training for leadership (social rather than technical).		X U J C				
n. Training of students in scientific techniques.		T H				
k. Preprofessional and pretechnical training (opportunities for "background" materials for the learned professions and technical industries).		C U J U				
d. Coordination and synthesis or integration of the major fields of knowledge and experience (health, economic life, citizenship, home and family relationships, leisure).		T H				
e. Conserving the accomplishments of mankind (the race experience).		U C J				
t. Training for the wise use of leisure throughout life.		X U J C				
u. Training for worthy home membership (knowledge, skills, and appreciations of home and parental responsibilities).		T H				
h. Manners (acquaintance with established forms of etiquette).		X J C U				
o. Religious training.		T H				
m. Research (productive research by faculty).		J X C U				
i. Mental discipline.		U				
x. Education of graduate students to master's degree level.		C J X U				
y. Education of graduate students to doctor's degree level.		T H				
		U				
		C X J				
		T H				

FIGURE 1—APPENDIX A.—Relative emphasis to various aims of an index of emphasis by different types of higher institutions.

EXPLANATION.—X represents combined scores, teachers colleges and normal schools; U, universities; C, colleges; J, junior colleges. The X score is divided below the line; T, teachers colleges; N, normal schools.

- I. General Versus Specialized Work**
1. A considerable number of general courses in curricula.
  11. The inclusion of orientation courses in all curricula.
  14. General rather than specialized education for teachers of various subjects and levels.
  59. More integrating courses and fewer specialized courses in curricula for teachers.
- II. Prescription**
2. High prescription in 4-year curricula.
  3. Practically total prescription in 2-year curricula.
  10. The inclusion of electives in all curricula.
- III. Professional Work**
4. A limited education and psychology prescription.
  8. Introduction to various theories of school organization.
  16. Teachers made critical of new philosophies of organization, curriculum and methods.
  26. The emphasis, at the undergraduate level, upon accepted theories and practices rather than upon research findings.
  27. Comprehensive preservice education for all types of teaching situations and difficulties.
  32. The provision for practice teaching in situations typical of the surrounding region.
  57. Control of education of teachers by professors of education and psychology.
  58. Minimum of 90 clock-hours of student teaching.
- IV. Professional Treatment**
9. The professionalization of practically all subject-matter courses.
  30. The elimination of all special methods courses and the inclusion of special methods in subject-matter courses.
  31. The teaching of special methods by subject-matter professors rather than by professors of education.
  42. The frequent teaching of demonstration lessons in practice schools by college instructors of subject-matter courses.
  43. Frequent opportunity for students in all college courses to observe in the practice school.
  44. The superiority of good demonstration to practice teaching in the preparation of teachers.
  47. The provision for separate special methods courses in the major subject.

INDEX SCALE				
Favor unani- mously	Favor- able	Equally divided opinion	Not Favor- able	Opinion unani- mously
200	100	0	-100	-200
LPE				
L	EP			
SE	P	L		
S	EL	P		
		L	S	PE
	PE	LS	EL	P
	PE	SL		
	P	EL	LS	
	EL			
ES	L			
SEL				
S	LPE			
P	L	S	E	
P	L	SE		
PE	S	L		
EP	SL			
P	SEL			
P	LES			
		LS	E	
		L	S	E
	P	SE	L	
	S	EL		
	LS	PE		
	EP		S	L
		P	EL	S
	PE	S	L	
P	EL		EP	S
		EP	S	L
		S	LP	E
		PE	SL	
	L	S		E
SL		E		
		SE	L	P
	S	E	LP	
P	ES	L		
P	SEL			
		LS	P	E
	EP	S	L	EP
	S	L	EP	

FIGURE 2—APPENDIX A.—A comparative study of the reaction of certain faculty groups on curricular proposals relating to the education of teachers.

EXPLANATION.—The letter L represents academic subject instructors; P, presidents; E, teachers of education; S, teachers of special subjects. Colleges, universities, and junior colleges are represented above each line; normal schools and teachers colleges below each line.

V. Differentiation

- 8. Differentiation beyond usual major and educational requirements for secondary teachers.
- 28. Some differentiation in curricula for urban and rural teachers.
- 23. The desirability of limiting each State institution to specified types of teacher preparation.
- 24. The desirability of centralized State control of all State-supported teacher-preparation institutions.

VI. Criteria of Curriculum Making

- 6. Better public-school practices the criterion for 4-year curricula.
- 7. Better public-school practices the criterion for 2-year curricula.
- 12. The program of studies based largely upon educational research.
- 13. The program of studies based largely upon a philosophy of education with research subordinated.
- 17. Dual emphasis upon general culture and technical training for teaching.

- 26. Provision for the development of latent abilities.
- 25. Preparation of secondary teachers to teach several subjects.
- 45. The desirability of leadership by teacher-preparation institutions in the reorganization of public-school curricula.
- 46. The use of job analysis in the development of teacher-preparation curricula.
- 48. Need of a definitely prescribed sequence of courses for every type of teaching position.
- 52. As much emphasis on techniques of creative education as on teaching of tool and content subjects.

VII. Standards

- 16. High achievement in previous work prerequisite for admission to curricula for teachers.
- 21. The development in prospective teachers of a capacity for independent professional activity
- 22. The desirability of continuing the education of teachers after the preservice period.
- 23. Growth in teaching skills developed on job rather than during preservice period.
- 24. Mastery of subject matter the first essential in the education of teachers.
- 29. The introduction of all prospective teachers to the problems of urban and rural life.

INDEX SCALE				
Favor unani- mously	Favor- able	Equally divided opinion	Not favor- able	Oppose unani- mously
200	100	0	-100	-200
	P	U S L		
	P	S S L		
	S S L P			
	S S L	P		
	S P S L			
	P S L			
	S S L			
	S L S			
	P	S L E		
	P S L E			
	L S E			
	P S S L			
	P S L			
		L S E		
	S L S			
	S S L P			
	P L S S			
	P S L			
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		S S L P		
		P S S L		
		S P L E		
		S P L		
	S S P L			
		S P L		
	P S L			
	P S L			
	L S E			
	S S L P			
	L S			
	L S E			
	P S S L			
	P S L			

FIGURE 2—APPENDIX A.—Continued—A comparative study of the reaction of certain faculty groups on curricular proposals relating to the education of teachers.  
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	INDEX SCALES				
	Favor unani- mously 200	Favor- able 100	Equally divided opinion 0	Not favor- able -100	Oppose unani- mously -200
36. Four-year curricula more essential for preparation of elementary teachers than for secondary teachers.			P S L		
37. Limited acceptance of correspondence or extension credit in teacher-preparation curricula.	PL SE		P SE L		
38. No college credit for review courses of elementary or secondary subject matter.	PL SE				
39. Elimination of deficiencies in elementary or secondary content of a prospective teaching field.	P L E S				
40. The limitation of teaching certificates to the specific levels and fields of preparation.	SE PL				
41. The limitation of certificates to either the elementary or secondary field.	S L EP				
42. All higher educational institutions permitted to prepare teachers.	E L S		L S	EP	
43. Any curriculum largely concerned with subject matter of major.		L S P		L S E P	
44. Comprehensive objective personnel data of value to teacher-training institution.	EP S L			E L S	
45. Graduate credit for correspondence and group extension courses.			S E L		
46. Health certificate prerequisite for teaching.	ES L				
47. One-year curriculum, chiefly professional content, cultural background assumed.		S E L			
VIII. Values					
48. Attitudes, appreciations, and ideals, the by-products of direct attention to knowledge and skills.	PEL	PL S E			
49. Insight into both social and individual behavior important.	SE PL				
50. The cultivation of physical, social, and esthetic capacities as well as intellectual capacities.	PEL			LSP E	
51. Emphasis on knowledge and skills required for teaching public school minimum essentials.	ES L		L	SPE	
52. Ability to develop personality traits in pupils as important as knowledge and teaching skill.	ES L				
53. Provision for development of social and individual traits of teachers.	ES LPS				
54. Education modified according to social and economic background of prospective teachers.		PE L			
55. Preparation to teach contemporary life as well as race experience.	EP S L				

FIGURE 2—APPENDIX A—Continued.—A comparative study of the reaction of certain faculty groups on curricular proposals relating to the education of teachers.

TABLE A (appendix).—Summary of institutional policies in teachers colleges and normal schools<sup>1</sup>

A. ENROLLMENT DATA AND PROSPECTIVE TEACHERS

Item	Enrollment				Prospective teachers	
	Undergraduate		Graduate		Median	Range
	Median	Range	Median	Range		
Regular year:						
Men.....	186.00	1-1,032	19	1-171	162.11	1- 907
Women.....	429.57	23-3,043	21	2-283	429.57	19-1,938
Total.....	615.57	26-3,075	40	3-454	591.68	19-2,845
Summer term:						
Men.....	121.31	3- 786	26	1-603	103.26	1- 602
Women.....	444.00	8-2,718	43	4-675	388.50	4- 878
Total.....	565.31	11-3,504	69	5-1278	491.76	7-1,480

B. LENGTH OF TERMS

	Number of institutions	Percent
Term plan (143 returns, Inquiry 12):		
Semester plan followed.....	73	51
Quarter plan followed.....	70	49

	Number of weeks	
	Median	Range
Length of session (Inquiry 12):		
Semester plan.....	18.58	15-20
Quarter plan.....	12.43	9-13
Length of summer term (Inquiry 12): Reporting, 110; 76.4 percent.....	8.98	4-15

	Weeks in term	Percent
	4	2
	5	1
	6	47
	9	8
	10	8
	11	8
	12	25
	15	1

C. HOW WORK IS TAKEN

	Percent required of 136 reporting
Regular year:	
1-year residence.....	77.8
More than 1 year.....	14.8
Less than 1 year.....	7.4

Summer work. (See sec. B, Length of summer terms).  
 Analysis of permanent record cards of 1,157 4-year graduates of 20 teachers colleges.  
 In 17 subject fields almost all students (98 percent) take over three-fourths of their work in residence.  
 In 17 subject fields 47 percent take from the equivalent of one semester to a year's work.

<sup>1</sup> Comparative data from other inquiries are inserted in this summary.

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TABLE A (appendix).—Summary of institutional policies in teachers colleges and normal schools—Continued

C. HOW WORK IS TAKEN—Continued

	Semester credits	
	Median	Range
Extension work (101 returns, Inquiry 12, no extension work accepted in 18 institutions):		
Correspondence work accepted.....	18.71	0-32
Group work accepted.....	21.11	0-64
Total extension work accepted.....	20.23	0-64

In 17 subject fields less than 15 students (1.8 percent) took correspondence work to the extent of 2 to 8 semester-credits. Of these same 17 major groups of students, only 13 percent took 3 to 11 semester-credits of group extension work.

Judgment of instructors on extension work in 17 subject fields:

(a) A total of 585, or 74 percent of those responding, would accept a median of 10.56 percent of correspondence work or about 14 semester-credits.

(b) A total of 573, or 73 percent, would accept a median of 12.56 percent of group extension work or about 18 semester credits.

(c) A total of 577, or 73 percent, would accept a median of 19.73 percent of extension work (both types combined) or about 26 semester-credits.

On a proposal to limit extension work and require most preservice work in residence, more than 90 percent of the instructors agree, two thirds without qualification.

Transfer work.—No data from Inquiry 12 (related to transfer residence rule. See B, Term plan, above). In 17 subject fields more than one-third of all students (36 percent) took the equivalent of 1 semester to 3 years of college work in other institutions.

D. SCHOLARSHIP REGULATIONS

[Scholarship standards (138 returns, Inquiry 12); 97 percent have scholarship rule]

Average required:	Percent
B.....	0.8
B+.....	2.8
C+.....	9.8
C.....	63.6
C-.....	11.4
D.....	8.8
No average.....	9.8
Higher scholarship required in major.....	16.1
Credit for quality (excess credit for superior grades) permitted.....	12.3
Median percent freshmen dropped for poor scholarship: <sup>1</sup>	
Public universities and colleges.....	11.5
Private universities and colleges.....	6.5
Public teachers colleges and normal schools.....	5.0
Total.....	6.5

E. RESTRICTION ON RANK OF COURSES :

[Inquiry 12]

	Percent	
	Yes	No
Are students—		
(a) Permitted to enroll in credit courses 2 years ahead of their class?		
May freshmen take junior courses?.....	8	99
May freshmen take senior courses?.....	1	99
May sophomores take senior courses?.....	19	81
(b) 2 or more below their class?		
May seniors take sophomore courses?.....	57	43
May seniors take freshman courses?.....	43	57
May juniors take freshman courses?.....	51	49
(c) May junior college students get credit toward bachelor's degree for senior college courses?.....	48	52
(d) May senior college students take junior college courses and receive credit for them toward a degree?.....	34	66

<sup>1</sup> From table 25. Brammell, F. E. Articulation of High School and College. Monograph No. 10, National Survey of Secondary Education. Office of Education Bulletin, 1933, no. 17.

