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IN THE UNITED STATES  
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CHAPTER II  
ELEMENTARY EDUCATION

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## CHAPTER II

### ELEMENTARY EDUCATION

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CONTENTS: *I. What is the Elementary School: Organization, Enrollment, The Staff, The School Year, The Cost*; *II. The School Program: Method in the Elementary School, Progress in Curriculum Construction, Textbooks and Other Instructional Materials*; *III. Progress of Pupils: Success and Failure, Factors Influencing Progress*; *IV. Supervision of Instruction: From the State Department of Education, Within City School Systems*; *V. Research and Investigation in Elementary Education: The Service of Research to Elementary Education, Agencies Conducting Research, Summary.*

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#### INTRODUCTION

It is not a simple matter to attempt to summarize the achievements or point out the apparent tendencies in an educational program providing for 21,000,000 children, engaging the services of 600,000 teachers, and involving an annual expenditure, with public secondary education, of more than \$2,000,000,000. Neither is it a simple matter to present a picture of the status of an elementary educational system the individual units of which vary in size and consequent administrative and instructional problems from the 1-room school in a sparsely settled section with fewer than 10 pupils enrolled to a large city school in a densely populated city section with six or eight hundred pupils enrolled. Still a third complicating factor is that of the elementary school's rapidity of change—in type of organization, in type of curriculum, in variety of educational provisions, in instructional practice. There are, however, certain evident factors of progress which deserve special comment.

1. The years 1928-1980 saw considerable progress in the development of administrative and instructional techniques for getting progressive educational theory into practice in the schools. The theory of learning as an active rather than an absorptive process is not new, but many schools have made commendable gains in providing the schoolroom equipment, courses of study, and instructional materials which have helped to put the theory into practice. A continued interest in creative education has broadened from the earlier em-

phasis upon creative writing in upper elementary grades to creative activity in many other forms of expression, such as constructing, illustrating, dramatizing, and modeling. Interest in creative education has continued in lower grades through self-initiated activities.

2. Elementary schools are more and more surrendering their traditional isolation as an agency for instruction alone and are sharing in the responsibility for pupils' physical, recreational, educational, and social welfare in hours outside the regular school day. This is shown in various ways: First, by the types of positions newly established or increased in number, such as visiting teacher, home visitor, social-case worker, after-school recreational director, director of parent education activities, school counselor; second, by the increased use of school facilities after school, on Saturdays, and during holidays; third, by the increased attention schools are giving to the matter of coordinating their programs with programs of other institutions or organizations interested in the welfare of children, such as libraries, recreational agencies, boys' and girls' clubs and organizations, juvenile courts, Red Cross, and community clinics. This coordinated program of health, education, and social welfare for its children is something which many communities are striving hard to attain.

3. The instructional possibilities of the radio and the sound films have received more than usual attention. Such programs of education by radio as the State-wide School of the Air in Ohio, and those in the cities of Cleveland, Pittsburgh, New York, and Atlanta indicate the possibilities of extending exceptional opportunities to a great number of schools. The popularity of those sound films which have been developed for school use and their possibilities of value through the combination of visual and auditory impression promise to make this medium of instruction of increasing use.

4. The interest in educational tests and measures continues, as is evidenced by numbers of new standardized tests issued during the past biennium and by the continuing reports of city, State, and even nation-wide testing programs. This interest in testing educational products is extending somewhat more than formerly to a scientific measurement of techniques and practices as well, as is shown by the recent tendency to question the desirability of homogeneous grouping, the worth of individualized instruction, the effectiveness of techniques of drill, and many other established practices.

5. During this period of a serious oversupply of teachers a closer scrutiny of the applicant's training for a particular type of work has been possible. The elementary school is still a long way from exerting the same care in the selection of its teachers for certain ages or types of children or for particular fields of work as is shown in

selecting teachers of the so-called special subjects. However, some progress seems to have been made in working toward acceptable standards of preparation for school librarians, and for teachers of elementary school science, literature, and social studies.

6. In the widespread activity in curriculum construction a definite intention can be seen of providing courses of study for pupils of different learning interests, difficulties, or capacities. Hence, Detroit publishes a course in English for the foreign born, El Paso a course in functional English for children of Mexican parentage, New York State Education Department a course in English for seventh and eighth grade vocational schools, Denver a publication on the differentiation of curricula for slow-learning children.

Other indications of progress or change, such as in growth, in enrollment, development of supervisory systems, organization of nursery schools, provision of instructional materials, and others will be noted in the following pages.

