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STANDARDS IN GRADUATE WORK
IN EDUCATION

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, January 19, 1922.

SIR: The standards and educational practices of all higher institutions are scrutinized now as never before in our history. For the most part these examinations relate chiefly to undergraduate and professional schools and colleges. It is, however, important that the graduate divisions in our great universities should lead the way with superior requirements and standards for graduate work. In this field the committee on standards of the Society of College Teachers of Education has, under the direction of Prof. Leonard V. Koos, of the University of Minnesota, done some pioneer work by conducting an investigation of the graduate standards and practices in college departments of education. The study reveals valuable information which should be brought to the attention of the higher institutions in this country. I wish, therefore, cordially to recommend the publication of the manuscript as a bulletin of the Bureau of Education.

Respectfully submitted.

JNO. J. TIGERT,
Commissioner.

The SECRETARY OF THE INTERIOR.

STANDARDS IN GRADUATE WORK IN EDUCATION.

SCOPE AND METHOD OF THE STUDY.

There is reported here a digest of responses to a rather extended inquiry concerning standards in graduate work in education. The lines of investigation were drawn largely from two chief sources, (1) the report of a committee of the American Association of University Professors, and (2) responses of heads of schools and colleges of education to a letter asking for a statement of what seem to be the more pressing problems in the standardization of graduate work in the field of education. The former appeared in the January-February (1919) number of the bulletin of the association. It was concerned solely with the doctorate in philosophy, not with the master's degree, and gave consideration to problems of standardization of this degree for the entire range of university work to which it should apply, not merely to the field of education, as does the present study. Through analogy this report supplied important lines of investigation for the study here undertaken. From the responses of the deans and directors of schools and colleges of education were drawn the problems more peculiar to the field under consideration. No item of practice was investigated which was without recognition in the report referred to or in the responses of the deans and directors of whom preliminary inquiry had been made.

The questionnaire framed on the basis of these sources was sent to the heads of departments or schools of education in approximately 90 higher institutions in many parts of the country. This number included all the State universities and other State institutions which might be presumed to be giving graduate training in education, to all the larger non-State higher institutions known as places where graduate training in education is obtainable, besides a number of smaller colleges and universities randomly selected.¹

In all, 61 of the schools of which inquiry had been made sent answers of one sort or another, some of them stating merely that they gave little or no graduate training, others by returning the questionnaire properly filled out. Most of the responses of the former type came from the randomly selected smaller institutions. Up to the time of completion of the work of tabulation, usable responses had been submitted by representatives of 42 departments, schools, or colleges of education. The blank was in most cases filled out by or under the immediate direction of the head, dean, or director, but in a few instances by some other person informed as to practices and authorized to express the opinions called for. Of these 42 institutions, 17 grant the master's degree only, the remaining 25 granting both the master's and the doctor's degree.

¹ The list from which were drawn the names of the heads of departments and deans to whom questionnaires were sent is that appearing on pages 95-109 of the 1918-19 Educational Directory of the U. S. Bureau of Education, appearing as Bu. of Educ. Bul., 1918, No. 26.

The names of the institutions represented in the study are as follows: University of Arizona, University of Arkansas, University of California, University of Chicago, Clark University, Columbia University (Teachers College), Cornell University, University of Florida, George Peabody College for Teachers, George Washington University, University of Georgia, Harvard University, University of Illinois, Iowa State College, State University of Iowa, Johns Hopkins University, University of Kansas, Louisiana State University, University of Maine, University of Michigan, University of Minnesota, University of Mississippi, University of Missouri, University of North Carolina, University of North Dakota, Northwestern University, Ohio Wesleyan University, University of Oregon, Pennsylvania State College, University of Pennsylvania, University of Pittsburgh, University of South Dakota, Stanford University, Syracuse University, University of Tennessee, University of Texas, University of Utah, University of Vermont, University of Washington, West Virginia University, University of Wisconsin, and Yale University.

Examination of the list will show that there is a very satisfactory representation of State institutions and of the larger nonpublic universities. In fact, very few institutions important in graduate training in education are absent from the list. But the representation of departments of education in smaller private institutions is rather meager. Their absence must be largely explained by the fact that they undertake little in the way of graduate training. This explanation has the support of a number of answers to this effect from the heads of their departments of education. It is also supported by the fact that most of them failed to respond even to a second request. These facts justify assurance that the study here presented is to be regarded as a fairly complete survey by questionnaire of the practices in and opinions as to graduate training in education in the United States during the school year covered by the study, 1919-20.

For the most part the answers of those who returned the questionnaires were sufficiently full and satisfactory. This was especially true of the reports on *practice*. There was some tendency to fail to respond to the requests for *opinions* as to appropriate practices, except when the individual who filled out the questionnaire was moved to take exception to current practices. As the discovery of this disagreement with practice was after all the thing sought for in the request for opinion, this partial failure to respond to the requests for opinion affects only to a small extent, if at all, the achievement of the purpose of the investigation. Because of this purpose in seeking opinions, no frequent reference is made to them in the report unless they tend to deviate from the trend of practice.

It is not presumed to be the function of this report to do more than to present the facts of practice and opinion. The writer, therefore, restricts himself to their bare and brief recital.²

I. ADMISSION AND PREREQUISITES.

SECONDARY-SCHOOL PREPARATION.