<sup>2</sup> Questions on graduate-rank omitted due to fact that but 15 of 145 teachers colleges gave graduate work.

TABLE A (appendix).—Summary of institutional policies in teachers colleges and normal schools—Continued

E. RESTRICTION ON BANK OF COURSES—Continued

	Percent	Reply	Percent
(e) Amount of "off-level" work permitted:			
Any amount.....	3.41	Only to make up differences.....	6.04
Two-thirds.....	.25	Certain courses.....	.53
One-half.....	4.72	After completion of regular course.....	.28
One-third.....	11.65	In rare instances.....	2.62
One-half or less.....	21.66	In special cases.....	3.94
		No answer.....	45.41

	Courses restricted, or with prerequisites required	Percent
Data on restricted courses:		
(a) Year level (2,909 courses, Inquiry 13).....	Restricted to:	
	(1) Junior-college students.....	18.0
	(2) Senior-college students.....	30.6
	(3) All undergraduates.....	20.4
(b) Prerequisites (1,798 courses, Inquiry 12).....	With prerequisites required:	
	None.....	34.6
	1.....	25.7
	2.....	15.1
	3.....	13.8
	4 or more.....	10.3
(c) Position in major sequence (1,719 courses).....	Position in sequence:	
	First.....	19.6
	Second.....	14.4
	Third.....	11.9
	Fourth.....	6.7
	Fifth.....	4.3
	Sixth.....	3.1
	Not belonging in sequence.....	41.6

F. SPECIAL FEATURES OF CONTENT AND METHOD

Percent of those offering		Percent of those offering	
Ten ranking survey courses reported in 67 percent (482) of institutions:		Ten ranking survey courses reported in 67 percent (482) of institutions—Continued.	
Biological science.....	51	Modern history.....	34
Sociology.....	45	Music.....	31
Physical science.....	42	General literature.....	30
Education.....	37	Art.....	29
Hygiene.....	34	American history.....	23

About 90 percent of 790 instructors approve orientation-survey courses (Inquiry 14) and 93 percent with proper proportion to esthetic, intellectual, social, and physical fields. The 10 ranking survey courses approved by these respondents are—

Percent	Percent		
History.....	74	Speech.....	63
Literature.....	69	Art.....	58
Composition.....	67	Economics.....	57
Sociology.....	64	General psychology.....	55
Health.....	63	General literature.....	53

These instructors would also devote a median of 11 percent of 4-year curriculum to survey-orientation work.

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TABLE A (appendix).—Summary of institutional policies in teachers colleges and normal schools—Continued

F. SPECIAL FEATURES OF CONTENT AND METHOD—Continued

	Percent of institutions claiming	How conducted (departments or classes)	When conducted
Honors courses (140 returns, Inquiry 12).	9.3	Most departments in 2 institutions. Few departments in 9 institutions.	At entrance, 5 institutions; end of third year, 1 institution; end of fourth year, 4 institutions. At freshman level, in 10 institutions; entire 4 years, in 5 institutions.
Comprehensive examinations (140 returns, Inquiry 12).	10.7	All departments in 2 institutions. Few departments in 4 institutions.	
Tutorial plan (141 returns, Inquiry 12).	16.3	-----	
Ability grouping (142 returns, Inquiry 12).	20.4	In all classes in 8 institutions.	

G. FINANCING INSTRUCTION

(a) Budget for salaries of faculty alone (in percent, 104 returns, Inquiry 12).	Proportion of salaries of faculties to total budget (in percent): Median, 66; Q1 and Q3, 56 and 74; range, 20-85.	Other surveys of higher education suggest an average of 64 percent.
(b) Budget for purchase of library books (in percent, 106 returns, Inquiry 12).	Proportion of college budget for purchase of library books (in percent): Median, 2.03; Q1 and Q3, 1.17 and 3.75; range, 0-16.	Other surveys suggest an average less than 1 percent.

H. DIPLOMAS, CERTIFICATES, AND DEGREES

[145 institutions]

*One-year curricula (88 returns).*—Twenty-four titles of diplomas and certificates. No one type predominant. Highest frequency, 2.

*Two-year curricula (80 returns).*—Sixty-two titles of diplomas and certificates. Titles with frequencies of 4 or more: 2-year diploma, 11; normal diploma, 5; rural diploma, 5; certificate, 4; junior-college diploma, 4. Thirty-eight titles with frequency of 1.

*Three-year curricula (60 returns).*—Fifty-two titles of diplomas and certificates. Titles with frequencies of 4 or more: 3-year diploma, 6; life certificate, 4. Twelve titles with frequency of 1.

*Four-year curricula (106 returns).*—Forty-eight titles of degrees, diplomas, and certificates. Titles with frequencies of 6 or more: B.S. in education, 23; A.B. degree, 31; B.S. degree, 18; bachelor of education, 17; A.B. in education, 6. Forty-one titles with frequency of 1.

APPENDIX B

TABLE B1.—Size of prescriptions according to a catalog analysis of 66 teachers colleges and normal schools<sup>1</sup>

Major curriculum	Number institutions offering major curriculum	Median credits for graduation	Major		First minor			Second minor			Education, educational psychology			Special methods			Student teaching, observation		
			Range of credits	Median credits	Percent prescribing first minor	Range of credits	Median credits	Percent prescribing second minor	Range of credits	Median credits	Percent prescribing education	Range of credits	Median credits	Percent prescribing special methods	Range of credits	Median credits	Percent prescribing student teaching	Range of credits	Median credits
1. English	38	128	15-47	30	6-31	7	8	6-12	12	100	8-24	18	15	2-11	6	100	2-16	6	
2. Speech	10	125	16-44	25	10-20	18	18	6-12	12	100	8-24	15	40	2-4	3	100	4-11	3	
3. Foreign language: Classical	15	128	13-32	26	10-32	18	18	12	12	100	8-24	17	72	2-8	3	100	2-11	3	
4. Modern	13	127	12-30	25	6-31	13	13	6-12	11	100	8-24	15	31	2-8	4	100	2-11	4	
5. French	17	129	10-32	24	10-32	18	18	6-12	12	100	10-24	17	59	1-5	3	100	3-11	3	
6. German	7	124	12-30	20	10-20	16	16	0	0	100	12-19	16	43	2-6	4	100	3-11	4	
7. Spanish	9	125	18-30	26	10-19	15	15	12	12	100	12-24	19	44	2-6	4	100	2-10	4	
8. Mathematics	23	129	13-36	28	6-31	18	18	7	7	100	8-26	16	52	2-14	4	100	2-17	4	
9. Science major	11	130	25-57	35	8-30	19	19	9	9	100	8-20	13	64	2-11	5	100	2-10	5	
10. Biological	29	128	18-49	26	10-31	19	19	24	24	100	8-24	16	41	2-8	3	100	2-10	3	
11. Natural	11	126	13-46	29	11-31	18	18	27	27	100	8-26	16	54	2-6	3	100	3-11	3	
12. Chemistry	16	127	20-41	29	10-20	18	18	25	25	100	10-24	18	50	2-8	3	100	3-10	3	
13. Physics	13	128	13-30	26	8-20	18	18	28	28	100	10-24	18	31	2-8	3	100	3-10	3	
14. Geography	22	130	20-36	28	10-30	20	20	32	32	100	10-25	18	59	2-8	3	100	2-10	3	
15. Social sciences major	18	128	13-46	33	6-31	15	15	29	29	100	8-24	16	44	2-8	3	100	2-17	3	
16. History	22	129	22-49	29	8-31	17	17	23	23	100	10-24	16	67	2-8	4	100	2-10	4	
17. Sociology and economics	13	126	15-37	24	10-30	19	19	15	15	100	9-24	15	62	2-8	3	100	2-10	3	
18. Agriculture	14	128	20-40	28	6-33	18	18	29	29	100	10-24	13	57	2-6	3	100	2-10	3	
19. Art	32	127	10-78	36	6-31	15	15	28	28	100	6-28	15	81	1-12	7	100	2-11	7	

<sup>1</sup> Directions for reading table: 28 of the 66 teachers colleges and normal schools offer major curricula in English with a median of 128 semester-credits required for graduation. The prescriptions in the major field extend from 15 to 47 credits, with a median of 30. 89 percent of the institutions which offer majors in English prescribe a first minor which extends from 6 to 31 credits with a median of 15 credits, etc.

<sup>2</sup> Includes special methods and professional work in the major field.

<sup>3</sup> Includes student teaching, observation, and special methods (outside of major field).

<sup>4</sup> Includes special methods in the major field only.



TABLE B1.—Size of prescriptions according to a catalog analysis of 66 teachers colleges and normal schools—Continued

Major curriculum	Number in-stitutions offering major curriculum	Median credits for graduation	Major		First minor		Second minor		Education, educational psychology		Special methods		Student teaching, observation				
			Range of credits	Median credits	Percent prescribing	Range of credits	Median credits	Percent prescribing	Range of credits	Median credits	Percent prescribing	Range of credits	Median credits	Percent prescribing	Range of credits	Median credits	
1	3	8	4-5	5	7-8	9	10-11	11	12-13	13	14	15-16	16	17	18	19	20
<i>4-year curricula—Continued</i>																	
20. Commercial education.....	29	127	16-39	31	8-20	15	11-13	12	5-24	100	15	2-22	5	3-12	100	6	3-12
21. Home economics.....	34	129	24-52	34	6-24	15	6-13	12	8-24	100	15	1-10	4	2-15	100	6	2-15
22. Industrial arts.....	26	123	21-60	32	19-31	17	8-13	13	7-24	100	14	2-40	7	3-16	100	6	3-16
23. Library science.....	5	127	9-33	16	12-20	16	11-13	12	11-19	100	12	2-4	3	2-32	60	4	2-32
24. Music.....	34	129	15-72	34	8-31	13	11-13	12	8-24	100	15	2-17	8	2-15	100	6	2-15
25. Physical education for men.....	30	129	19-62	28	8-31	16	11-13	12	8-24	100	16	3-37	10	3-11	100	6	3-11
26. Physical education for women.....	32	129	15-70	30	8-31	16	11-13	12	4-24	100	16	1-22	6	2-11	100	6	2-11
<i>Education:</i>																	
27. Elementary.....	21	129	4-38	12	12-18	15	11-12	12	6-26	100	12			2-15	100	7	2-15
28. Intermediate.....	18	130	9-32	12	11-20	14	11-13	12	6-29	100	14			2-13	100	7	2-13
29. Kindergarten, primary.....	30	129	3-31	15	11-20	14	11-12	12	6-27	100	14			2-13	100	9	2-13
30. Rural.....	11	131	2-29	17	11-20	19	11-12	12	6-29	100	18			2-13	100	7	2-13
31. Upper grade.....	20	129	2-24	6	11-30	16	11-18	15	9-24	100	15			2-14	100	9	2-14
<i>3-year curricula</i>																	
<i>Education:</i>																	
32. Elementary.....	8	97	2-22	11					6-14	100	10			5-15	100	9	5-15
33. Education.....	8	96	1-32	3					6-14	100	10			5-15	100	12	5-15
34. Kindergarten, primary.....	12	99	2-32	11					6-20	100	12			5-15	100	10	5-15
35. Rural.....	6	99	1-13	10					6-11	100	8			5-15	100	10	5-15
36. Upper grade.....	6	98	3-13	5					9-19	100	12			5-16	100	10	5-16
<i>2-year curricula</i>																	
<i>Education:</i>																	
37. Elementary.....	11	66	1-11	6					4-13	100	8			1-10	100	6	1-10
38. Intermediate.....	15	64	1-19	7					3-12	100	7			3-10	100	7	3-10
39. Kindergarten, primary.....	21	66	2-20	10					3-11	100	7			2-18	100	7	2-18
40. Rural.....	19	66	2-21	8					3-13	95	7			2-10	100	7	2-10
41. Upper grade.....	15	65	2-8	5					4-13	100	9			2-10	100	7	2-10
<i>1-year curricula</i>																	
<i>Education—Rural</i>																	
42. Education—Rural.....	5	32	2-9	5					2-6	60	3			2-8	100	8	2-8