## I. WHAT IS THE ELEMENTARY SCHOOL?

### ORGANIZATION

Public-school organization of elementary education in the United States is commonly accepted to include kindergartens and the first six grades. This definition is based on the trends and tendencies of the past 10 years in which an increasing number of children are offered kindergarten education and in which the high-school program accepts pupils at the seventh-grade level.<sup>1</sup> There is also a tendency to make provision for children of preschool or nursery age. Enrollments in the schools of the country as a whole, however, indicate that the majority of children do not attend kindergarten and that they remain in elementary schools through the seventh or eighth grade. Progressing normally a child who starts school at 4 or 5 years of age in the kindergarten passes at 12 into the junior high school or at 14 into a 4-year senior high school.

*Factors controlling upper and lower grade limits.*—The presence of kindergartens at the lower limit of the school unit and an upper-grade limit of the sixth, seventh, or eighth grade are dependent upon State laws or regulations and upon local rulings. All but four States provide for the establishment of kindergartens through permissive or mandatory legislation or by an established low school-entrance age. The majority of school systems in cities having populations of 30,000 or more take advantage of these laws. Small towns and rural districts, face problems of transportation for children enrolled in the

<sup>1</sup> Seventh Yearbook, The Department of Superintendence, National Education Association, 1201 Sixteenth Street NW., Washington, D. C., 1929.

half-day kindergarten session, of organization of grade groups where the enrollments are small, and of financial support for kindergartens. Such problems have retarded the establishment of kindergartens in these districts.

It is well to keep four facts in mind when considering school entrance: (1) Kindergarten attendance is still voluntary although a limited number of cities report that it is a prerequisite for admission to first grade.<sup>2</sup> (2) Compulsory school entrance ages are 7 and 8 years in all but three States,<sup>3</sup> in which it is 6 years. (3) The traditionally accepted age for school entrance is 6. This is a permissive age for entrance in 30 States, while 13 more States lower this to 5 years, one to 4 years, and one raises it to 7 years. (4) In a limited number of communities interest in the education of children below kindergarten age has resulted in the establishment of demonstration or laboratory nursery schools.

Upper-grade limits of the elementary school are determined largely by the type of high-school organization maintained and by the length of school life provided. In school systems maintaining the elementary and undivided high-school organization, the upper elementary grade is customarily the eighth. In the case of communities maintaining an 11-year school program the upper elementary grade is the seventh and, in a few communities still offering a 13-year school life, this upper grade is the ninth. Communities offering an 11-year school life and a junior high-school organization are fairly evenly divided between apportioning five or six grades to the elementary group.<sup>4</sup>

During the process of reorganization in secondary education there is great variety in grade distribution even within a single school system. In one school there may still be eight elementary grades, in another seven and in still another but six. The tendency is toward a general acceptance of the K6-3-3 plan of organization but this and the K6-8 plan and the addition of two years of junior college tend to be modified according to local needs and ideals. A clear notion of the present stage of reorganization is given in the chapter on secondary education of this biennial report of educational progress. In the tables presented in that chapter, the lower grade designated for the junior high school or for the senior high school in instances where no junior high-school organization has been effected, may be taken to indicate the grade above that which completes the elementary unit.

<sup>2</sup> Kindergarten-Primary Articulation. Josephine MacLatchy. Educational Research Bulletin, College of Education, The Ohio State University. Vol. IX, No. 13.

<sup>3</sup> Public-School Attendance Ages in the Various States. Ward W. Keewacker. Office of Education, Washington, D. C. Circular No. 10, March, 1930.

<sup>4</sup> Secondary Education. Carl A. Jessen. U. S. Bureau of Education. Bulletin, 1929, No. 22. Table 2.

For purposes of this report the following tables give a fairly definite picture of the limits within which the elementary school is organized. From them it is evident that the larger the city the greater are the chances that a child may attend kindergarten, and that the smaller the community the greater the chances are that a seven or eight grade elementary curriculum is required and that there is no junior high school organization.

TABLE 1.—*Lower-grade limits for elementary schools; data from 3248 cities and towns*<sup>1</sup>

Population: Size of cities reporting	Number of cities reporting lower-grade limit of—			Per cent of cities reporting lower-grade limit of—		
	Kinder- garten	Grade 1	Total	Kinder- garten	Grade 1	Total
100,000 or more.....	61	4	65	93.85	6.15	100
30,000 to 100,000.....	134	36	170	78.82	21.18	100
10,000 to 30,000.....	229	166	395	57.97	42.03	100
2,500 to 10,000.....	359	579	938	38.27	61.73	100
Below 2,500.....	325	1,585	1,910	17.47	82.53	100
Total.....	1,108	2,320	3,428	32.32	67.68	100

<sup>1</sup> Data from Table 1, Bulletin, 1930, No. 39, Kindergarten-Primary Education. A Statistical and Graphic Study.