Investigation of high-school preparation.—Eighteen institutions state without qualification that they investigate the high-school preparation of graduate students. Twelve others answer to the effect that it is sometimes investigated. Illustrations of statements coming under this head are: "Yes; unless accredited

² The committee on standards of the Society of College Teachers of Education, for whom the study here reported has been made, will undertake the task of recommendation of appropriate practices on the basis of the findings presented.

high school"; "Yes; if college is not accredited." Only 12 of the entire group of 42 institutions answer "No" to the question concerning the investigation of high-school preparation.

Amount of high-school preparation required.—Few of the institutions will accept anything less than four years of high-school work. Few of them accept less than 15 units. The exceptions are the small number that will accept 14 or 14½ units, or insist upon 15½ or 16. Four institutions in one way or another make it clear that they do not insist upon the full four years for the completion of the necessary units, seeming thereby to encourage economy of time for the more capable pupils.

COLLEGE PREPARATION.

The bachelor's degree as a prerequisite to admission.—Almost all institutions insist upon the bachelor's degree based upon four years of work as a prerequisite to admission to graduate work. Three of the entire group of 42 institutions are ready to accept a bachelor's degree secured in less than the traditional four years, thereby seeming to encourage economy of time for more capable students.

Specific requirements other than education.—The next point of inquiry was the extent to which the institutions prescribed specific subjects of study which the student should offer in order to be admitted to graduate work. Of the entire group of 42 institutions, 17 make no specific prescriptions; 20 name prerequisites. The numbers of these subject prescriptions and their names appear in Tables 1 and 2. The former of these tables shows that the number of prescriptions varies widely. The total amount of credit in these prescriptions is not presented in the tables, but it may be said that it also varies widely. In 14 instances of amounts of credit where these could be computed from the answers, they ranged from 3 to 72 semester hours.¹ There are 14 different practices in these 14 cases, showing little or no tendency to standardization of practice.

TABLE 1.—Number of specific prerequisites other than education.

Number of prerequisites	Number of institutions
0	17
1	5
2	3
3	3
4	2
5	1
6	3
9	1
Miscellaneous answers	3
No answer	2
Total number of institutions	42

The second of these two tables shows the more common prerequisites in the order of their frequency of appearance. A few of the institutions require the presentation by the candidate of majors or minors without prescribing in what subjects these majors and minors shall be.

Investigation of the college work antecedent to graduate training.—There is a great variety of practice as to who investigates this work. In fact, there are 17 different practices reported by the 42 institutions concerned: 9 institu-

¹ Because the semester hour is the unit more commonly used, as far as possible other units of credit have been reduced to semester hours. Where this was not possible, the answers were omitted.

tions indicate that the dean of the graduate department performs this function; 7 report that it is the work of the graduate committee; 5 that it is done by the head of the department or school of education. Other practices reported with less frequency are university registrar or examiner, the committee on admissions, the committee on relations with other institutions, etc.

TABLE 2.—Names of specific prerequisites other than education, and their frequency of appearance.

Prerequisite	Number of institutions
Psychology.....	11
A laboratory science.....	11
Social studies.....	11
English.....	11
Foreign languages.....	11
Philosophy.....	11
Hygiene and sanitation.....	11
Mathematics or logic.....	11
Public speaking.....	11
Physical education or military training.....	11

Practices in this regard may be summed up in another way. A committee has a functional relationship to this investigation in 19 institutions; the dean or head of the graduate school or department in 13 instances; the department of education in 12 instances; and the registrar in 6. There are sometimes two or three of these relationships in one institution.

Of the 42 institutions, 30 report that they use lists of approved higher institutions in evaluating the student's work antecedent to his graduate training. Nine use no such lists.

The more common lists used in this evaluation of college work are the United States Bureau of Education list, lists prepared by the State universities, and the North Central Association list. A number of other lists are named in a few instances, e. g., the Association of American Universities, the Carnegie Foundation, Babcock's, Southern Association, etc. A number of institutions speak of "our own list" or "experience."

Procedure when an institution is not on an approved list. Some of the wide variation of practice reported in this connection may be cited for illustration: Referring the question of acceptance to the State university in the State in which the college is located for its evaluation of the institution concerned (7); permitting the student to register, subject to the requirement that he show ability (6); considering carefully the individual (3); inspection by a member of the faculty if within the State (3); "our experience" (3). A few of those who responded to the question made comment somewhat as follows: "We should have a national list (of approved higher institutions) made by some recognized authority." These comments and the wide variety of practices in the matter of approving graduate students when coming from institutions on no approved list show a need of standardization of higher institutions over wider than State areas.

PREREQUISITES IN EDUCATION.

Special requirements in education.—Twenty institutions prescribe no specific courses in education preliminary to admission to graduate courses in education. Five make no answer to the question concerning these prerequisites. Seventeen report one or more. The more common subjects reported are shown in Table 3. Table 4 shows the number of courses designated as prerequisites.