Major curriculum	Number institutions offering major curriculum	General psychology			English			Foreign language			Mathematics			Science			Social sciences		
		Percent prescribing general psychology	Range of credits	Median of credits	Percent prescribing English	Range of credits	Median of credits	Percent prescribing foreign language	Range of credits	Median of credits	Percent prescribing mathematics	Range of credits	Median of credits	Percent prescribing science	Range of credits	Median of credits	Percent prescribing social sciences	Range of credits	Median of credits
I	3	31	2-3	26	24	2-3	27	2-3	29	28	3-10	23	3-24	25	3-24	26	3-24	28	
4-year curricula																			
1. English	33	20	2-4	3	(1) 80	6-23	34	6-24	15	28	3-10	95	3-24	8	95	2-24	12	95	
2. Speech	10	30	3-4	3			80	4-24	8		4-7	70	4-12	10	90	3-19	11	90	
Foreign language:																			
3. Classical	18	33	3-4	3	94	7-18	6	14		6	3-7	94	4-12	7	86	3-18	11	86	
4. Modern	13	69	1-3	3	109	6-16	6			6	3-8	77	3-21	8	92	3-18	12	92	
5. French	17	36	3-4	3	100	4-18	6	14		6	3-10	94	4-12	7	88	5-18	11	88	
6. German	7	57	3-4	4	86	4-13	6			6	3-7	86	4-7	5	86	3-11	7	86	
7. Spanish	9	56	3-4	4	78	6-13	6	18		6	4-7	89	4-12	7	100	3-12	8	100	
8. Mathematics	33	48	1-0	3	100	4-18	24	6-16	11	11	3-16	(1) 64	3-28	7	94	3-19	12	94	
9. Science major	11	27	2-3	3	100	5-16	13	10-12	11	5					100	5-21	10	100	
Science:																			
10. Biological	29	23	2-4	3	100	4-17	38	6-18	12	7	3-14	45	5-18	12	93	2-19	11	93	
11. Natural	11	45	3	3	100	6-16	36	8-16	10	5	2-14	54	3-13	8	91	5-19	9	91	
12. Chemistry	16	44	2-4	3	100	4-17	31	6-18	10	7	4-10	44	6-13	8	94	3-14	9	94	
13. Physics	13	46	3-4	3	100	5-17	38	6-18	12	7	3-19	54	4-19	6	92	3-15	17	92	
14. Geography	23	41	3-4	3	100	5-18	27	10-18	12	6	3-10	59	4-21	8	91	3-15	17	91	
15. Social science major	18	50	2-11	3	100	6-33	6	12	12	5	3-8	50	3-24	9	(1)	2-15	8	(1)	
Social sciences:																			
16. History	22	45	2-8	3	95	5-16	36	8-16	13	6	4-8	45	4-21	8	86	3-13	8	86	
17. Sociology, economics	13	62	2-4	3	100	7-16	38	10-14	12	6	3-8	69	4-21	7	62	6-26	12	62	
18. Agriculture	14	50	1-3	3	100	5-12	29	6-16	10	6	3-7	50	4-47	21	100	3-20	7	100	
19. Art	22	59	1-4	3	100	5-32	19	10-20	13	6	3-8	41	3-21	8	84	2-20	11	84	
20. Commercial education	29	34	2-3	3	63	4-13	21	10-18	10	5	2-16	29	3-21	9	90	3-20	10	90	
21. Home economics	34	41	2-4	3	100	3-19	12	10-18	11	5	3-6	18	3-36	11	97	3-20	10	97	
22. Industrial arts	26	38	2-5	3	100	5-18	23	4-18	11	7	3-10	54	3-21	11	85	3-21	11	85	
23. Library science	5	60	2-3	3	90	6-25	60	6-18	10	6	4-6	60	4-24	12	100	3-30	13	100	
24. Music	34	41	2-7	3	97	4-25	26	8-18	12	6	3-8	32	1-21	7	86	3-19	9	86	
25. Physical education for men	30	47	3-4	3	97	5-19	20	10-18	13	5	3-8	40	3-30	11	93	3-19	11	93	
26. Physical education for women	33	44	2-4	3	97	5-18	25	8-18	11	5	3-8	34	4-30	12	94	3-20	10	94	

\* Only work in addition to the prescription in the major subject is recorded.

TABLE B1.—Size of prescriptions according to a catalog analysis of 66 teachers colleges and normal schools—Continued

Major curriculum	Number institutions offering major curriculum	General psychology			English			Foreign language			Mathematics			Science			Social science		
		Percent prescribing general psychology	Range of credits	Median of credits	Percent prescribing English	Range of credits	Median of credits	Percent prescribing foreign language	Range of credits	Median of credits	Percent prescribing mathematics	Range of credits	Median of credits	Percent prescribing science	Range of credits	Median of credits	Percent prescribing social science	Range of credits	Median of credits
1	3	31	23	23	34	25	26	37	23	23	31	33	33	34	35	33	37	33	
<i>4-year curricula—Continued</i>																			
Education:																			
27. Elementary.....	21	43	1-5	3	100	0-24	14	14	0-12	0	2-10	8	81	2-13	10	100	3-34	16	
28. Intermediate.....	18	23	2-3	3	100	8-31	16	17	3-10	7	1-13	6	94	2-26	9	100	6-36	18	
29. Kindergarten-primary.....	30	37	2-4	4	97	5-31	13	13	10-18	11	2-9	6	87	2-26	10	100	3-33	13	
30. Rural.....	11	27	3	3	100	5-19	12	0	.....	.....	1-8	6	100	2-15	9	100	0-25	19	
31. Upper grade.....	20	35	2-3	3	100	5-31	11	10	10	.....	3-10	5	86	3-26	9	95	0-26	14	
<i>5-year curricula</i>																			
Education:																			
32. Elementary.....	8	28	2-3	3	100	7-19	13	0	.....	.....	2-10	6	100	2-13	7	100	3-26	14	
33. Intermediate.....	8	50	2-5	3	100	9-16	13	0	.....	.....	2-5	4	100	3-11	5	100	11-30	11	
34. Kindergarten-primary.....	13	23	3	3	100	9-19	13	0	.....	.....	2-10	4	100	3-27	7	100	3-16	17	
35. Rural.....	5	60	3	3	100	6-16	9	20	8	.....	3-6	4	60	3-11	3	80	13-17	15	
36. Upper grade.....	6	17	3	3	100	6-31	13	0	.....	.....	4-6	5	100	5-13	7	88	0-31	17	
<i>6-year curricula</i>																			
Education:																			
37. Elementary.....	11	15	3	3	100	6-16	13	0	.....	.....	2-5	4	83	2-6	6	91	7-20	13	
38. Intermediate.....	15	26	2-3	3	100	5-17	9	0	.....	.....	1-6	3	87	2-11	5	80	3-15	12	
39. Kindergarten-primary.....	21	34	1-4	3	100	4-13	9	0	.....	.....	2-4	3	90	2-11	5	86	3-12	9	
40. Rural.....	19	21	3-4	3	100	5-13	9	0	.....	.....	1-5	3	89	3-10	5	79	3-14	10	
41. Upper grade.....	16	40	2-4	3	100	5-17	9	0	.....	.....	2-8	3	73	2-7	5	97	8-13	10	
<i>7-year curricula</i>																			
Education: Rural.....																			
42.	5	30	3	3	100	4-6	6	0	.....	.....	2-5	3	60	4-8	5	80	5-9	7	

Major curriculum	Number institutions offering major curriculum	Agriculture			Commercial education			Home economics			Industrial arts			Library science			Physical education		
		Percent prescribing agriculture	Range of credits	Median credits	Percent prescribing commercial education	Range of credits	Median credits	Percent prescribing home economics	Range of credits	Median credits	Percent prescribing industrial arts	Range of credits	Median credits	Percent prescribing library science	Range of credits	Median credits	Percent prescribing physical education	Range of credits	Median credits
1	3	30	40	41	49	43	44	45	48	48	49	50	51	53	53	54	55	56	
2-year curricula																			
1. English	26	3	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
2. Speech	10	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
3. Foreign language:	18	6	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
Classical	13	6	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
Modern	17	6	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
4. French	7	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
5. German	9	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
6. Spanish	33	3	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
7. Mathematics	11	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
8. Science	29	7	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
9. Science major	11	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
10. Biological	11	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
11. Natural	16	6	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
12. Chemistry	13	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
13. Physics	23	5	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
14. Geography	18	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
15. Social science major	23	9	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
16. History	13	15	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
17. Sociology, economics	14	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
18. Agriculture	23	9	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
19. Art	20	3	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
20. Commercial education	24	8	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
21. Home economics	26	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
22. Industrial arts	6	0	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
23. Library science	34	6	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
24. Music	30	7	2	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
25. Physical education for men	.....	.....	.....	.....	0	.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	

\* Only work in addition to the prescription in the major subject is recorded.

TABLE B1.—Size of prescriptions according to a catalog analysis of 68 teachers colleges and normal schools—Continued

Major curriculum	Number institutions offering major curriculum	Agriculture			Commercial education			Home economics			Industrial arts			Library science			Physical education		
		Percent prescribing agriculture	Range of credits	Median of credits	Percent prescribing commercial education	Range of credits	Median of credits	Percent prescribing home economics	Range of credits	Median of credits	Percent prescribing industrial arts	Range of credits	Median of credits	Percent prescribing library science	Range of credits	Median of credits	Percent prescribing physical education	Range of credits	Median of credits
1	3	20	40	41	43	43	46	47	48	49	49	51	53	53	54	55	55		
4-year curricula—Continued																			
24. Physical education for women—	32	6	2		0		0		0			28	0-2	26	(*)				
25. Education:																			
26. Elementary.....	21	10	2-3		6	2	3	1-0	5	2		19	0-1	1	100	0-14	6		
27. Intermediate.....	18	17	2-3		0		3	2-3	11		3	20	0-1	1	100	0-16	6		
28. Kindergarten, primary.....	30	10	2		7	2-3	4	2-6	27	1-5	2	27	0-1	1	100	0-16	7		
29. Rural.....	11	56	2-5		0		3	3	27	1-3	2	18	0-1	1	100	0-9	6		
30. Upper grade.....	20	10	2-3		5	3		3	5	1		36	0-1	1	95	0-11	7		
5-year curricula																			
31. Education:																			
32. Elementary.....	8	25	2-3		0			2-6	13	5		28	0-1	1	100	2-14	6		
33. Intermediate.....	8	0			0				13	3		63	0-1	1	100	0-14	6		
34. Kindergarten, primary.....	13	0			0			2-6	46	2-5	3	62	0-1	1	100	0-17	7		
35. Rural.....	6	40	3		0				0			20	0		100	0-14	4		
36. Upper grade.....	6	0			0				17	3		33	0-1	1	100	0-11	4		
2-year curricula																			
37. Education:																			
38. Elementary.....	11	9	2		0	3		2-3	0			19	1	1	100	0-7	3		
39. Intermediate.....	16	6	2		0			1	13	1		47	0-1	1	100	0-11	5		
40. Kindergarten, primary.....	21	10	2		5	3	3	1-3	19	1-3	2	33	0-1	1	95	0-7	4		
41. Rural.....	19	42	2-5		5	3		1-5	11	1-5	2	32	0-1	1	89	0-7	4		
42. Upper grade.....	15	13	3		0				0			47	0-1	1	100	0-7	5		
1-year curricula																			
43. Education—rural.....	5	20	3		0				0			0			60	0-3	3		