TABLE 2.—*Upper-grade limits for elementary schools; data from 738 cities of 10,000 population and more*<sup>1</sup>

Population: Size of cities reporting	Number of cities reporting upper-grade limit of—				Per cent of cities reporting an upper-grade limit of—			
	Grade 5	Grade 6	Grade 7 or 8	Total	Grade 5	Grade 6	Grade 7 or 8	Total
100,000 or more.....	4	48	16	68	6	70.5	23.5	100
30,000 to 100,000.....	3	117	63	183	1.7	63.9	34.4	100
10,000 to 30,000.....	7	218	262	487	1.4	44.8	53.8	100
Total.....	14	383	341	738	2	52	46	100

<sup>1</sup> Data from Table 7, Bulletin, 1929, No. 34, Statistics of City School Systems, using the lower grade of the high-school organization as the one above the upper-grade limit for the elementary school. The column of seventh and eighth grades includes records from junior high school organizations which begin with grade 8 and from cities reporting only a senior high school organization.

*Classes for exceptional children.*—For the education of children having mental or physical handicaps or expressing exceptional ability, approximately half of the school systems in cities having populations of 10,000 and more provide special classes. Many State-supported institutions care for children having aggravated cases of physical and mental disorders. These institutions serve both rural and city districts.

Special classes provided in city school systems care for children mentally deficient or backward, anemic or tuberculous, deaf or hard of hearing, blind or partially seeing, crippled, speech defective, delinquent or unstable, and gifted. The type of class most fre-

quently organized is for the mentally deficient or backward child. The order in which the classes have been listed indicates the frequency with which they occur as reported from cities having populations of 10,000 and over.

The importance of these classes in the elementary-school organization is being so widely recognized that detailed analyses of the service as now rendered and of the problems involved are given in Chapter XI of this biennial report entitled "Education of Exceptional Children."

*Nursery education.*—A description of elementary education—the beginning of a child's school experience—would be incomplete without recognizing the present interest in educational programs for children of preschool age. This interest has developed during the past decade and the preschool child has been the center of attention for a steadily increasing group of scientific workers interested in child development.

No fixed programs are yet accepted for nursery education and the suspended judgment of workers in this field as to what constitutes the most adequate environment, guidance, and development for young children is one of the safeguards to sound growth for this new movement. To aid in maintaining a high standard for the program of work in nursery schools a statement of minimum essentials<sup>5</sup> was issued by the National Association for Nursery Education, the name accepted in 1930 for the organization which developed from the original National Committee on Nursery Schools. In this pamphlet objectives of nursery-school education are described as well as standards for the organization and maintenance of the schools. The associations composed of teachers and leaders in the many fields of education and science concerned with phases of child development, have conducted three biennial conferences at which pertinent and practical problems of nursery-school education have been discussed. Printed reports of two of these conferences have been made available.<sup>6</sup>

But four nursery schools were reported as organized in or before the year 1920. In 1930 there were 226 schools. Of these 109 were reported to the Office of Education between 1928 and 1930, an increase of 93 per cent.

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<sup>5</sup> Minimum Essentials of Nursery School Education. Subcommittee of the National Committee on Nursery Schools. National Committee on Nursery Schools. Rose H. Alschuler, secretary, 795 Lincoln Ave., Winnetka, Ill., 1930.

<sup>6</sup> Conference on Nursery Schools. Report of the Second Conference of Those Interested in Nursery Schools, held in New York City, Apr. 22-23, 1927. National Committee on Nursery Schools. Conference of Nursery School Workers, called by National Committee on Nursery Schools. Report of third conference, Oct. 23-26, 1929. National Committee on Nursery Schools. Rose H. Alschuler, secretary, 795 Lincoln Ave., Winnetka, Ill., 1930.

During the past biennium a special effort has been made to carry educational programs for preschool children into the homes and into institutions giving them partial or full day care. The need for such programs has been shown in studies made by a committee of the White House Conference which surveyed and analyzed the human and material elements in the environments surrounding young children.<sup>7</sup>

#### ENROLLMENTS

*The elementary-school population.*—Slightly more than 21,000,000 children were enrolled in the public elementary schools of the country in 1928. The increase in enrollment for the biennium 1926-1928 was so small as to suggest that there was very little increase in the population of school age during that period and also that elementary education is accepted as a part of the life of practically all the children living in the United States.

Of every hundred children enrolled in elementary schools of the United States 44 are in school systems of cities having a population of 2,500 or more and 56 are in school corporations having less than 2,500 population. No appreciable differences in this ratio for urban and rural<sup>8</sup> school enrollments appear in the biennium 1926-1928, but during the decade 1918-1928 city-school enrollments increased 22.4 per cent while rural-school enrollments decreased 9.6 per cent. This change doubtless reflects the general trend of population movement from the country to the city. It may also suggest consolidation of rural schools with larger school systems.