TABLE 3. *Specific prerequisites in education.*

Subjects	Number of institutions
Educational psychology	10
History of education	2
Principles of education	2
Special methods	2
Observation and practice	2
Theory and practice	1
Administration	1
Secondary education	1

TABLE 4. *Number of specific prerequisites in education.*

Number of specific prerequisites	Number of institutions
1	5
2	5
3	2
4	3
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
36	1
37	1
38	1
39	1
40	1
41	1
42	1
Total number of institutions	42

Amounts of credit in specific prerequisites. When these specified requirements are reduced to semester hours, they vary no less widely than do the subjects or numbers of courses. The totals range from 3 to 32, the most common practice, reported by six institutions, being 12 hours.

The opinions favor a larger amount of undergraduate work in education than does practice. The range is from 5 to 32 hours, with the more common opinion being again 12 hours. Reports from 11 institutions recommend increases of the amounts required in this field, while the report from no institution recommends the reduction of the requirement in operation.

Experience as a substitute for prerequisites in education.—Of the 33 institutions which have prerequisites in education specified or unspecified, 10 report that they do not accept experience in lieu of prerequisites in education, 15 that they do. Of the 42 institutions, 9 have no such prerequisites. Several of the institutions in which experience is accepted in lieu of the prerequisites make such qualifying statements as follow: "For the introductory course only"; "To a limited degree"; "For practice teaching only"; "Sometimes"; etc.

Several of those who answer the questionnaire state emphatically that "experience will not supply ideas," thereby indicating that they very much disapprove of the practice of accepting it in lieu of other prerequisites.

DISTINCTION BETWEEN ADMISSION TO GRADUATE WORK AND ADMISSION TO CANDIDACY FOR ADVANCED DEGREES.

For the master's degree.—Approximately two-thirds of the persons making response to the questionnaire report that a distinction is made between admission to graduate work and admission to candidacy for the master's degree, while about one-third state that no such distinction is made. A number of those who report a practice making no such distinction emphasize the desirability of doing so.

The distinctions made.—An approximate fourth of the institutions make the period of residence the distinction between admitting to graduate work and admitting to candidacy for a degree. The remainder either answer "No" or

fail to respond to this question. Thus, in most institutions there is no distinction in terms of preliminary residence. *Quality of work* is made a basis of distinction between admission to graduate work and admission to candidacy in somewhat less than half the schools. Most of the questionnaires are silent in the matter of other bases for distinction between admission to graduate work and admission to candidacy for the master's degree; they have no bases other than those already named.

For the doctor's degree.—Of the 25 institutions granting the doctor's degree, 20 report that they make some distinction between admission to graduate work and admission to candidacy for this degree. Three report that there is no such distinction.

The distinctions made.—Eleven report that there is a period of residence preliminary to admission to candidacy. Five report that there is not. Most of the institutions are following the practice of insisting upon quality of work as a basis for admission to candidacy. A few of those who report volunteer information as to the grade required, as "B" or some other measure of scholarship. The most common other basis of distinction between admission to graduate work and to candidacy for the doctor's degree is the preliminary examination. Among other bases named are the thesis subject and the foreign-language requirement.

THE ABILITY OF STUDENTS WHO RECEIVE THE HIGHER DEGREE.

The master's degree.—In answer to the question as to whether or not the master's degree is differentiated rigidly from the bachelor's degree as not attainable by persons of mere average ability who give the necessary time, 10 say "No," 27 "Yes," while 5 fail to answer or give answers which are not usable. Opinion favors such a differentiation more strongly than practice.

Doctor's degree.—As may be expected, the reports indicate almost a unanimity of insistence upon rigid differentiation of the doctor's degree from the bachelor's as not attainable by persons of mere average ability who give the necessary time. Twenty-four indicate that they do so differentiate; the remaining 1 of the 25 institutions granting the doctor's degree reports that it does not. Opinion is in no disagreement with these reports of the trend of practice. (The candidate is and should be, according to both practice and opinion, a person of more than average ability.

II. RESIDENCE REQUIREMENTS.

MASTER'S DEGREE.

Minimum period of residence during the academic year.—The almost uniform practice is to require a full year of residence if the student attends during the regular academic year from September to June. Two schools report a minimum period of residence of two years.

Obtaining the degree by summer residence only.—Thirty-six institutions report that this degree may be obtained by summer residence only; five that it may not.

Minimum period of residence during summer sessions.—The facts as to the minimum number of weeks of residence required if the student attends only during the summer sessions are reported in Table 5. We find in this table a marked tendency to accept a shorter period of residence during the summer sessions than during the academic year.

TABLE 5.—Minimum number of weeks of residence for master's degree when candidates attend summer sessions only.

Number of weeks.	Number of institutions.
15.....	1
18.....	8
24.....	11
27.....	1
30.....	4
32.....	4
36.....	4
Degree may not be obtained by summer residence.....	5
No answer or answer not usable.....	4
Total number of institutions.....	42

What is required in lieu of the difference between minima of all-year and summer residence.—In 16 institutions from which we have answers as to what is required in lieu of the difference between summer residence and residence during the academic year, 9 report that nothing is required, while 7 report in some such terms as follows: "Supervised study or projected work in absentia"; "the equivalent of a semester's work in absentia"; "the maturity of the candidate and his ability to do intensive work"; "undetermined as yet."