Major curriculum	Number institutions offering major curriculum	Art		Music			Miscellaneous			Restricted electives			Free electives		
		Percent prescribing art	Range of credits	Median of credits	Percent prescribing music	Range of credits	Median of credits	Percent prescribing miscellaneous	Range of credits	Median of credits	Percent prescribing restricted electives	Range of credits	Median of credits	Percent prescribing free electives	Range of credits
1	3	57	25	59	69	61	68	64	65	66	67	68	69	69	71
4-year curricula															
1. English	23	26	1-3	3	29	1-3	3	3	3	3	3	3	3	3	45
2. Speech	10	30	1-3	3	30	1-3	3	2-3	3	3	3	3	3	3	35
3. Foreign language:															
Classical	18	22	1-3	3	23	1-3	3	3	3	3	3	3	3	3	43
Modern	13	26	1-3	3	46	1-3	3	3	3	3	3	3	3	3	43
French	17	18	1-3	3	13	1-3	3	3	3	3	3	3	3	3	41
German	7	0	1-3	3	0	1-3	3	3	3	3	3	3	3	3	46
Spanish	9	0	1-3	3	0	1-3	3	3	3	3	3	3	3	3	43
4. Mathematics	33	33	1-3	3	36	1-3	3	3	3	3	3	3	3	3	42
5. Science major	11	55	1-4	3	45	1-6	3	3	3	3	3	3	3	3	33
Sciences:															
10. Biological	29	14	1-3	3	17	1-3	3	1-3	3	3	3	3	3	3	45
11. Natural	11	36	1-3	3	36	1-3	3	3	3	3	3	3	3	3	40
12. Chemistry	16	6	2	3	6	2	3	3	3	3	3	3	3	3	46
13. Physics	13	8	2	3	8	2	3	3	3	3	3	3	3	3	45
14. Geography	22	36	1-3	3	36	1-3	3	3	3	3	3	3	3	3	40
15. Social science major	18	33	1-3	3	22	2-3	3	1-3	3	3	3	3	3	3	40
Social sciences:															
16. History	22	27	1-3	3	27	1-3	3	3	3	3	3	3	3	3	43
17. Sociology and economics	13	23	2-3	3	23	2-3	3	3	3	3	3	3	3	3	42
18. Agriculture	14	7	2-3	3	14	1-3	3	3	3	3	3	3	3	3	43
19. Art	32	28	1	3	28	1-14	3	2-3	3	3	3	3	3	3	41
20. Commercial education	29	21	1-4	3	21	1-2	3	3	3	3	3	3	3	3	27
21. Home economics	34	65	1-9	3	18	1-3	3	3	3	3	3	3	3	3	27
22. Industrial arts	26	46	1-10	3	23	1-3	3	3	3	3	3	3	3	3	37
23. Library sciences	6	0	1-10	3	0	1-3	3	3	3	3	3	3	3	3	25
24. Music	34	29	1-3	3	0	1-3	3	3	3	3	3	3	3	3	30
25. Physical education for men	30	27	1-3	3	30	1-3	3	3	3	3	3	3	3	3	40
26. Physical education for women	33	28	1-5	3	24	1-5	3	3	3	3	3	3	3	3	30

\* Only work in addition to the prescription in the major subjects recorded.

TABLE B1.—Size of prescriptions according to a catalog analysis of 66 teachers colleges and normal schools—Continued

Major curriculum	Number institutions offering major curriculum	Art			Music			Miscellaneous			Restricted electives			Free electives		
		Percent prescribing art	Range of credits	Median of credits	Percent prescribing music	Range of credits	Median of credits	Percent prescribing miscellaneous	Range of credits	Median of credits	Percent prescribing restricted electives	Range of credits	Median of credits	Percent prescribing free electives	Range of credits	Median of credits
1	3	57	63	69	61	63	63	64	65	66	67	68	69	70	71	
<b>4-year curricula—Continued</b>																
<b>Education:</b>																
27. Elementary.....	21	95	2-9	5	2-12	4	33	1-7	3	76	10-70	30	86	2-56	27	
28. Intermediate.....	13	80	3-7	5	1-8	4	22	1-3	2	78	4-72	25	94	3-46	28	
29. Kindergarten-primary.....	30	80	3-13	6	2-12	4	23	1-3	2	83	2-76	23	90	2-51	29	
30. Rural.....	11	83	1-6	5	1-8	4	18	1-2	2	82	8-67	27	91	13-46	20	
31. Upper grade.....	20	80	1-6	4	1-8	3	20	1-2	2	80	3-60	38	90	3-55	23	
<b>5-year curricula</b>																
<b>Education:</b>																
32. Elementary.....	8	100	3-9	5	3-10	6	50	2	2	63	0-25	19	50	1-86	11	
33. Intermediate.....	6	100	3-6	4	3-7	5	30	1-2	2	80	8-41	30	88	7-30	21	
34. Kindergarten-primary.....	13	100	3-11	5	3-10	5	54	1-4	2	81	0-41	26	62	1-27	15	
35. Rural.....	6	80	3-5	4	3-6	4	40	1-2	2	100	3-40	26	80	0-41	24	
36. Upper grade.....	6	50	2-6	6	1-6	6	50	2-3	3	50	15-58	33	83	1-33	7	
<b>6-year curricula</b>																
<b>Education:</b>																
37. Elementary.....	11	91	1-6	3	1-8	4	18	2-4	1	37	3-43	5	55	1-24	10	
38. Intermediate.....	15	93	1-5	3	1-5	3	33	1-2	1	44	2-34	5	63	1-11	4	
39. Kindergarten-primary.....	21	90	1-6	3	1-6	3	19	1-2	1	24	5-11	7	76	2-22	6	
40. Rural.....	19	96	1-4	3	1-5	2	16	1-1	1	68	2-4	3	74	1-25	8	
41. Upper grade.....	15	87	1-6	2	1-6	3	20	1-2	1	47	2-34	9	73	2-23	13	
<b>1-year curricula</b>																
42. Education—rural.....	5	80	1-2	2	1-2	2	0			40	2-10		20	5		

TABLE B.—The pattern of work taken by graduates of 20 teachers colleges<sup>1</sup>

Major curriculum	Num-ber perma-nent record cards	Total credits for degree		Major		Education and educa-tional psychology			Special methods			Student teaching and observation			General psychology		
		Range of credits	Me-dian of cred-its	Range of credits	Me-dian of cred-its	Per-cent taking education, etc.	Range of credits	Me-dian of cred-its	Per-cent taking special methods	Range of credits	Me-dian of cred-its	Per-cent taking student teaching, etc.	Range of credits	Me-dian of cred-its	Per-cent taking psychol-ogy	Range of credits	Me-dian of cred-its
<b>1</b>																	
<i>4-year curricula</i>																	
1. English.....	100	120-146	131	30-39	23	100	5-20	81	1-19	11	13	84	1-14	15	16	17	19
2. Foreign language.....	49	120-169	130	16-40	24	100	5-25	84	1-10	6	6	84	3-11	6	25	2-6	4
3. Modern.....	44	122-159	129	16-38	24	100	7-34	77	2-13	5	5	86	4-12	6	30	2-10	3
4. Mathematics.....	100	120-150	130	12-45	25	100	5-41	81	1-24	7	7	93	2-15	7	31	2-22	6
5. Science.....	60	120-175	130	16-70	28	100	10-42	80	2-19	6	6	86	3-10	6	30	2-16	4
6. Biological.....	60	120-163	133	5-60	24	100	5-30	78	1-11	5	5	84	2-15	6	25	2-6	4
7. Chemistry.....	50	120-167	130	5-60	24	100	7-39	86	2-26	4	4	73	2-17	6	20	2-10	5
8. Geography.....	100	120-162	128	5-57	27	100	3-37	77	2-28	5	5	85	4-13	6	34	1-10	4
9. Art.....	50	120-165	131	20-75	33	100	8-31	86	2-16	10	10	93	2-16	8	30	2-10	4
10. Commercial education.....	68	120-194	139	19-37	34	100	10-48	89	1-25	6	6	80	1-14	5	42	1-10	3
11. Home economics.....	92	120-165	133	22-39	37	100	7-34	79	1-13	6	6	80	2-9	6	30	2-10	4
12. Industrial arts.....	50	120-163	129	14-108	35	100	8-33	79	1-13	5	5	86	2-14	7	50	2-27	3
13. Music.....	85	120-170	130	22-120	43	100	2-45	91	2-22	4	4	84	2-17	7	46	2-10	4
14. Physical education for men.....	50	120-163	129	4-45	27	100	3-39	76	1-18	4	4	84	4-14	6	72	2-14	3
15. Physical education for women.....	41	120-170	137	13-55	27	100	3-39	78	2-17	7	7	96	2-13	7	61	2-10	4
16. Education.....	75	120-159	129	( <sup>2</sup> )	---	100	8-48	88	2-37	13	13	99	2-25	9	49	2-21	3
17. Intermediate.....	75	120-153	129	( <sup>2</sup> )	---	100	7-37	73	2-27	7	7	99	2-25	10	61	2-20	6
<i>2-year curricula</i>																	
18. Education.....	100	60-101	68	( <sup>3</sup> )	---	100	5-26	85	2-21	11	11	94	3-22	7	56	2-7	4
19. Intermediate.....	100	60-126	68	( <sup>3</sup> )	---	100	3-33	94	2-23	11	11	91	1-22	9	47	2-10	4
20. Rural.....	100	44-116	68	( <sup>3</sup> )	---	100	5-25	95	2-33	13	13	97	2-19	7	61	2-7	3

<sup>1</sup> Directions for reading table: An analysis of 100 permanent record cards of students majoring in English shows that the median number of credits taken for the degree is 131, with a range which extends from 120 to 146. The median number of credits taken in the major is 33, with a range from 20 to 59. 100 percent of the students took courses in education, with a median of 20 and a range from 6 to 39; etc.

<sup>2</sup> Courses in chemistry could not be segregated from all work in physical sciences.

<sup>3</sup> Education courses in the major could not be segregated from all work in education.

<sup>4</sup> Degrees not awarded at the end of 2-year curricula.



TABLE B.—The pattern of work taken by graduates of 20 teachers colleges—Continued

Major curriculum	Number permanent record cards	English		Mathematics		Art		Music		Library science					
		Percent taking English	Range of credits	Median of credits	Percent taking mathematics	Range of credits	Median of credits	Percent taking art	Range of credits	Median of credits	Percent taking library science	Range of credits	Median of credits		
1	3	100	20	21	23	24	25	26	27	28	29	30	31	32	33
<i>4-year curricula</i>															
1. English	100	100	20-30	23	51	1-24	7	1-23	3	57	0-23	3	13	1-4	3
2. Foreign language:															
Classical	49	100	0-50	24	57	3-25	6	1-11	2	51	1-8	3	10	1-13	6
Modern	44	100	4-11	13	71	3-24	6	1-23	3	63	1-14	3	9	1-7	3
3. Mathematics	100	99	2-35	14	100	12-45	25	1-23	3	45	1-17	2	5	1-1	1
4. Science:															
Biology	50	98	4-30	15	63	1-27	6	1-51	3	48	1-14	3	12	1-6	1
Chemistry	50	98	3-30	13	90	2-27	15	1-25	3	24	1-13	4	4	1-6	1
Geography	50	98	3-43	19	43	1-10	6	1-25	3	76	1-19	2	4	1-6	1
History	100	99	3-39	17	50	2-24	6	1-11	3	26	1-20	2	12	1-13	2
5. Art	92	92	2-33	17	100	1-9	3	20-75	33	100	1-63	7	2	1-1	1
6. Commercial education	95	97	1-35	11	50	1-33	6	1-24	3	35	1-47	2	6	1-10	1
7. Home economics	92	100	4-33	15	70	2-11	6	1-40	5	70	1-17	3	23	1-1	1
8. Industrial arts	50	98	3-24	13	62	2-35	6	1-19	3	56	1-13	2	2	1-1	1
9. Music	85	99	3-44	14	42	3-16	6	1-29	9	100	23-120	45	6	1-1	1
10. Physical education for men	50	93	5-43	15	30	3-15	6	1-7	2	24	1-6	2	4	1-3	1
11. Physical education for women	41	100	7-33	16	20	2-7	4	1-3	3	54	1-19	2	7	1-3	2
12. Education:															
Intermediate	75	100	5-37	21	53	2-23	7	1-57	0	68	1-74	0	21	1-7	2
Kindergarten, primary	75	99	5-43	18	51	1-19	6	1-25	0	70	1-34	5	23	1-13	1
<i>5-year curricula</i>															
13. Education:															
Intermediate	100	96	3-27	10	50	1-13	3	1-8	3	77	1-20	3	14	1-5	1
Kindergarten, primary	100	97	2-25	9	28	2-5	3	1-13	4	90	0-27	3	19	1-5	1
Rural	100	96	2-32	8	41	2-10	3	1-33	3	70	1-7	3	26	1-5	1