Consolidated schools have increased on an average of 1,000 yearly during the past decade.<sup>9</sup> There has been a corresponding annual decrease of five thousand 1-room schools during this same period. The 1-room school, with a single teacher covering all subjects of the curriculum for the eight elementary grades, is still the type of school which most of the children living in rural districts attend.

The composite type of population of the United States is a problem which materially affects the work of public schools, particularly in the elementary grades. The distribution of nationalities for the 1920 census shows 34 per cent of the population to be either foreign born or of foreign-born parents and 10 per cent to be negroes.

<sup>7</sup> White House Conference, 1930. *Addresses and Abstracts of Committee Reports.* New York, The Century Co. 365 pp.

<sup>8</sup> With the wide variety of interpretation among the several States of what constitutes a rural district it is difficult to make comparable groupings of school enrollments throughout the country according to classifications of urban and rural, e. g., in the State of Mississippi any community having a population of 1,000 constitutes a "city" and in Massachusetts "city" schools are only reported from communities having a population of 25,000 and more.

<sup>9</sup> Rural School Consolidation. Timon Covert. Pamphlet No. 6. U. S. Office of Education, June, 1930.

Of the children between the ages of 5 and 13 attending schools, 28 per cent are foreign born or of foreign-born parents and 9 per cent are negroes. The following table shows the degree to which different racial groups take advantage of school opportunities:

TABLE 3.—Percentage of United States population in each racial group 5-13 years of age attending school—1920 census

Racial groups	Total number	Number attending school	Per cent attending school
Native white of native parentage.....	12, 190, 990	9, 762, 259	80
Native white of foreign parentage.....	5, 050, 578	4, 175, 546	82.67
Foreign born white.....	423, 200	335, 570	79.29
Negro.....	2, 255, 425	1, 474, 030	65.35
Indians, Chinese, Japanese, and all others <sup>1</sup> .....	72, 739	43, 730	60.1
Total.....	19, 992, 947	15, 791, 135	78.9

<sup>1</sup> Comprises Filipinos, Hawaiians, Hindus, Koreans, Malays, Maoris, Samoans, and Siamese.

Problems of pupil-nationality confronting the elementary school teacher focus largely on two requisites for good citizenship—correct use of the English language and acquaintance with and an acceptance of certain desirable social customs. Language difficulties cause a large part of school retardation. Special attention is necessarily given to development of vocabularies, to diction, and to forms of oral expression to assure the pupils' intelligent understanding of lessons in such subjects as geography and history and in statements of arithmetical problems. Special emphasis in curricula is also necessarily placed upon social adjustments and habit formation.

There are wide variations among cities in the magnitude of the problem of educating children of different nationalities. These variations include cities in certain localities having in their populations a great majority of native whites; cities having an enrollment of negroes so large as to require dual school systems for white and colored children; cities having many Mexican children, with Spanish as their native tongue as in Tucson, Ariz., where the Mexican pupils constitute 48 per cent of the elementary-school enrollment; and cities having a large variety of nationalities and a large proportion of foreign children in the elementary-school enrollment as in Buffalo, where in one school having an enrollment of 320 pupils, 32 nationalities are found, and where 40.5 per cent of the total elementary-grade enrollment for the city is composed of children having foreign parentage.

For the next few years this problem of teaching children of foreign extraction in schools of the United States will not increase. Recent restrictions upon immigration due to unemployment have caused a 70 per cent reduction in the number of immigrants admitted to this country between the first five months of the present fiscal

year—July to November, 1930, and the five following months, December, 1930, to April, 1931—when the restrictive order began to function.

*Grade distribution of enrollments.*—More children are enrolled in the kindergarten and the first three grades than in grades 4 to 6. By far the largest enrollment occurs in the first grade, which is used as an adjustment as well as an entrance grade by the school systems in cities not maintaining kindergartens and by those providing kindergartens but enrolling a large entrance group of children who did not attend kindergarten. The drop in enrollment in the group of elementary grades starts with the fourth grade and the decrease is sharp from then on through the seventh and eighth grades. Decreases in the number of children attending school in these upper elementary grades are often attributed to economic pressure which requires children to go to work as soon as the law permits and also to the children's lack of interest in school work. Much is being done to correct this last difficulty through departmentalization of upper-grade work, through teaching methods which solicit the pupil's interest and effort, and through the junior high-school program.