Opinions as to what should be done in lieu of the difference noted are more in the direction of (1) insisting upon some sort of requirement; or (2) equalizing the periods of residence by requiring longer attendance in summer sessions.

Correspondence study as meeting the requirements for the master's degree.—Of the 42 institutions, 33 report that correspondence work is not accepted in lieu of residence requirements. Seven report that it is so accepted. Opinion is somewhat more inclined than is practice to accept correspondence study as a substitute for residence, but it would insist that the work be "well organized," that it be accepted only to a "limited extent," or "in very small amounts."

Other kinds of work accepted as a substitute for residence.—The majority of institutions refuse to accept any other kind of work as a substitute for residence. Of the 16 institutions which do accept such work, the following kinds are accepted: Field or research work (5 institutions), projected work in absentia (4), extension classes (4), etc.

The effect upon the period of residence when the student does not meet the prerequisites in education.—Of those institutions from which answers have come concerning the effect upon residence of not having met the prerequisites in education, 10 report definitely that it extends the period of residence, and 4 that it may lengthen it, but that it does not always work in this way. Six of the institutions having prerequisites answer that the absence of the prerequisites in the training of the candidate does not result in a longer period of residence. If to these are added those already reported as having no prerequisites and also the portion of the 9 not answering the question in which the failure to present prerequisites may be presumed to have no effect, we are safe in concluding that in a majority of institutions the fact of having had no preliminary work in education does not tend toward extension of the length of residence required for the degree under consideration.

Opinion is more favorable than is practice to an extension of the period of residence if the prerequisites have not been met.

DOCTOR'S DEGREE.

Minimum period of residence during academic year without previous graduate training.—Of the 25 institutions reporting that they grant the doctor's degree, 19 report that they hold to a three-year requirement for candidates

without previous graduate training, and 3 each report one-year and two-year requirements.

Obtaining the degree by summer residence only.—In 19 institutions it is impossible for a candidate to receive the doctor's degree by summer residence only. In but 4 institutions may this be accomplished; 1 reports "possibly," while in 2 others there seems to be no rule.

Minimum period of residence during summer session.—Of the 4 institutions from which reports indicate that they accept summer residence as satisfying all residence requirements, 1 reports a minimum requirement of 24 to 30 weeks; 2 a minimum total of 3 years of residence; and one 60 weeks.

The minimum period of residence when the candidate has had graduate training in another institution.—The universal requirement here is a one-year minimum.

Correspondence work in lieu of residence requirements.—Practice is emphatically opposed to acceptance of correspondence work as a substitute for residence requirements for the doctor's degree, reports from 22 institutions stating that it is not accepted. Opinion is to a slight degree more favorably inclined toward granting such credit, but it would insist that, if it is accepted, it be field research in small amount and under careful supervision.

Other kinds of work as substitutes for residence.—Of the 25 institutions granting the doctor's degree, 11 report that no other kinds of work are accepted as substitutes for residence. Another group of the same number of institutions report that research work is sometimes accepted, although some specify that it must be a type of research work requiring absence.

Effect upon period of residence of not meeting the prerequisites in education.—Reports from 5 institutions indicate that the period of residence is extended by the failure to present the prerequisites in education upon entrance to graduate study. Four institutions report that this does not extend the period of residence, three of these stating that there is enough time in the three years to make up the prerequisites. When to these are added the 9 others having no prerequisites, it is apparent that the predominant practice in this regard results in no extension of the period of residence.

III. CREDIT REQUIREMENTS. ✓

MASTER'S DEGREE.

Table 6 presents the number of semester hours of credit required for the master's degree. The amount of credit required may be seen to vary widely and seems to be considerably influenced by the value placed upon the thesis, one of the almost universal requirements for the master's degree. The table also indicates that a few institutions do not specify graduate requirements in terms of formal credits.

TABLE 6.—Semester hours of credit required for the master's degree.

Number of semester hours	Number of institutions
20	1
24	5
26	1
28	1
30	8
32	3
35	1

Number of semester hours.	Number of institutions.
9 to 12 and thesis	1
18 and thesis	1
24 and thesis	5
30 and thesis	3
32 and thesis	1
Requirement not stated in units of credit	4
No answer or answer not usable	7
◆ Total number of institutions	42

DOCTOR'S DEGREE.

Not many institutions specify requirements for the doctor's degree in terms of credit hours. Six in which requirements are so stated report 48 hours (1 institution), 54 hours (1), 60 hours (2), 64 hours (1), 90 hours (1). One institution each reports the following practices: "24 and the thesis," "30 and the thesis," and "60 and the thesis." It is the more common practice for the institutions granting the doctor's degree to state that the requirements for this degree are not stated in units or hours. A few of those who volunteer an opinion state that the character and quality of the work and the dissertation should be the determining factors, rather than the amount of credit.

IV. THE DISTRIBUTION OF WORK.

ORGANIZATION OF THE WORK IN EDUCATION.

An item of some significance in a study of the requirements for higher degrees in education is the practice in the matter of organization of work in the field. Therefore, one point of inquiry was whether or not the work in education is organized by departments. Thirteen copies of the questionnaire report that education is so organized; twice this number make a negative answer.