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Major curriculum	Number permanent record cards	Foreign language—classical			Foreign language—modern			Science—biological			Science—general			Science—physical		
		Percent taking classical language	Range of credits	Median of credits	Percent taking modern language	Range of credits	Median of credits	Percent taking biological sciences	Range of credits	Median of credits	Percent taking general science	Range of credits	Median of credits	Percent taking physical science	Range of credits	Median of credits
1	3	34	35	38	37	38	39	40	41	43	43	44	45	46	47	48
<i>4-year curricula</i>																
1. English	100	27	3-35	7	37	38	39	40	41	43	43	44	45	46	47	48
2. Foreign languages:																
Classical	49	100	16-40	28	65	6-38	28	71	3-21	7	7	3-6	3	30	3-32	8
Modern	44	16	3-53	22	100	16-58	34	77	3-32	6	6	3-5	4	61	2-10	8
4. Mathematics	100	15	2-29	10	59	3-32	13	73	1-24	6	6	2-8	3	48	2-12	8
5. Science:																
Biological	80	10	6-20	12	62	1-24	12	100	16-70	28	28	1-6	3	90	2-32	9
Chemistry	80	12	6-17	9	62	1-24	13	82	3-35	13	13	3-22	3	100	6-69	29
Geography	80	10	1-14	10	80	2-12	7	82	1-32	6	6	2-8	3	46	3-33	7
History	80	7	2-26	11	43	3-30	10	77	1-20	4	4	1-3	3	44	2-25	7
Art	80	8	3-11	4	36	2-15	10	78	2-11	3	3	1-2	3	40	2-12	3
10. Commercial education	98	2	3-18	11	28	3-24	11	69	1-22	3	3	1-3	3	38	3-14	7
11. Home economics	92	2	3-21	11	29	1-16	7	91	2-45	7	7	2-17	2	40	2-12	3
12. Industrial arts	80	4	5-10	8	32	3-16	9	70	2-32	4	4	2-1	2	33	3-24	7
13. Music	85	7	3-16	8	55	1-26	10	52	1-10	5	5	1-3	3	64	3-24	13
14. Physical education for men	50	4	8-10	8	32	3-15	8	88	3-30	15	15	2	2	52	1-11	7
15. Physical education for women	41	2	3	3	59	3-17	10	93	3-33	17	17	3	3	64	2-27	3
Education:																
Intermediate	75	11	2-8	3	39	1-26	8	92	3-28	7	7	1-4	3	55	1-31	7
Kindergarten, primary	75	9	2-28	3	51	1-22	10	96	3-23	8	8	2-8	3	35	1-12	4
<i>3-year curricula</i>																
Education:																
Intermediate	100	3	3-8	3	5	6-10	8	70	2-18	3	3	2-6	3	8	3-8	4
Kindergarten, primary	100	7	1-8	5	9	2-13	3	69	2-10	3	3	2-8	3	15	3-10	3
Rural	100	3	2-6	4	6	1-9	4	66	2-13	3	3	4-6	6	11	2-6	3

6715-10-1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100

TABLE B.—The pattern of work taken by graduates of 80 teachers colleges—Continued

Major curriculum	Number permit record cards	Geography			Social sciences—economics			Social sciences—history			Social sciences—political science			Social sciences—sociology		
		Percent taking geography	Range of credits	Median of credits	Percent taking economics	Range of credits	Median of credits	Percent taking history	Range of credits	Median of credits	Percent taking political science	Range of credits	Median of credits	Percent taking sociology	Range of credits	Median of credits
1	3	48	50	51	53	54	54	55	56	57	58	59	61	63	63	
<i>4-year curricula</i>																
1. English	100	60	1-24	6	48	1-20	4	94	2-28	13	88	3-16	4	51	2-16	4
2. Foreign language: Classical	49	29	2-11	6	16	2-12	5	100	2-28	12	67	1-13	3	31	2-8	3
3. Foreign language: Modern	44	39	1-12	3	14	2-6	4	91	2-27	7	41	2-16	4	26	2-13	4
4. Mathematics	100	54	1-24	7	30	2-17	4	82	2-36	7	51	2-11	4	43	2-23	4
5. Science	50	42	1-19	6	20	2-8	5	89	2-28	8	56	2-22	4	26	2-9	4
6. Chemistry	50	28	2-13	6	42	2-14	6	74	2-16	6	48	2-13	4	40	2-9	4
7. Geography	50	100	5-30	24	42	2-18	4	88	2-24	9	70	2-12	4	66	2-25	6
8. History	100	54	1-24	7	54	2-19	7	100	2-67	27	66	1-26	9	66	2-19	6
9. Art	50	50	2-13	6	22	2-8	3	80	2-18	6	44	2-6	3	48	1-8	4
10. Commercial education	96	67	3-19	7	77	2-25	7	76	2-24	6	56	2-22	3	42	1-21	4
11. Home economics	92	29	1-12	4	47	1-16	5	74	2-18	7	52	2-12	3	60	1-13	4
12. Industrial arts	50	50	2-19	6	38	2-24	3	68	2-27	8	48	1-20	3	47	2-13	4
13. Music	85	57	1-13	5	18	1-6	3	79	2-28	6	46	1-8	4	64	1-24	5
14. Physical education for men	50	36	3-29	5	64	1-21	4	88	1-26	8	60	2-12	4	64	2-27	6
14. Physical education for women	41	32	2-15	3	32	2-20	3	81	2-18	7	54	2-8	4	51	2-19	6
15. Education: Intermediate	75	91	1-28	7	31	2-15	5	97	1-30	10	61	2-18	3	56	2-19	4
17. Kindergarten—primary	75	80	1-20	6	30	1-9	4	83	1-20	9	56	2-10	4	84	1-19	4
<i>3-year curricula</i>																
18. Education: Intermediate	100	74	1-14	5	17	2-10	3	82	2-16	5	31	2-6	3	35	2-17	3
19. Kindergarten—primary	100	62	1-10	4	5	2-8	3	60	1-13	5	26	2-8	3	43	2-13	4
20. Rural	100	83	2-8	4	14	2-6	3	99	2-18	6	22	2-15	3	53	1-6	3

TEACHER EDUCATION CURRICULA

Major curriculum	Num-ber perma-nent record cards	Agriculture			Commercial education			Home economics			Industrial arts			Physical education		
		Percent taking agriculture	Range of credits	Median of credits	Percent taking commercial education	Range of credits	Median of credits	Percent taking home economics	Range of credits	Median of credits	Percent taking industrial arts	Range of credits	Median of credits	Percent taking physical education	Range of credits	Median of credits
1	3	64	65	66	67	68	69	70	71	72	73	74	75	76	78	
<i>4-year curricula</i>																
1. English	100	8	1-8	3	17	1-30	3	20	1-37	4	6	1-11	3	67	1-34	7
2. Foreign language: Classical	40	2	5	5	12	3-14	3	10	2-29	3	3	1-7	5	57	2-8	3
3. Modern	44	5	2-4	2	21	2-56	13	7	2-29	2	7	2-7	6	68	2-9	3
4. Mathematics	100	6	2-24	6	19	1-32	4	10	2-18	3	17	1-28	5	69	1-12	6
5. Science:																
6. Biological	50	22	3-13	5	25	1-36	3	22	2-16	3	28	1-30	6	70	1-24	4
7. Chemistry	50	14	2-18	6	22	2-27	3	13	1-10	2	20	1-20	6	64	1-15	3
8. Geography	50	24	1-21	3	28	2-29	4	10	2-10	3	24	1-28	3	54	1-27	7
9. History	100	12	3-12	4	18	1-30	3	13	2-10	5	25	1-28	3	70	1-27	5
10. Art	50	4	3	3	26	1-24	3	26	1-30	6	28	1-28	6	60	2-27	8
11. Commercial education	96	2	3-6	8	100	19-67	24	19	1-9	2	7	1-4	2	59	0-35	6
12. Home economics	92	3	4-8	8	14	1-27	3	100	22-59	37	10	1-6	3	78	1-39	6
13. Industrial arts	50	24	2-21	12	24	2-17	3	0	1-12	3	100	14-108	35	62	1-33	7
14. Music	85	5	1-5	3	15	1-27	3	12	1-12	3	7	1-12	6	61	1-18	5
15. Physical education for men	50	40	3-19	10	28	1-16	4	10	2-39	3	44	1-42	12	100	4-45	27
16. Physical education for women	41	2	8	10	20	1-37	10	32	1-14	3	2	3	3	100	13-55	27
17. Education: Intermediate	75	16	2-24	6	31	1-18	3	27	1-27	3	25	0-10	3	76	1-14	6
18. Kindergarten-primary	75	7	1-7	3	26	1-20	3	29	1-18	3	17	1-8	3	81	1-15	6
<i>3-year curricula</i>																
19. Education: Intermediate	100	13	3-6	3	13	1-16	3	19	1-6	3	6	1-3	2	77	1-17	4
20. Kindergarten-primary	100	8	1-3	3	11	1-8	3	19	1-12	2	6	1-5	2	86	1-21	6
21. Rural	100	28	2-16	3	8	2-9	4	28	1-10	2	9	1-15	3	70	1-10	6



Major curriculum	Number institutions offering major curriculum	English			Foreign language			Mathematics			Social science			Science		
		Percent prescribing English	Range of credits	Median of credits	Percent prescribing foreign language	Range of credits	Median of credits	Percent prescribing mathematics	Range of credits	Median of credits	Percent prescribing social science	Range of credits	Median of credits	Percent prescribing science	Range of credits	Median of credits
1. English.....	57	100	23	28	24	25	24	27	28	28	29	31	33	33	34	35
2. Foreign languages.....			19-41	30	6-32	13		19	3-13	6		2-27	7	72	3-14	6
3. French.....	57	97	3-21	8	24-58	40		19	3-13	6		2-27	7	68	3-14	8
4. Latin.....	54	96	1-21	9	19-52	36		19	3-8	6		2-27	6	69	3-14	8
5. Mathematics.....	52	97	3-21	8	6-24	12		100	17-40	28		2-27	7	70	3-28	8
6. Social science—major.....	33	89	6-20	10	6-22	13		72	3-13	6		20-54	35	72	6-12	10
7. Social science—history.....	53	98	3-21	8	6-24	12		96	3-13	6		19-47	30	74	3-14	8
8. Sciences.....																
9. Biology.....	37	92	3-21	8	6-24	13		24	3-12	6		2-27	7	100	21-64	22
10. Botany.....	33	94	3-21	8	6-24	12		18	6-14	6		2-27	7	100	19-46	23
11. Chemistry.....	56	96	3-21	8	6-24	12		43	3-17	6		2-27	7	100	19-56	22
12. General.....	12	92	6-20	8	6-22	13		50	6-13	7		4-15	8	100	18-43	27
13. Physics.....	52	94	3-21	8	6-24	12		69	3-24	12		2-27	7	100	19-49	28
14. Zoology.....	33	94	3-21	8	6-24	12		18	6-14	6		2-27	7	100	19-49	28
15. Agriculture.....	14	93	6-20	8	6-24	12		26	3-6	6		2-15	6	100	6-42	6
16. Art.....	24	97	3-20	10	15-22	16		18	5-13	3		2-15	6	93	6-14	7
17. Commercial education.....	15	100	6-15	10	2-24	12		73	2-13	6		2-16	6	96	6-55	6
18. Home economics.....	28	96	3-20	12	7-24	12		64	6-22	6		3-15	8	93	4-14	7
19. Industrial arts.....	11	100	6-20	10	6-15	12		55	6-15	6		4-17	8	89	6-55	6
20. Music.....	37	98	4-18	10	6-24	13		73	6-24	6		2-15	12	94	6-13	8
21. Physical education for men.....	27	98	6-18	10	2-16	13		52	2-16	6		2-15	6	49	3-15	6
22. Physical education for women.....	27	96	6-16	10	6-16	11		59	6-16	6		2-15	6	100	6-33	6
23. Administration and supervision.....	11	91	6-14	8	6-18	12		82	6-18	6		3-22	12	91	6-33	15
24. Elementary education.....	16	94	6-48	12	6-18	12		81	6-18	6		2-15	9	94	6-13	7
25. General education.....	14	93	3-14	9	6-24	16		100	6-24	6		2-12	6	57	6-15	8

TABLE C1.—The pattern of prescriptions according to a catalog analysis of 57 colleges and universities—Continued