The distribution of elementary-grade enrollments among the grades and the kindergarten and changes in this distribution during the decade 1918–1928 are shown by the following figures:

TABLE 4.—*Enrollments in kindergarten-elementary grades for 1918 and 1928 showing percentage distribution among grades and per cent of increase or decrease for the decade*<sup>1</sup>

Grades	Enrollments		Percentage distribution among grades		Per cent of change for decade, increase (+) or decrease (-)
	1918	1928	1918	1928	
Kindergarten.....	433,377	696,490	2.29	3.26	+60.5
1.....	4,323,170	4,171,037	22.85	19.61	-3.5
2.....	2,607,727	2,816,540	13.79	13.28	+8
3.....	2,524,215	2,661,977	13.34	12.51	+5.5
4.....	2,440,871	2,632,474	12.90	12.36	+7.5
5.....	2,128,086	2,435,466	11.25	11.46	+14.4
6.....	1,838,770	2,243,443	9.71	10.55	+22.1
7.....	1,482,675	2,021,636	7.84	9.55	+36.35
8.....	1,140,804	1,590,354	6.03	7.47	+39.4
Total.....	18,919,696	21,268,417	100.00	100.00	+12.4

<sup>1</sup> Data from Table 2, Bulletin, 1930, No. 5, Statistics of State School Systems.

The distribution with reference to kindergarten enrollment varies materially with the several States. For example, kindergarten enrollments in Michigan comprise 12 per cent and first-grade enrollments 14 per cent of the total elementary enrollment for that State. In Arkansas no kindergarten enrollments are reported and first-grade enrollments comprise 24 per cent of the total elementary enrollment.

Increases and decreases in enrollments for individual grades during the decade 1918-1928 show the major change in kindergarten enrollments. The decrease in first-grade enrollments may be due both to the decrease in birth rate and to a possible improved system of classifying school entrants. The increase in enrollments for the intermediate and upper grades may perhaps be attributed to the appeal of the junior high-school organization to pupils of this age. It may also be attributed to better administration of existing school attendance laws, and other factors.

#### THE STAFF

*New services provided.*—A typical elementary-school staff of not many years ago included a principal or head teacher and a teacher for each grade or class. Current directories of city-school systems testify to the new services provided in elementary schools.

Los Angeles: Sun room, agriculture, foreign opportunity, home economics, shoe shop, art leather, cobbling, manual education, gilding, adjustment, little B I.  
Berkeley: Adjustment, opportunity, playground director.

Providence: Home visitors, ungraded, auditorium, library, fresh air, discipline, backward children, assistant principal.

Seattle: Junior primary, foreign.

Minneapolis: Subnormal, physician, nurse, baths, speech, sight saving, visiting teacher.

Cincinnati: Foreign speaking, sight saving, remedial, open air, mental defective, library, auditorium.

It is evident that these illustrations fall into three classes: (1) New instructional offerings, (2) provision for pupils' special difficulties, and (3) adoption of certain responsibilities for social service.

*Certification and teaching standards.*—One influential factor in establishing teaching standards in the public schools is the granting of teachers' certificates. The duration of certificates, the grades or subjects included in the permission to teach, the preparation required of candidates, and the agencies authorized to issue certificates are a matter for State determination.<sup>10</sup> In many States overlapping exists among the types of certificates available for teachers, especially in the field of kindergarten-primary and general elementary grade work.

Many certification difficulties are enumerated and explained in a study made to help Nebraska<sup>11</sup> clear its own series of regulations and large number of authorized certificating agencies. Contributions for this study were made by 41 States. Among the 17 recommendations made at the conclusion of the study are the following: The

<sup>10</sup> Review of Educational Legislation, 1929-30. Ward W. Keesecker. Office of Education, Bulletin, 1931, No. 20.

<sup>11</sup> The Present Status of Certification in Nebraska. Herbert L. Cushing. Excerpts in Thirty-first Biennial Report of the State Superintendent of Public Instruction. Nebraska, 1929-1931. Pp. 46-70.

various (certification) classifications must be self-explanatory with reasonable distinction between the responsibilities of the different teaching positions; there should be a period of teaching apprenticeship; all certificates should be issued through one central office; there should be no distinction as to the number of years' training required for rural and urban schools; certificates should never be permanent in the sense that they are valid for life regardless of whether the holder stays in the profession and whether or not she makes additional professional preparation. The protection which well-organized certification programs can give to the schools is evident.

#### THE SCHOOL YEAR

*Length of school term.*—Children in the elementary schools of the United States have an average of 172 days for their school year. This is an increase of 10 days or about half a school month between the years 1920 and 1928. On an average the elementary school year is a week shorter than the year provided for secondary schools.

The length of school year varies among the States. The range in 1928 was from an average of 138.9 days in Arkansas to an average of 188 days in New Jersey. The school year also varies according to urban and rural districts. A shorter school year prevails in rural schools. One comparison<sup>12</sup> gives an average of 183 days in city schools and only 156 to the rural schools. Equalization funds<sup>13</sup> operating in three-fourths of the States are helping to increase the minimum length of school year in districts where education needs have increased disproportionately with their taxable wealth. Since these districts—usually rural—contribute to urban wealth, the urban areas are called upon to give financial assistance.