The departments more commonly named by those who report having an organization of the former sort are as follows: Educational psychology (10 institutions), administration (7), history of education (6), secondary education (5), vocational or industrial education (5), rural education (5), health education or educational hygiene (1), elementary education (4), and a scattering of a wide array of departments, among them philosophy of education, educational sociology, normal-school education, religious education, kindergarten education, agricultural education, art education, etc.

Lines of graduate specialization.—Another point of inquiry that may be seen to be somewhat related to the problem of organization is the number and kinds of lines of graduate specialization open to students. The facts concerning this are presented in Tables 7 and 8.

MASTER'S DEGREE.

The number of majors and minors required.—Table 9 shows the practices as to the number of major and minor subjects required for the master's degree in the institutions, represented by those who answered the questionnaire. There is seen to be a wide variety of practice in this regard.

¹ One of these reports "24 and thesis or its equivalent."
² One of these reports "28 and thesis or its equivalent."

TABLE 7.—*Lines of graduate specialization within the field of education.*

Line of specialization.	Number of institutions.
Administration.....	19
Educational psychology.....	17
History of education.....	16
Secondary education.....	12
Elementary education.....	7
Vocational education.....	6
"Education".....	5
Supervision.....	5
Tests and measurements.....	5
Experimental education.....	4
Theory.....	4
Philosophy of education.....	2
Educational sociology.....	2
Rural education.....	2
Religious education.....	2
Principles of education.....	2
Methods.....	2
Normal school education.....	1
Higher education.....	1
Primary education.....	1
Kindergarten education.....	1
Play and recreation.....	1
Practical arts education.....	1
Others.....	9

¹ It is not unlikely that those who gave this answer misunderstood the question.

TABLE 8.—*Number of different lines of graduate specialization within the field of education.*

Number of lines of specialization.	Number of institutions.
1.....	8
2.....	4
3.....	5
4.....	1
5.....	1
6.....	1
7.....	1
8.....	1
9.....	1
10.....	1
11.....	1
No answer.....	7
Total number of institutions.....	42

TABLE 9.—*Number of major and minor subjects required for the master's degree.*

Number of majors and minors.	Number of institutions.
One major only.....	12
One major and one minor.....	9
One major and one or two minors.....	4
One major and two minors.....	1
One or two majors and two minors.....	1
"Varies".....	1
Work not arranged by majors and minors.....	2
No answer or answer not usable.....	12
Total number of institutions.....	42

When we come to study the amounts of credit required in these majors and minors we find an even greater variety of practice. For 29 institutions making responses with any degree of definiteness there are 25 different practices. There is thus little or no standardization of practice in this regard. As far as possible, a comparative study was made of the amounts of credit required in the major when no minor is required and when minors are required. No marked difference was found, except that a few of the institutions requiring a major only require a considerably larger amount of credit in that major. In

cases where no minor is required, the majors range from 10 to 36 hours, with very few above 20. Where minors are required, the majors range from 10 to 21 hours. The number of institutions whose responses could be used for the comparison was too small to give findings of much significance.

Departments from which majors and minors are accepted.—The following are the more common departments in education from which majors are accepted: Administration, educational psychology, history of education, secondary education, elementary education, and rural education. Other departments are reported by one or two institutions each.

The situation as to departments in which minors are accepted differs in no essential respect from what has been reported for majors.

Specialization within the field of education.—Almost three-fourths of those who report, i. e., 30 of the total of 42, signify that specialization within the field of education, e. g., in educational psychology, administration, etc., is encouraged; 4 report that it is not, while 3 say that it is "permitted" or "not discouraged."

There is not marked a tendency to require specialization within the field of education, as only 15 indicate unequivocally that this practice is followed, while 19 indicate that it is not.

DOCTOR'S DEGREE.

Number of majors and minors.—The outstanding practice is to require a major and two minors for the doctor's degree, as 10 of the 25 institutions giving this degree make this the requirement. Other practices followed in three of four institutions each are: One major and one minor; one major and one or two minors; one major only.

Departments from which majors and minors are accepted.—In those institutions in which education is organized by departments, the following departments are named as those in which majors are more commonly accepted: Educational psychology, administration, secondary education, elementary education, rural education, and history of education. The following are among the departments which come in for occasional mention: Philosophy of education, health education, primary education, kindergarten education, educational sociology, vocational education, religious education, etc. The facts as to departments from which minors are accepted are nowise different from those just presented for majors.

Restrictions as to distribution of majors and minors.—Of the group of 25 institutions, 7 granting the doctor's degree in education state that there are no restrictions as to the distribution of majors and minors. Typical statements of those who place restrictions are: "Must take one-half or two-thirds of work in philosophy, psychology, and social lines"; "major and one minor must be in related fields"; "the distribution of the minors is at the discretion of the education faculty"; "one minor must be outside the main field, one may be inside." Most of the restrictions are in the direction of making for the unity of the fields covered by the student during his graduate training.

Specialization within the field of education.—Of the group of 25 institutions, 17 granting the doctor's degree in education report that specialization within the field of education is encouraged. Two additional institutions say that specialization is restricted to the research of the student. Two reply that specialization is not encouraged. Eleven of the reports indicate that specialization is required; six, that it is not required; the remainder making no answer.