Major curriculum	Number institutions offering major curriculum	Philosophy			Religion			Fine arts			Physical education		Special vocational subjects		
		Percent prescribing philosophy	Range of credits	Median of credits	Percent prescribing religion	Range of credits	Median of credits	Percent prescribing fine arts	Range of credits	Median of credits	Range of credits	Median of credits	Percent prescribing vocational subjects	Range of credits	Median of credits
1. English.....	57	36	37	23	39	41	43	43	44	45	46	47	43	49	
2. Foreign language: French.....	57	19	3-15	6	19	3-10	5	3-6	6	1-11	4	7	1-3	5	
3. Latin.....	54	19	3-15	6	21	3-10	6	3-6	6	1-11	4	7	1-3	5	
4. Mathematics.....	57	18	3-15	5	21	3-10	6	3-6	6	1-9	4	7	1-3	5	
5. Social science—major.....	18	22	3-6	6	23	4-8	7	3-6	6	1-11	3	11	1-3	5	
6. Social science—history.....	53	21	3-15	6	23	3-10	6	3-6	6	1-11	4	8	1-3	5	
7. Science: Biology.....	57	22	3-15	6	30	4-10	6	3-6	6	1-11	3	11	1-3	5	
8. Botany.....	33	9	3-15	6	3	3	6	3-6	6	1-9	4	3	1-3	5	
9. Chemistry.....	56	18	3-15	5	21	3-10	6	3-6	6	1-9	4	7	1-3	5	
10. General.....	13	8	6	5	17	3-8	6	3-6	6	1-11	3	8	1-3	5	
11. Physics.....	53	15	3-15	5	17	3-8	6	3-6	6	1-11	4	4	1-6	5	
12. Zoology.....	33	6	3-6	6	7	3	6	3-6	6	1-9	4	3	1-6	5	
13. Agriculture.....	14	0	0	6	6	6	6	3-6	6	2-9	4	3	1-6	5	
14. Art.....	34	12	3-6	4	7	3-6	6	18-69	24	2-9	4	100	20-70	49	
15. Commercial education.....	15	7	3	5	0	0	6	0	0	2-11	4	15	1-3	3	
16. Home economics.....	28	11	3-6	3	7	6-10	6	3-8	5	2-9	4	100	18-64	37	
17. Industrial arts.....	11	0	0	3	0	0	6	3-8	5	2-9	4	100	23-51	33	
18. Music.....	37	11	3-15	6	11	4-8	6	18-60	45	2-9	4	100	16-47	24	
19. Physical education for men.....	27	11	3-12	6	4	3	3	2-6	3	21-60	38	3	3	3	
20. Physical education for women.....	27	11	3-6	3	4	3	3	2-6	3	14-56	33	7	1-3	3	
21. Administration and supervision.....	11	9	3	3	0	0	6	4-10	6	2-6	4	34	1-3	3	
22. Elementary education.....	16	13	3	6	6	6	6	4-10	6	2-8	4	0	2-7	6	
23. General education.....	14	21	6	6	29	4-10	7	4-10	7	2-6	4	13	2-7	6	

Major curriculum	Number institutions offering major curriculum	All academic work <sup>1</sup>		All academic work without major <sup>2</sup>		Restricted electives			Free electives			All electives		
		Range of credits	Medi- an of credits	Range of credits	Medi- an of credits	Percent prescribing restricted electives	Range of credits	Medi- an of credits	Percent prescribing free electives	Range of credits	Medi- an of credits	Percent prescribing electives	Range of credits	Medi- an of credits
1. English.....	57	36-103	76	59	53	54	64	64	95	4-57	30	100	10-72	44
2. Foreign language.....														
3. French.....	57	49-103	75	20-77	49	74	6-64	15	96	1-49	23	100	6-69	43
4. Latin.....	54	40-107	77	20-77	45	69	6-66	16	96	6-62	24	100	7-77	43
5. Mathematics.....	57	38-106	78	20-83	54	67	6-67	16	98	4-57	24	100	7-78	43
6. Social sciences major.....	15	60-108	81	20-71	49	56	9-61	21	83	5-33	24	94	23-70	24
7. Social sciences-history.....	53	49-103	74	20-70	50	72	6-70	15	96	3-61	24	100	10-78	42
8. Science.....	37	56-103	84	30-80	56	68	6-55	15	97	3-45	19	100	4-72	29
9. Botany.....	33	38-106	69	20-80	48	73	6-66	16	94	2-57	30	100	11-77	46
10. Chemistry.....	55	38-106	80	20-83	53	71	6-66	15	93	4-57	17	98	4-77	30
11. General.....	13	38-106	81	20-86	45	67	6-62	14	92	3-57	16	100	3-73	35
12. Physics.....	33	38-106	85	20-83	60	67	6-62	16	94	3-57	16	100	8-73	37
13. Zoology.....	33	38-106	71	20-80	48	73	6-66	16	94	3-57	20	100	11-77	44
14. Agriculture.....	14	13-65	49	13-65	49	36	8-13	16	88	2-44	20	100	3-64	26
15. Art.....	34	38-106	73	20-76	45	74	6-30	15	87	2-57	26	100	3-64	29
16. Commercial education.....	15	39-76	45	22-75	45	60	6-24	13	83	2-40	23	100	3-60	29
17. Home economics.....	28	39-76	53	34-78	43	32	3-36	13	96	1-51	14	98	3-60	31
18. Industrial arts.....	11	36-58	40	36-58	40	35	3-28	16	100	3-46	17	100	24-74	35
19. Music.....	37	60-112	87	10-71	43	62	6-36	16	96	4-48	17	94	4-70	30
20. Physical education for men.....	27	30-70	47	30-70	47	48	3-30	16	98	4-41	23	100	3-60	29
21. Physical education for women.....	11	33-70	46	32-70	46	56	3-30	15	98	4-41	23	100	3-60	28
22. Administration and supervision.....	11	39-78	56	30-78	46	44	3-34	16	100	18-66	33	100	15-64	54
23. Elementary education.....	16	24-77	53	24-77	53	44	3-34	16	100	20-66	40	100	18-64	54
24. General education.....	14	43-76	51	43-76	51	36	6-30	16	100	27-66	43	100	28-30	57

<sup>1</sup> 100 percent prescribed physical education.  
<sup>2</sup> 100 percent prescribed academic work.  
<sup>3</sup> 100 percent prescribed academic work without major.

TABLE C.—The patterns of work taken by 1,771 prospective teachers graduating from 24 colleges and universities<sup>1</sup>

Major curriculum	Number of permanent record cards	Total credits for degree		Major		Education <sup>2</sup> and educational psychology <sup>3</sup>		Special methods, observation, and student teaching only		General psychology			
		Range of credits	Median of credits	Range of credits	Median of credits	Range of credits	Median of credits	Percent taking special methods, etc.	Range of credits	Median of credits	Percent taking psychology	Range of credits	Median of credits
1. English	100	116-200	126	29-67	37	6-54	19	87	2-25	7	78	3-13	6
2. Foreign language:													
French	100	114-171	126	15-54	31	6-46	19	90	2-11	7	77	2-12	6
Latin	100	99-144	125	17-41	28	4-32	19	90	2-13	7	75	2-16	6
3. Mathematics	100	108-160	127	21-60	29	6-44	21	94	2-20	6	72	2-11	5
4. Social science major	100	110-179	126	18-55	47	7-47	19	95	2-25	7	83	2-10	6
5. Social science—history	100	110-158	125	19-50	30	6-32	18	83	1-15	7	68	2-12	6
6. Sciences:													
Biology	50	108-144	126	20-61	32	6-37	18	98	2-14	7	98	2-12	6
Botany	50	110-169	125	19-46	29	6-50	20	76	2-37	7	78	2-6	6
Chemistry	100	104-153	126	19-56	31	3-29	17	79	2-19	7	86	2-12	6
General	100	115-158	126	11-67	41	10-43	23	97	2-23	7	84	2-9	6
Physics	34	114-156	123	14-34	24	6-31	19	88	2-15	6	64	2-9	6
Zoology	50	109-156	126	18-40	27	6-33	18	82	1-15	6	88	2-13	6
Agriculture	50	115-146	121	42-78	60	12-29	17	100	1-15	6	12	2-6	4
7. Art	100	114-164	124	21-100	42	6-64	23	91	1-73	9	73	1-12	5
8. Commercial education	50	107-161	123	6-67	29	17-64	23	100	2-35	8	70	2-10	6
9. Home economics	100	109-147	126	25-72	43	6-47	20	99	2-25	7	69	2-12	6
10. Music	100	112-160	126	16-117	54	5-41	21	86	2-24	12	71	1-12	6
11. Physical education for men	100	108-163	126	18-75	34	8-46	19	96	2-15	7	78	2-14	6
12. Physical education for women	100	104-149	122	20-69	36	7-51	22	96	2-24	9	70	2-15	5
13. Elementary education	100	104-149	122	16-67	42	10-57	43	98	2-38	15	73	2-17	5
14. General education	87	119-161	126	20-62	30	20-62	30	92	1-42	8	68	1-13	6

<sup>1</sup> Directions for reading table: An analysis of 100 permanent record cards of students majoring in English shows that the median number of credits taken for the degree is 126, with a range which extends from 116 to 200. The median number of credits taken in the major is 37, with a range from 23 to 67. 100 percent of the students took courses in education, with a median of 19 and a range from 6 to 64, etc.

<sup>2</sup> Includes courses in special methods, observation, and student teaching.

<sup>3</sup> 100 percent took educational psychology.

Major curriculum	Number permanent record cards	English			Foreign language			Mathematics			Science			Social sciences		
		Percent taking English	Range of credits	Median of credits	Percent taking foreign language	Range of credits	Median of credits	Percent taking mathematics	Range of credits	Median of credits	Percent taking science	Range of credits	Median of credits	Percent taking social science	Range of credits	Median of credits
1. English	100	100	22-27	37	96	6-60	31	23	33	34	2-20	10	97	2-68	18	
2. French	100	100	6-45	20	100	23-83	61	5-21	7	94	2-20	10	97	2-68	18	
3. Latin	100	100	4-36	20	100	20-78	83	2-19	7	98	4-30	11	95	2-47	13	
4. Mathematics	100	99	4-32	13	99	6-54	41	2-19	7	88	2-22	10	94	2-47	13	
5. Social sciences major	100	99	6-46	19	90	2-34	100	21-60	29	96	2-50	13	96	2-52	13	
6. Social sciences—history	100	100	4-44	13	98	4-36	48	3-13	7	97	1-28	11	100	18-66	47	
7. Science:																
Biology	50	100	5-24	13	92	4-24	73	2-23	7	100	24-74	61	96	4-40	13	
Botany	50	98	6-39	11	90	1-33	58	2-23	7	100	25-82	60	100	5-33	11	
Chemistry	100	99	4-26	13	100	6-41	90	1-30	11	100	21-70	50	94	1-30	11	
General	100	99	3-33	14	91	6-36	77	2-35	8	100	11-67	41	97	2-57	15	
Physics	34	100	4-23	12	97	6-34	100	6-30	20	100	18-52	29	100	6-31	10	
Zoology	50	100	4-27	13	98	6-42	46	2-27	7	100	23-66	61	100	2-39	13	
12. Agriculture	50	100	9-15	11	14	3-10	5	1-15	4	100	16-36	24	100	3-33	13	
14. Art	100	98	1-30	14	63	1-33	28	2-16	4	88	2-27	9	92	2-44	10	
15. Commercial education	50	100	6-51	13	72	2-28	40	2-16	6	84	2-16	8	98	8-54	26	
16. Home economics	100	100	3-28	13	68	3-36	29	2-14	4	100	2-44	24	95	2-34	12	
17. Music	100	100	5-27	13	78	2-34	28	2-16	4	80	3-26	9	75	2-47	8	
18. Physical education for men	100	99	5-35	13	64	3-24	33	1-21	8	100	5-55	20	98	3-43	18	
19. Physical education for women	100	100	4-34	15	83	1-29	34	1-15	6	100	1-50	22	100	2-30	13	
20. Elementary education	100	99	7-36	17	73	2-31	33	1-15	5	98	2-34	10	100	6-49	23	
21. General education	87	100	7-44	13	82	2-45	51	2-36	9	98	2-39	13	99	5-54	24	

TABLE C.—The patterns of work taken by 1,771 prospective teachers graduating from 24 colleges and universities—Continued