In several States specific statements are made indicating that benefits from the equalization fund are dependent upon a certain specified length of school term. For example, in Alabama the statement occurs "Beginning October 1, 1928, the county shall have provided for the preceding year a school term of at least 140 days, \* \* \*"<sup>14</sup> and in New York State "No district shall be entitled to any portion of such school moneys (equalization fund) on such apportionment unless the report of the trustees for the preceding school year shall show that a common school was supported in the district and taught by a qualified teacher or by successive qualified teachers for not less than 190 days. \* \* \*"<sup>15</sup>

<sup>12</sup> Rural School Circular No. 27, *Some Comparative Statistics of Public-School Education in Urban and Rural Communities*. W. H. Gaumnitz. Office of Education. October, 1928.

<sup>13</sup> See section on equalization funds in Vol. I, ch. 1 of this biennial survey for a detailed treatment of the subject.

<sup>14</sup> *State School Taxes and School Funds and Their Apportionment*. Fletcher H. Swift and Bruce L. Zimmerman. Bureau of Education Bulletin, 1928, No. 20.

<sup>15</sup> *Educational Law as Amended to July 1, 1930*. University of the State of New York Bulletin No. 957.

In many cities the school year is extended by means of summer sessions and in three or four instances by an all-year organization of the schools. Summer sessions range from 5 to 10 weeks in length with the majority planned for a 6-weeks' term. All elementary grades are included by some school systems while others limit the summer work to the intermediate or upper elementary grades.

Approximately two-thirds of the large cities having 100,000 population or more offer summer session work for elementary school children; not quite a half (41 per cent) of the cities having 30,000 to 100,000 population, and a fifth of the cities having populations of 10,000 to 30,000 have summer sessions in elementary schools.

The all-year school<sup>16</sup> has been offered by a few city school systems as a plan for increasing economic and educational efficiency. Under this plan the school year is divided into quarters, the summer session becoming an integral quarter of the whole year's program. It is reported to obviate defects in the short summer session plan by considering it a term in which work is carried on at the normal rate of progress. A child may cover one grade and a third of another grade during the four quarters of the school year. One of the fundamental arguments in favor of this program is that a child will complete the school curriculum in a shorter time than by attending only the commonly accepted school year.

*The day's program.*—The majority of children enrolled in kindergartens attend school a half-day session of 2½ or 3 hours. It is interesting, however, to note that, particularly in small towns and villages, more than a quarter of the kindergarten enrollment is carried for the full elementary-school day.<sup>17</sup> A number of school systems in large cities are providing a full-day session to care for socially handicapped children and for children chronologically eligible but mentally unready for customary first-grade work.

In the first and second grades the median school day is 4 hours 35 minutes and 4 hours 45 minutes in length, exclusive of noon or recess periods.<sup>18</sup> The range in length is from 2¾ to 6½ hours. For the other elementary grades the median school day is 5 hours with a range from 4 to 6 hours.

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<sup>16</sup> All-Year School Organization. Warren A. Roe. Educational Method, Vol. X, No. 2, November, 1930.

The Effects of All-Year Schools Upon Pupil Advancement. George J. Brinkerhoff. Educational Method, Vol. X, No. 8, December, 1930.

Significant Movements in City School Systems. W. S. Deffenbaugh. U. S. Office of Education, Bulletin, 1929, No. 16.

<sup>17</sup> Kindergarten-Primary Education. A Statistical and Graphic Study. U. S. Office of Education, Bulletin, 1930, No. 30.

<sup>18</sup> Length of School Day. U. S. Bureau of Education, City School Leaflet No. 25, July, 1927.

During the school day time is divided among the many subjects and activities of the curriculum.<sup>19</sup> In keeping with the principles of teaching method underlying the activity type of curriculums and the "unit of work" method of teaching many variations from the generally accepted time schedule have been made. A flexible adjustment of time allotted to the school activities is encouraging group work and giving opportunity for attention to individual needs among the children.

The increasing number of subject fields to be included in the elementary-school curriculum and the resultant demand for teachers who have had specialized training in specific fields (such as science, industrial art, social studies) have occasioned variations in types of administrative organization in elementary schools. Departmentalization of certain subjects has long been common because of the advantages of localizing the equipment, securing teachers having special training, limiting the number of fields in which a teacher must be responsible, and providing pupils the opportunity of working with different teachers.

To provide an enriched curriculum which shall include science, dramatics, industrial arts, physical education, and to increase the capacity of a building by making the greatest possible use of all of a building's facilities at a given time, the platoon or work-study-play plan of school organization has developed and is in use in more than 217 cities in 40 States and Hawaii.