As a whole, specialization is more frequently favored both by practice and opinion for the doctor's degree than for the master's.

AMOUNT OF WORK THAT MAY BE CARRIED.

The maximum amount of credit that may be earned in any one semester or quarter.—The maximum amount of credit in number of credit hours which may be earned in any quarter or semester by graduate students ranges from 12 to 20. The more common practices followed by 9 and 8 institutions, respectively, are 12 and 18 hours. Occasionally an institution allows a student to carry as much as 19 or 20 hours, but it is more common to find the practice less than 18 hours. The value of these figures in the determination of the trend of practice is to some extent discounted by the fact that some institutions make the thesis a requirement over and above the maximum of course work, the number of these cases not being exactly determinable from the answers given. In most instances, however, the work on the thesis is included as a part of the number of hours the student is permitted to carry.

Unfortunately, also, the question of the amount of work that may be carried by students during summer sessions was not raised. This question deserves some consideration in any attempt to standardize graduate work. As those acquainted with practices in summer schools are aware, the amount of work that may be carried by students in attendance upon them often exceeds that which may be carried during the sessions of the regular academic year.

V. ADMINISTRATION OF COURSES IN EDUCATION.

NUMBERS OF COURSES OF THE DIFFERENT GRADES.

Number of strictly graduate courses.—The numbers of strictly graduate courses reported by these schools and departments of education are shown in Table 10. For those making usable responses, these numbers may be seen to range from none—the most common practice—to 20, with a scattered distribution of responses between these extremes. When these numbers are tabulated for the 25 schools granting the doctor's degree, the range may be seen to be just as wide, but with fewer distributed to the smaller numbers. Those schools having the smaller numbers are appropriately those which limit themselves to granting the master's degree. However, it may be said that there are a number of schools undertaking to grant the doctor's degree which have a meager offering of strictly graduate courses.

TABLE 10.—Number of strictly graduate courses offered.

Number of courses.	Number of institutions (of the total of 42).	Number of institutions granting master's degree only.	Number of institutions granting both master's and doctor's degrees.
0.....	8	7	1
1.....	4	3	1
2.....	3	2	1
3.....	1	1	1
4.....	2	1	1
5.....	3	1	2
6.....	2		2
7.....	1		1
8.....	4		4
9.....	1		1
14.....	1		1
15.....	2		2
20.....	1		1
No answer or answer not usable.....	9	2	7
Total number of institutions.....	42	17	25

The number of courses open to both graduates and undergraduates is shown in Table 11. For purposes of comparison of the institutions granting both degrees and those granting only the master's degree, the numbers of courses have been separately tabulated.

It was found that in 8 schools no courses are open to undergraduates only. The conclusion that may be drawn is that there is no undergraduate course in these institutions to which graduate students are not admitted for credit.

The numbers of both (1) strictly graduate and (2) graduate and undergraduate courses is presented in Table 12, with the same effort at distinction between the institutions granting both the degrees and those granting the master's degree only.

The distinctions between strictly graduate and strictly undergraduate courses.—As 8 institutions of the entire group of 42 report that they have no strictly graduate courses, these made no response to the question concerning such distinctions. Three additional institutions report that no distinctions are made between these two grades of courses, while five more fail to answer or make answers not pertinent. The trend of distinction in the 24 institutions whose representatives specify one or more distinctions may be characterized by quotation: "More research in graduate courses"; "more seminar work"; "a more critical type of work"; "more largely independent work and individual instruction"; "more outside reading"; "the difficulty and scope of material and degree of advancement"; etc. The more common distinctions are the first two named.

TABLE 11.—Number of courses offered which are open to both graduates and undergraduates.

Number of courses.	Number of institutions granting master's degree only.	Number of institutions granting both master's and doctor's degrees.
0.....	1
1.....	2
2.....	1
3.....	2
4.....	2	2
5.....	1	1
6.....	2
7.....	1
8.....	1
9.....	1
10.....	1
11.....	1
12.....	1
13.....	1
14.....	1
15.....	1
16.....	1
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.....
No answer or answer not usable.....	2	8
Total number of institutions.....	17	25

TABLE 12.—Total number of strictly graduate courses and courses open to both graduates and undergraduates (i. e., the total offering to graduate students).

Number of courses.	Number of institutions granting master's degree only.	Number of institutions granting both master's and doctor's degrees.
3.....	1	
4.....	1	
6.....	2	1
9.....	2	1
10.....	1	
11.....	1	
12.....	1	1
14.....	1	
15.....	2	1
18.....	1	
19.....	1	
21.....		1
23.....	1	1
32.....		1
40.....		1
46.....		1
53.....		1
60.....		1
No answer or answer not usable.....	4	
Total number of institutions.....	17	25

Distinctions in courses open to both graduate and undergraduate students.

The distinctions in requirements between the two groups of students in courses which are open to both graduates and undergraduates are, in the order of frequency of mention, as follows: Additional work required of graduates (9 institutions); more research (7); more reports (6); higher quality expected (6); greater amount of written work (5); wider reading (4). The reports from some institutions give as many as two or three of these distinctions. The answers from 11 institutions indicate that no distinctions are made in these courses between graduate and undergraduate students.