Major curriculum	Number permit record cards	Philosophy			Religion			Fine arts			Special vocational subjects		
		Percent taking philosophy	Range of credits	Median of credits	Percent taking religion	Range of credits	Median of credits	Percent taking fine arts	Range of credits	Median of credits	Percent taking vocational subjects	Range of credits	Median of credits
1. English.....	100	49	2-54	6	43	2-33	36	37	38	40	17	1-29	4
2. Foreign language:													
French.....	100	37	2-10	6	23	2-12		1-36		4	63	1-10	4
Latin.....	100	42	2-18	4	44	2-11		1-28		5	16	1-13	4
3. Mathematics.....	100	43	2-19	6	38	2-20		1-16		3	9	1-11	3
4. Social science major.....	100	17	1-12	4	28	1-21		1-20		5	45	1-43	4
5. Social science—history.....	100	44	2-18	6	48	2-13		1-28		4	7	1-12	6
6. Science:													
Biology.....	50	18	2-8	5	40	2-13		1-12		7	12	1-20	4
Botany.....	50	16	1-6	4	20	2-8		1-14		3	44	1-34	4
Chemistry.....	100	28	1-17	4	21	1-18		1-28		4	37	1-13	4
General.....	100	13	2-9	4	22	1-8		1-15		4	26	1-48	6
Physics.....	54	44	3-10	4	21	3-7		1-17		5	66	1-16	6
Zoology.....	50	26	2-12	4	8	2-7		1-10		4	24	1-11	4
7. Agriculture.....	50	0			10	1-4		1-6		2	160	44-63	61
8. Art.....	100	25	2-20	4	24	1-14		21-110		45	60	1-35	5
9. Commercial education.....	50	16	3-7	4	8	2-8		1-24		4	100	6-37	30
10. Home economics.....	100	14	3-8	6	12	2-15		1-15		5	100	27-72	44
11. Music.....	100	19	1-6	4	16	2-11		17-119		56	42	1-19	4
12. Physical education for men.....	100	15	2-5	3	18	2-13		1-15		3	30	1-70	4
13. Physical education for women.....	100	16	1-6	3	10	2-9		1-13		4	48	1-21	4
14. Elementary education.....	100	22	1-8	4	23	2-10		1-24		5	57	1-26	5
15. General education.....	87	47	2-23	7	37	1-24		1-16		6	76	1-34	6

## APPENDIX D

### TEACHERS' VIEWS ON SOME PROBLEMS IN GENERAL EDUCATIONAL THEORY<sup>1</sup>

*Before you begin to mark the statements, be sure to read carefully the following.*— These statements involve controversial issues in education on which outstanding educators disagree widely. And on both sides are educational leaders whose opinions we must respect.

Consequently, you should think of the statements as being neither absolutely true nor absolutely false.

Consider your mark as an expression of your own personal opinion. Perhaps there is no "correct answer", for our best authorities hold widely differing views. We wish to know what you think about these matters.

Your reactions will not be scored as right or wrong; they will be taken to indicate whether you declare yourself more for one side than for the other of these educational issues.

*Directions for marking.*— Be sure to mark each statement in one of the following ways:

- (+) ( ) ( ) If you feel you are in full agreement with the view set forth in the statement.
- ( ) (+) ( ) If you agree with the view, but with a few reservations.
- ( ) ( ) (+) If you agree, but only with many reservations.
- (-) ( ) ( ) If you are altogether opposed to the view.
- ( ) (-) ( ) If you are opposed, but with a few reservations.
- ( ) ( ) (-) If you are opposed, but with many reservations.
- ( ) ( ) ( ) 1. The purpose of education should be essentially to prepare boys and girls for the activities which make up, or which ought to make up, well-rounded adult life.
- ( ) ( ) ( ) 2. For the elementary school, I favor a curriculum which in large part represents an organization in terms of separate subjects.
- ( ) ( ) ( ) 3. Systems of uniform examinations given by boards of education in some States should be eliminated from the American public school.
- ( ) ( ) ( ) 4. In educating the youth of our country we have indeed put emphasis upon individual success, but we have done so with due consideration for social good.
- ( ) ( ) ( ) 5. The most effective instruction results when the teacher aims primarily to prepare the child for successful adult life.
- ( ) ( ) ( ) 6. The movement to substitute "activities" for "subjects" in the school curriculum will operate against the best interests of American education.
- ( ) ( ) ( ) 7. If the curricula of our teacher-training institutions are to be changed from their traditional academic basis, a survey of the school activities of teachers in the public schools should furnish us the basic materials for building the new curricula.

<sup>1</sup>Bureau of Publications, Teachers College, Columbia University, New York.

- ( ) ( ) ( ) 8. Each State should be free to order its own education without being obliged to heed the decisions of any system of national planning commissions.

NOTE.—You are reminded not to think of these statements as definitely true or false on somebody's authority. You are merely registering your personal opinion on the controversial issues involved.

- ( ) ( ) ( ) 9. The place given to specific technics and measurements in the professional education of teachers today should be reduced rather than increased.
- ( ) ( ) ( ) 10. The remedy for the overcrowded curriculum in the elementary school is a program of carefully selected minimum essentials in the various subjects calling for greater mastery of fewer details.
- ( ) ( ) ( ) 11. We should cease to put emphasis upon education in childhood for the deferred values of later life.
- ( ) ( ) ( ) 12. Courses in the classics and in mathematics still remain among the most effective agencies of mental development in the student.
- ( ) ( ) ( ) 13. The school should instill obedience, for it is a condition of the highest type of leadership that "he who would command must first learn to obey."
- ( ) ( ) ( ) 14. It is sound practice to apportion State school funds to local communities according to the amounts those communities are already spending for their schools.
- ( ) ( ) ( ) 15. The years of childhood should be thought of as being primarily a period of preparation for adult life.
- ( ) ( ) ( ) 16. Education should work toward the goal of teaching and learning things when the need for them arises in life experiences.
- ( ) ( ) ( ) 17. College entrance requirements are too academic in character for the good of our secondary schools.
- ( ) ( ) ( ) 18. For some types of problems in education, the philosophic and not the scientific method must remain permanently the guide to a solution.
- ( ) ( ) ( ) 19. The best way to deal with such doctrines as Communism is to teach positively the soundness of our own economic system.
- ( ) ( ) ( ) 20. Some children who are fully normal mentally are quite incapable of creative endeavor.

NOTE.—Again we wish to remind you not to think of these statements as definitely true or false. Even our best authorities disagree on many of the issues involved.

- ( ) ( ) ( ) 21. We must come to rely chiefly upon scientific method to give us adequate educational objectives.
- ( ) ( ) ( ) 22. The school should strive to develop in its pupils that hardy and rugged individualism which characterized early American life.
- ( ) ( ) ( ) 23. Upon the public schools of America must rest, as their dominant task, the guardianship and transmission of the race heritage.
- ( ) ( ) ( ) 24. Telling children about the good behavior that is expected of them and urging them to follow such precepts is a procedure justified by the results which it produces in conduct.

- ( ) ( ) ( ) 25. The time will probably come when the major objectives of education will be determined by persons recognized as experts in the science of education.
- ( ) ( ) ( ) 26. With increasing interdependence within our national life, there is need for some type of central agency to effect a corresponding increase in unification of educational effort.
- ( ) ( ) ( ) 27. In this period of rapid change, it is highly important that education be charged with the task of preserving the long established and enduring educational aims and objectives.
- ( ) ( ) ( ) 28. In any community where opinion is predominantly on one side of a certain question, the wise teacher will keep classroom discussion off that question.
- ( ) ( ) ( ) 29. The pupil profits largely in the degree that there is logical organization of the materials of instruction presented to him.
- ( ) ( ) ( ) 30. The increasing use of scientific method in the study of education will ultimately lead to the abandonment of philosophy of education.
- ( ) ( ) ( ) 31. A course in general educational theory can be as close to the vital and immediate needs of the prospective teacher as is the provision for his technical training and supervised practice.
- ( ) ( ) ( ) 32. By means of a system of Nation-wide planning commissions, the United States should undertake deliberately to shape and give direction to the course of its social development.
- ( ) ( ) ( ) 33. In the interest of social stability, the members of the new generation must be brought into conformity with the enduring beliefs and institutions of our national civilization.
- ( ) ( ) ( ) 34. As science develops, it will some day be able to predict to a very high degree of accuracy what a given individual will do in almost any particular situation.
- ( ) ( ) ( ) 35. In putting so much emphasis upon the psychology of habit and learning, we are failing to cultivate the human will which gives expression to the real self of the individual.
- ( ) ( ) ( ) 36. The need for courses in general educational theory in teacher-training institutions should gradually disappear as a growing science of education shall continually improve our techniques and objective tests and measures.
- ( ) ( ) ( ) 37. It is the influence and pressure of the social group which brings the individual to feel personally responsible, and there is no other source of such feeling of responsibility.
- ( ) ( ) ( ) 38. It is impossible to predict the adult needs of the contemporary school population with sufficient accuracy to justify an educational program based on minimum essentials of subject matter.
- ( ) ( ) ( ) 39. The first concern of the teaching profession in America should be with the understanding and control of the forces that are making a new society.
- ( ) ( ) ( ) 40. Job analysis is a highly reliable technique for determining principles and objectives for the elementary-school curriculum.
- ( ) ( ) ( ) 41. The finer phases of culture are best pursued for their own sake, and should, on the whole, be kept separate from matters of practical and vocational development.

- ( ) ( ) ( ) 42. The effectiveness of education should be determined more by general social conditions (such, for instance, as revealed through crime statistics) than by any apparent effect upon particular individuals.

**NOTE**—Please bear in mind that your reactions will not be scored as right or wrong, but will be interpreted as placing you on one or the other side of the educational issues involved.

- ( ) ( ) ( ) 43. Adult life changes so rapidly that it cannot safely be used to set the standards for the education of children.
- ( ) ( ) ( ) 44. Seeing that "natural philosophy" has been superseded by the exact sciences, we may expect that philosophy of education will eventually be superseded by the science of education.
- ( ) ( ) ( ) 45. General theory frequently fails to become operative in the teacher's practice because it is by nature so abstract as to prove functionally effective for only a few of the gifted students.
- ( ) ( ) ( ) 46. Without passing upon the merits of communism, we might find a valuable suggestion for us in Russia's current use of her public schools in carrying out a deliberately planned social program in the Nation.
- ( ) ( ) ( ) 47. Little of value can be achieved in the education of children until they have learned obedience to those in authority.
- ( ) ( ) ( ) 48. With the extension of knowledge and the development of science, the element of uncertainty in life is being progressively decreased.
- ( ) ( ) ( ) 49. For the prospective teacher to have a good course in general principles of education and no specific training, would be better than for him to have only the technical specific training and no course in general principles of education. (Supposing he could have only one or the other, not both.)
- ( ) ( ) ( ) 50. As a rule, drill should be introduced only in situations where the pupils feel a genuine need for it.
- ( ) ( ) ( ) 51. Any organization of education of higher official standing than that now represented by the Office of Education in Washington, D.C., would tend unduly to jeopardize the rightful control by States and local communities over their own education.
- ( ) ( ) ( ) 52. The scholastic attainments of pupils as revealed by standardized achievement tests constitute a reliable basis upon which to rate the teachers of those pupils.
- ( ) ( ) ( ) 53. The success of exact science in achieving control and mastery of mechanical things is an indication of what may be expected when the methods of the exact sciences are applied to the fields of human and social phenomena.
- ( ) ( ) ( ) 54. It is misleading to believe that anyone is a "born teacher."
- ( ) ( ) ( ) 55. I believe that it is often desirable to subordinate the good in the child's present living to the greater good of his future adult life.
- ( ) ( ) ( ) 56. To think of motive as a part of the act performed is truer than to think of motive as back of and impelling the act performed.
- ( ) ( ) ( ) 57. Education may well be conceived as the unfolding of what is latent in the child.

- ( ) ( ) ( ) 58. The school will fail to measure up to its responsibilities in reducing crime in the degree that it gives up its well-established principles of discipline to make way for greater pupil freedom.
- ( ) ( ) ( ) 59. The individual is born with a mind which serves him throughout life as an agent for acquiring and retaining knowledge.
- ( ) ( ) ( ) 60. Environmental influences, more than heredity, determine the differences in mental ability which children show.
- ( ) ( ) ( ) 61. To believe that the spirit of man, like his body, is simply a part of nature is to deny him the possibility of enjoying the finer things in life.
- ( ) ( ) ( ) 62. Mind is individual; that is, each person has his own mind which is not only distinct from the minds of all other persons, but is also set apart from the world to be known.
- ( ) ( ) ( ) 63. The people of some nations possess, on the average, a greater native capacity for learning languages than do the people of some other nations.
- ( ) ( ) ( ) 64. In teaching such subjects as geography and history, I favor the following procedure: Pretest, teach, test the result, adapt the procedure, teach and test again to the point of actual learning.
- ( ) ( ) ( ) 65. In man's experience there are two realms: One an inner, characterized by mind; the other an outer, characterized by mere physical activity.
- ( ) ( ) ( ) 66. Man's inborn tendency to fight makes it highly improbable that war can ever be entirely abolished.
- ( ) ( ) ( ) 67. Educational experts rather than classroom teachers should make the curriculum.
- ( ) ( ) ( ) 68. I consider that man has a twofold nature, consisting of body and soul.
- ( ) ( ) ( ) 69. As far as capacity for education is concerned, one race is practically as capable of higher civilization as another.
- ( ) ( ) ( ) 70. Children, from the first school years on, should be given a genuine determining part in selecting the activities of their school curriculum.
- ( ) ( ) ( ) 71. To say that an individual has a soul is only to call attention to certain characteristics of his ways of feeling and acting as a human organism.
- ( ) ( ) ( ) 72. Classes in society are determined largely by conditions which are biologically inherent, hence social stratification must be accepted in any social order.
- ( ) ( ) ( ) 73. Coercion is necessary in schools because a good curriculum must call for the learning of many things whose value the young pupil cannot yet appreciate.
- ( ) ( ) ( ) 74. It is more true to say that the self is the habits acquired by the individual in the course of his life than to say that the self must be there to acquire the habits.
- ( ) ( ) ( ) 75. The source of economic competition is found in the trait of acquisitiveness in man's original nature.
- ( ) ( ) ( ) 76. Man's faculty of reason is complete in itself apart from the subject matter upon which man applies his reason.