The cooperative group plan of organization which has been developed recently aims to secure for elementary school pupils enlarged curriculum opportunities and contact with teachers who are to some extent specializing in certain fields, such as the language field, the science field, the industrial and fine arts field, and the social studies field. The four or five teachers responsible for the work of the same pupils in these fields form the cooperative group to plan the program, discuss the activities and progress of their pupils, and by such coordinated planning to integrate rather than to separate the various fields of study.

Many public-school programs are also including some provision for out-of-school activities. In some instances these programs are carried on under the supervision of the school faculties; in other instances close cooperation exists between the school and municipal

<sup>19</sup> *How Schools Use Their Time*. Henry Carlton Mann. Teachers College Contributions to Education No. 383. Teachers College, Columbia University, 1928.

*The Organized Recess*. Marie M. Ready. U. S. Office of Education, Pamphlet No. 2. March, 1930.

*Program Making in Small Elementary Schools*. Hollis L. Caswell. Division of Surveys and Field Studies, George Peabody College for Teachers, Nashville, Tenn., 1930. 77 p.

recreation departments with out-of-school play supervised by the latter departments. In still other instances school property is loaned to outside agencies for recreational purposes—agencies which in turn supply programs for school children. A survey of enactments relative to the use of school playgrounds has been made recently by the Office of Education.

Statements indicating the effect of these enactments appear in many reports from superintendents of city schools, e. g.:

An extension of the playgrounds was authorized last spring. As a first experiment 12 schools in the city were open from 3.30 to 5.30 p. m. on each school day from the first Monday in May until the close of the school year. Experience with the after school use of playgrounds suggests the conclusion that their continuance, and possibly their extension, is justified.—*Seventy-Sixth Annual Report, Board of Education, St. Louis, Mo., 1930.*

Playground activities are conducted after school hours and on Saturday mornings during the spring and fall months, and throughout the summer, on 90 playgrounds and on 48 athletic fields. Approximately 500 trained teachers are engaged in this work. Fully equipped children's corners and athletic fields are generously patronized. The fact that, of this country's cities, Boston stands fourth in congestion of population indicates the importance of caring for the children on properly equipped and supervised areas set apart for this purpose.—*Annual Report of the Superintendent, Boston, Mass., 1929.*

Among other activities, aside from playground programs, for after-school hours are classes in art museums, music centers, garden clubs, religious education under supervision of the several religious denominations,<sup>20</sup> and the great variety of recreational programs provided by such agencies as the 4-H Clubs, the Boy and Girl Scouts of America, etc. A report of the White House Conference on Child Health and Protection estimates that such organizations serve 11,000,000 children.

#### THE COST OF ELEMENTARY EDUCATION

In 1927-28 the total enrollment in public elementary schools (including kindergartens) and public high schools was 25,179,696, and the total expenditure, including outlays, was \$2,184,847,200. This is an average expenditure of \$86.77 per pupil enrolled. Complete statistics are not available to show the proportionate cost for elementary and high school pupils, but returns from 16 States which report costs separately show a cost of \$80.49 per elementary school pupil attending in 1927-28;<sup>21</sup> a similar computation of the returns from 15 States shows a cost of \$169.96 per pupil attending regular and vocational high schools.

<sup>20</sup> Study of the Week-Day Bible School in Oregon. F. F. Powers and H. P. Rainey. *Elementary School Journal*, 28: 460-466, February, 1928.

<sup>21</sup> Statistics of State School System. Office of Education. *Bulletin*, 1930, No. 5. Washington, D. C., Government Printing Office.

## II. THE SCHOOL PROGRAM

## METHOD IN THE ELEMENTARY SCHOOL

From Middletown comes a description of elementary education as it was observed in 1925:

The school, like the factory, is a thoroughly regimented world. Immovable seats in orderly rows fix the sphere of activity of each child. For all, from the timid 6-year-old entering for the first time to the most assured high-school senior, the general routine is much the same. Bells divide the day into periods. For the 6-year-olds the periods are short (15 to 25 minutes) and varied: in some they leave their seats, play games, and act out make-believe stories, although in "recitation periods" all movement is prohibited. As they grow older the taboo upon physical activity becomes stricter, until by the third or fourth year practically all movement is forbidden except the marching from one set of seats to another between periods, a brief interval of prescribed exercise daily, and periods of manual training or home economics once or twice a week. There are "study-periods" in which children learn "lessons" from "textbooks" prescribed by the State and "recitation periods" in which they tell an adult teacher what the book has said; one hears children reciting the battles of the Civil War in one recitation period, the rivers of Africa in another, the "parts of speech" in a third; the method is much the same.<sup>2</sup>

On the other hand another quotation yields the following description of instruction:

Here is a group of 6 and 7 year olds. They dance; they sing; they play house and build villages; they keep store and take care of pets; they model in clay and sand; they draw and paint, read and write, make up stories and dramatize them; they work in the garden; they churn, and weave, and cook.