The proportion of courses open to both graduates and undergraduates that may be taken by candidates for the master's degree.—Practically half the reports from the institutions indicate that no restrictions are placed upon the proportion of courses open to both graduates and undergraduates which a candidate may offer for the master's degree. If to these are added the 8 institutions giving no strictly graduate courses in education, we have almost three-fourths of the entire group of 42 institutions not insisting upon any strictly graduate courses. Ten institutions have such restrictions. Five of these report that one-half of the student's work must be in strictly graduate courses; two, all of the work; and three others specify certain strictly graduate courses in the requirement for the degree.

The proportion of courses open to both graduate and undergraduate students which may be taken by the candidate for the doctor's degree.—Of the 25 institutions granting the doctor's degree, 12 report no such restriction as is referred to here. Only 4 of these institutions insist upon a definite amount, 1 of them asking for one-third, 1 for one-half, and 2 for all work in strictly graduate courses.

Size of classes to which graduate students are admitted.—A relatively small proportion of the institutions place limits on the size of classes to which graduate students are admitted. Thirty-four institutions have no such restrictions. Five in which there are such restrictions report maximum graduate classes of 8-10.

8-20, 15, 25, 30. It should be stated, however, that a large proportion having no such restrictions point out that in their institutions there is no need for a limit, since the number of graduate students is small in any event.

Nor is there a notable tendency to place limits on the size of such classes in *summer sessions*. Here opinion is more definitely formed, inasmuch as a larger proportion than follow such a practice recommend a limit for classes in education for summer sessions. Among the voluntary statements touching this recommendation are the following: "Especially necessary in summer," "a great abuse here in some famous summer schools."

VI. THESIS.

MASTER'S DEGREE.

The thesis as a requirement.—Almost all schools report the thesis as a requirement for the master's degree. Three institutions respond as follows: "Alternative with the seminary"; "provided, but may be substituted for"; and "may be excused." In only 3 additional schools is there no requirement of a thesis.

Amount of credit for the master's thesis.—There is a great variety of practice in this connection. Five institutions which require a thesis allow no credit for it, insisting that it is a task imposed "over and above courses." From this practice the amount ranges up to 20 semester hours, with no outstanding modal practice. More commonly than otherwise the credit is stated in terms of lower and upper limits, as 2-4, 4-8, 4-12. The median amount is a bit under five hours.

Publication of the master's thesis.—Only one institution insists upon the publication of the master's thesis. The remaining 38 answering the question report that publication is not required.

The time of completion of the master's thesis.—In every case but one the time for the completion of the thesis is indicated as before the examination.

DOCTOR'S THESIS.

The thesis as a requirement.—It is a universal practice of those institutions granting the doctor's degree to require a thesis.

The amount of credit for the thesis.—From what has been said above concerning the tendency of institutions not to state requirements for the doctor's degree in terms of credit hours, we should be led to anticipate that not many institutions specify the amount of credit which is allowed for the doctor's thesis. The answers bear out this expectation. Seven of those who report state that no credit is allowed, some of them indicating that it is required "over and above courses." Five institutions indicate that a year (3), two years (1), or one-half of all the time (1) is assigned to the work on the thesis.

Publication.—Almost all the institutions insist upon the publication of the doctor's thesis, only three stating that publication is not required. One indicates that publication is "urged." The publication is usually in full.

VII. FOREIGN LANGUAGE REQUIREMENT.

MASTER'S DEGREE.

The foreign language requirement.—Of the 42 institutions, 36 state that no foreign languages are required for the master's degree. Of the 5 institutions which report a requirement, 3 insist upon French and German and 2 upon French or German.

In the few instances where the foreign languages are required for the master's degree the ability which the student must show is a "reading knowledge" sufficient for research.

DOCTOR'S DEGREE.

Only 2 institutions granting the doctor's degree in education specify no requirements in foreign languages. One requires "two foreign languages"; 3, "two modern foreign languages"; 17, "French and German"; and 1, "such as are necessary for research."

Where opinion deviates from practice in the matter of the requirements of foreign language is in the recommendation of several persons answering that such languages should be required as are needed for research. The emphasis seems with these to be more upon a requirement where a functional relationship of the foreign languages to the pursuit of graduate study is demonstrable, rather than merely upon the relationship of tradition usually obtaining.

In almost every case the ability is a "reading knowledge," sometimes qualified as "fluent," "ready," etc.

By whom tested.—In 16 cases where answer is made, the "appropriate" department, e. g., French or German, applies the test of ability. But in 6 instances the test is applied by some one in the department of education.

When the candidate must show the ability.—In 19 cases of schools granting the doctor's degree, the ability in the foreign languages must be shown a year or approximately a year before coming up for the degree or coming up for the final examination.

VIII. EXAMINATIONS.

MASTER'S DEGREE.

Final examination.—Almost three-fourths of the institutions granting the master's degree insist upon a final examination. The remainder hold no such final examination.

Character of the examination.—Of these institutions in which a final examination for the master's degree is required, 16 make it oral; 1, written; 6, both oral and written; 3, either; 2, either or both; and 1, oral or both.