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- ( ) ( ) ( ) 77. Moral principles come from a source outside ourselves, and as such should be the determiners of changing social conditions rather than determined by them.
- ( ) ( ) ( ) 78. Orphan infants adopted into very desirable homes sometimes turn out disappointingly. I consider that in most such cases original nature is probably a more potent factor than environment.
- ( ) ( ) ( ) 79. The dominance of the white race in the world today bespeaks a mental capacity superior to that of other races.

## APPENDIX E

### A SOCIAL STUDY<sup>1</sup>

By MANLY H. HARPER, Ph.D.

#### DIRECTIONS

##### A. FILLING THE BLANKS BELOW

Fill only such blanks as the director of the study instructs you to fill.

1. Date.....
2. Your number.....
3. Age.....
4. Sex.....
5. Name.....
6. If you are now a student in an educational institution give:
  - a. Name of institution you are attending.....
  - b. Address of the institution.....
7. If you are now or were previously employed in educational work give:
  - a. Latest grade or subject taught, or other work done.....
  - b. Kind of institution.....
  - c. City or village..... or (if in a rural school) in what county.....
  - d. State.....
8. Extent of your educational preparation:
  - a. Number of years of work completed on the high school level.....
  - b. Number of years of work completed above the high school level.....
  - c. Degree or degrees held, if any.....

##### B. MARKING THE PROPOSITIONS OF THE STUDY

Before turning to mark the following three pages of propositions please read these directions carefully.

In plans for the development of good citizenship full weight and proper consideration should be given to the opinions and ideals of teachers and other educators. Your sincere cooperation is desired, therefore, in marking the propositions of this study. Use care but do not take more time than you need. You should be able to complete the marking in 35 or, at most, 45 minutes.

*If you agree with a proposition more fully than you disagree, mark it by placing a plus sign (+) in the parentheses at the left of the number.*

*If you disagree more fully than you agree, mark the proposition by placing a minus sign (-) in the parentheses at the left of the number.*

*Please mark each proposition even if in some cases you feel that you are merely guessing.*

*Make sure that you understand the above directions in italic type.*

#### THE PROPOSITIONS

- ( ) 1. In teaching the vital problems of citizenship, teachers should so impress on the students the approved opinions in these matters that life's later experiences can never unsettle or modify the opinions given.
- ( ) 2. If our people were willing to try the experiment fairly the Government ownership of railroads would be for the best interests of the country.

<sup>1</sup>Published and copyrighted, 1927, by Bureau of Publications, Teachers College, Columbia University, New York City.

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- ( ) 3. The practice of democracy, as developed in the United States, has no serious or far-reaching defects.
- ( ) 4. As a rule, the laborer in this country has as favorable an opportunity to obtain a fair price for his labor as his employer has to obtain a fair price for the goods which the laborer produces.
- ( ) 5. One should never allow his own experience and reason to lead him in ways that he knows are contrary to the teachings of the Bible.
- ( ) 6. The Government should provide to all classes of people opportunity for insurance at cost against accident, sickness, premature death, and old age.
- ( ) 7. For the improvement of patriotism our laws should forbid much of the radical criticism that we often hear and read concerning the injustice of our country and Government.
- ( ) 8. If any facts should be found favorable to socialism they should be omitted from histories written for high school use.
- ( ) 9. Among the poor, many more individuals fall short of highest satisfaction on account of too many desires than on account of lack of income.
- ( ) 10. The United States should exercise a wider and firmer control in Latin America.
- ( ) 11. Very large fortunes gained in this country have, in almost all cases, been obtained by proportionately large service to the common welfare.
- ( ) 12. The United States is justified in refusing to join the League of Nations.
- ( ) 13. Licenses to teach in the public schools should be refused to persons believing in socialism.
- ( ) 14. The measure of right or wrong in human action is in direct proportion to the measure in which the action enriches or impoverishes human experience.
- ( ) 15. On the whole in this country, the reward given manual laborers, as compared with the share taken by their employers, has been in just proportion to the services they have rendered.
- ( ) 16. The United States should avoid any extensive program of Government ownership and operation in the generation, transmission, and distribution of hydroelectric power.
- ( ) 17. The present curricula of our schools are well suited to the development of broad and sympathetic understanding among our various economic groups—farmers, miners, manufacturers, etc.
- ( ) 18. During the dangers of impending war our Government should prevent any groups of citizens from opposing, through public discussions or through publications, the Government's most thorough preparation for the possible conflict.
- ( ) 19. Without directly teaching religion a teacher's influence in the public schools should always be definitely and positively favorable to the purposes and activities of our generally recognized religious organizations.
- ( ) 20. The wage system of industry operates with desirable efficiency in promoting the interest of laborers in the work they are employed to do.
- ( ) 21. Some events in the history of the United States during the past 40 years show that influential groups among our people have at times swayed our Government into imperialism, the selfish policy of controlling and exploiting the people of another nation.
- ( ) 22. Because of conditions developed by science and invention, nations that continue to grow in strength and justice will inevitably become less interdependent.

- ( ) 23. Most students of our high schools should give a larger proportion of their time to the study of ancient languages, in view of the benefit of general mental development and refinement to be derived therefrom.
- ( ) 24. Our generally recognized religious organizations retard progress by continuing to operate as the dead hand of the past, hindering, through subservience to mythical superhuman authority, efficient search for truth and justice.
- ( ) 25. No normally healthy individual can justly appropriate and enjoy more property than he has earned by service to the common good.
- ( ) 26. The development of the highest welfare of the country will require Government ownership of important minerals.
- ( ) 27. World conditions seem now to insure enduring peace among the nations.
- ( ) 28. In the industries of this country proper opportunity and encouragement are usually given to laborers to progress from lower to higher positions of all grades of responsibility and reward.
- ( ) 29. The methods and curricula now commonly employed in teaching citizenship insure our country's efficient progress in democracy.
- ( ) 30. Our educational forces should be directed toward a more thoroughly socialistic order of society.
- ( ) 31. For the sake of our continued prosperity teachers should endeavor to give students of suitable age a firm understanding of and belief in the protective tariff policy.
- ( ) 32. Many more industries and parts of industries should be owned and operated cooperatively by the producers (all the workers) themselves.
- ( ) 33. The power of huge fortunes in this country endangers democracy.
- ( ) 34. In the elementary schools a direct study of the Constitution of the United States has greater possibilities for building citizenship than has any study or work that can be properly undertaken in the practical arts—such as homemaking, agriculture, mining, manufacturing, etc.
- ( ) 35. Events since the World War have shown clearly that the permanent policy of the United States should be to let Europe settle its political problems without our Government's participation.
- ( ) 36. Considering the present lack of respect for authority, teachers should rise to the occasion by depending less on the self-direction of students and more on the firmly enforced plans and directions given by the teacher.
- ( ) 37. As a rule, the time spent on Latin by the girls in our high schools could much better be spent on such subjects as music, fine arts, homemaking, literature, or social studies.
- ( ) 38. Some form of public regulation of business or some form of taxation should be used that would make impossible the accumulation or holding of a fortune as large as some fortunes now held.
- ( ) 39. Reproduction should be made impossible, by segregation or by surgical operation, for all those below certain low standards of physical and mental fitness.
- ( ) 40. Teachers can get no practical help from psychology that cannot be better obtained from mere common-sense experience.
- ( ) 41. On the whole, we have had too much of Government interference or regulation in private business.
- ( ) 42. The history of protective tariff legislation in this country is a worthy record of our Government's impartial and efficient devotion to the welfare of all the people.
- ( ) 43. It should become common practice for owners of capital to share profits and management with their employees.

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- ( ) 44. A large majority of those who usually vote the Republican ticket are influenced in their voting more by ignorance and prejudice than by rational thought. (No comparison with other parties is implied.)
- ( ) 45. Every boy and girl in American schools should be taught to give unquestioning and unlimited respect and support to the American flag.
- ( ) 46. History shows no development to encourage the hope that there can ever be a practical international or world government to deal with international or world affairs.
- ( ) 47. Our radical papers exaggerate greatly when they say that 5 percent of our population owns 95 percent of all the property in this country.
- ( ) 48. The development of the highest welfare of the country will require Government ownership of the land.
- ( ) 49. The Members of Congress from the agricultural sections should cooperate to make the laws of greatest possible advantage to the farmers.
- ( ) 50. There is no probability that the means of forming public opinion (especially the schools and the press) will be unfairly influenced or controlled by the wealthy interests.
- ( ) 51. Any self-direction by students of the elementary school should be limited to routine matters and special projects, leaving the regular work to be planned and directed entirely by the teacher.
- ( ) 52. We should attempt to give students in our public schools an abiding faith in the Constitution of the United States in all its parts and principles.
- ( ) 53. No school, college, or university should teach anything that is found to result in its students doubting or questioning the Bible as containing the word of God.
- ( ) 54. If every nation were as wise and just as the United States there would be no danger of more great wars.
- ( ) 55. In these days of lack of thoroughness, elementary teachers should give their attention more singly and directly to teaching the fundamentals—in reading, handwriting, arithmetic, etc.
- ( ) 56. The only god we should serve is truth revealed through the interpretation of experience by clear, unselfish, rational thought.
- ( ) 57. In matters of citizenship the student's interests, mental attitudes, and methods of work are not so vital as his desire to remember the conclusions emphasized by the teacher and other qualified authorities.
- ( ) 58. Our laws should prohibit giving information, even to adults, concerning birth control, through public meetings or through the mails.
- ( ) 59. By legislative and executive action, Government in this country has often given manufacturing and commercial interests special advantages seriously detrimental to other important interests.
- ( ) 60. The man whose vacant lots in a thriving city increase many fold in value because the city's homes and business grow up around those lots, should, in justice, be required to repay in taxes a large part of the unearned profits to the city that created the increased values.
- ( ) 61. A league or association of nations, including the United States, is the only kind of organization sufficiently inclusive to deal adequately with broader international affairs.
- ( ) 62. The opportunities for education offered to the young of this country show that our people are properly sensitive and loyal to the principle of equality of opportunity for all.
- ( ) 63. A larger proportion of time in our high schools should be given to such subjects as modern history, civics, economics, and sociology.

- ( ) 64. If it were true that 1 percent of the citizens of the United States owned more property than the other 99 percent, it would be of great importance in our high schools to seek to interest the students in a study of the causes operating to produce this unequal distribution of wealth.
- ( ) 65. Citizens should desire our elementary and high schools to give unprejudiced and vigorous study and discussion to important social and political issues upon which community opinion is divided.
- ( ) 66. It would be undemocratic for the United States to surrender any of its sovereign power to an international supergovernment in order to become a member of such an organization.
- ( ) 67. Taxes on very large inheritances should be high enough to prevent any heirs receiving huge fortunes.
- ( ) 68. The classroom teacher should be given a larger and more responsible share in organizing the curriculum of the school and in determining the subject matter and method of her own teaching.
- ( ) 69. It would be well to give a larger proportion of the time in our elementary schools to elements involved in the problems of capital and labor.
- ( ) 70. Histories written for elementary or high school use should omit any facts likely to arouse in the minds of the students questions or doubt concerning the justice of our social order and Government.
- ( ) 71. The life and work of the school cannot properly be like the activities of life outside of school because the school has its own work to do in preparing young people for later life.