For the most part these examinations concern themselves with both the courses and the thesis. In a few instances the examination is solely upon courses.

Preliminary examination.—In only 3 instances is the preliminary examination required for the master's degree.

DOCTOR'S DEGREE.

Final examination.—All institutions granting the doctor's degree require a final examination.

Character of the examination.—In 11 institutions, the final examination is oral; in 1, written; in 7, both oral and written; in 1, either; in 2, either or both; in 2, oral or both.

The examination in most of these schools covers all work in courses and the thesis. In a few instances the thesis is not emphasized.

Preliminary examination.—Thirteen institutions require a preliminary examination for the doctor's degree; 10 do not.

Form of the examination.—The practice varies widely as to whether the examination is written, oral, both, etc.

When the preliminary examination is given.—More commonly the preliminary examination is given a year before the final examination or the conferring of the degree.

IX. THE STAFF.

NUMBER AND TRAINING.

The number and training of the staff in the institutions from which our responses have come are shown in Table 13. A study of its columns shows that very few of the institutions granting the master's degree only have more than 5-9 instructors, while a large proportion have 4 or less. The institutions granting the doctor's degree tend to have a larger number of instructors. However, there are four institutions in this group that have four or less than four instructors.

TABLE 13.—Number of instructors in education.

Number of instructors.	Total of those answering.		Granting master's degree only.		Granting both master's and doctor's degrees.	
	Number of schools.	Per cent.	Number of schools.	Per cent.	Number of schools.	Per cent.
0-4.....	11	31.5	7	46.7	4	21.0
5-9.....	16	44.8	6	40.0	9	47.4
10-14.....	6	15.2	2	13.3	4	21.0
23.....	1	2.9			1	5.3
61.....	1	2.9			1	5.3
Total.....	35	100.3	15	100.0	19	100.0

DEGREES HELD BY THE INSTRUCTORS.

The facts concerning the degrees held by those giving instruction to graduate students in these institutions are shown in Tables 14 and 15. The former of these tables aims to show the distribution of institutions by the proportion of instructors holding the doctor's degree. A comparison of the facts as to the proportions of instructors with doctor's degrees in institutions granting the master's degrees only with the proportions for those institutions granting the doctor's shows that a much larger proportion of the latter have such training.

Table 15 sets forth the situation for proportions of instructors with one or the other of the two graduate degrees.

TABLE 14.—Percentages of instructors with doctor's degrees.

Per cent of instructors with doctor's degrees.	All institutions supplying data.		Institutions granting master's degree only.		Institutions granting both master's and doctor's degrees.	
	Number of institutions.	Per cent.	Number of institutions.	Per cent.	Number of institutions.	Per cent.
0.0-19.9.....	1	2.9	1		2	10.0
20.0-39.9.....	7	20.6	5	33.7	2	10.0
40.0-59.9.....	10	29.4	7	50.0	8	40.0
60.0-79.9.....	11	32.3			6	30.0
80.0-99.9.....	4	11.8	1	7.1	3	15.0
100.0.....	1	2.9			1	5.0
Total.....	34	99.9	14	99.9	20	100.0

TABLE 13.—Percentages of instructors with master's or doctor's degrees.

Per cent of instructors with master's or doctor's degrees.	All institutions supplying data.		Institutions granting master's degree only.		Institutions granting both a master's and doctor's degree.	
	Number of institutions.	Per cent.	Number of institutions.	Per cent.	Number of institutions.	Per cent.
30.0-39.9.....	2	5.9	3	14.3		
40.0-49.9.....	1	2.9			1	5.0
50.0-59.9.....	6	17.6	2	14.3	4	20.0
60.0-69.9.....	13	38.2	6	28.6	9	45.0
70.0-79.9.....	12	35.3	6	28.6	6	30.0
Total.....	34	99.9	14	100.0	20	100.0

THE TEACHING SCHEDULE.

An item of practice in departments of education that has considerable bearing upon the feasibility of caring for graduate work in any effective manner is the size of the teaching load of instructors who give the graduate training. Table 16 presents the maximum and the usual weekly teaching schedules in the institutions from which the replies have come, as well as the maximum teaching schedule regarded as appropriate for such instructors by those who responded to the questionnaire. In a large proportion of schools—53.5 per cent to be exact—the maximum teaching schedule of those who give graduate instruction is in excess of 12 hours, in a few instances running as high as 18 hours. The "usual" schedule tends to be smaller, but in almost a fifth of all the schools reporting it exceeds 12 hours. Opinion in only a single instance favors a maximum load of more than 12 hours.

TABLE 16.—The weekly teaching schedules of those giving graduate instruction.

Number of hours.	Maximum.		Usual.		Appropriate maximum ¹	
	Number of institutions.	Per cent.	Number of institutions.	Per cent.	Number of institutions.	Per cent.
7-8.....			10	32.0	8	38.1
9-10.....	6	21.4	8	25.8	5	23.8
11-12.....	7	25.0	7	22.6	7	33.3
13-14.....	4	14.3	2	6.5		
15-16.....	9	32.1	4	12.9	1	4.8
17-18.....	2	7.1				
Total.....	28	88.9	31	100.1	21	100.0

¹ Mostly at the even numbers, 8, 10, and 12.