A group is inventing dances, which we are told, are for a pageant. In a darkened room films are being shown. A high-school class is teaching the seventh grade how to use the library in looking up information on a geography topic. A primary class is getting ready for an excursion on the morrow to a bakery. Another has just returned from a trip to a woolen mill. All about their room are bulletins and pictures depicting the history of clothing. \* \* \*

In another building we come across a shop where one is wiring a doll house for electric lights and another is making rough-and-ready reflectoscopes. Over all the walls are blueprints, maps, and posters, and models of things made and in the making—ships, steam engines, cars, airplanes, submarines, sets for scenes, and even the swords and bucklers of medieval armor.<sup>3</sup>

Everywhere these contrasts are apparent, for elementary schools are quite generally attempting to modernize their instructional practice in harmony with their belief that learning is active and that effective instruction consists of bringing about the situations in which many desirable learning activities will take place.

Common practice probably falls somewhere between the two pictures drawn above. Indications that this is true are common.

<sup>2</sup> Lynd, Robert S., and Lynd, Helen Merrell. *Middletown, A Study in Contemporary American Culture*. New York, Harcourt, Brace & Co., 1929. P. 188.

<sup>3</sup> Rugg, Harold O., and Shumaker, Ann. *The Child-Centered School*. New York, World Book Co., 1928. Pp. 3-4.

1. Several State departments have recently issued courses or outlines for activity programs. The Alabama Course of Study for Elementary Schools (1930) lists many types of activities in each subject of study. The California Teachers Guide to Child Development (1930) describes in detail an activity program for kindergarten-primary grades. In North Carolina the State superintendent of public instruction issued a report on "activity programs, projects, research studies, etc." for 1928-29. A report of the committee on elementary education of the New York Council of Superintendents, published by the University of the State of New York (1929), includes descriptions of classroom activities selected because they "indicate the newer philosophy at work in New York's elementary schools."

2. Many schools are including activity periods or free-choice periods in their daily programs: For instance, the Alabama State Course of Study includes in the program for 6-grade 3-teacher schools a free period for self-initiated work at the opening of each school day in the first grade, and such a period once a week for the other grades. In emphasizing the need for varied programs one city superintendent writes: "These schools undertake to provide for all pupils opportunities that answer individual needs as well as group needs. In our modern school buildings attractive, homelike, and clean, an atmosphere of interest, industry, and cooperation prevails, each pupil enjoying the advantages of a school program rich in a variety of subjects and activities designed to meet individual needs and differences and to fit for the life and work of men and women."<sup>24</sup>

3. Among the new and outstanding books each year are a number whose viewpoint is distinctly toward the less formal and more individualized methods of classroom procedure. The "Sixty Educational Books of 1928," published in the Journal of the National Education Association for March, 1929, included 10 such publications, among which were *The New Leaven*, by Stanwood Cobb; *The Group-Study Plan*, by E. R. Maguire; and *An Adventure with Children*, by M. H. Lewis.

All of these things evince a steady interest in the establishment of classroom programs which shall combine with the other hours of the children's day to make for their all-round development through work and play and association with others.

#### PROGRESS IN CURRICULUM CONSTRUCTION

*Changes within the decade.*—Curriculum construction has emerged within the last decade from an individual responsibility assumed by State or city superintendents to a problem of sufficient magnitude

<sup>24</sup>Your Schools—Their Everyday Activities. New Britain Schools, New Britain, Conn.

to enlist the service of curriculum specialists and of State and National educational agencies, and the establishment of departments of curriculum research in cities. The initial impetus to the movement is usually credited to Bobbitt, whose book, *The Curriculum*, appeared in 1918. In 1920 *The Elementary School Curriculum* was published by Bonser, and in 1924, *Curriculum Construction by Charters*. Each of these writers indicates the need of principles of curriculum construction in harmony with a program or a philosophy of education.

Until the past decade few curriculum studies had appeared. Doctor Charters reported only 56 that had been published in the 10-year period prior to 1923.<sup>25</sup> But during this past decade literally thousands of studies appeared, dealing with the curriculum and the technique of curriculum construction.

Previous to this decade two techniques of curriculum investigation were common: Those techniques involved in the analysis of existing curriculum programs and those involved in the analysis of activities or uses which adults and children had for a given skill or item of information. The past 10 years have witnessed the development of other methods of curriculum research. A recent publication of the State Department of Public Instruction of South Dakota lists 14 approaches to curriculum construction.<sup>26</sup>

Certain national organizations have contributed exceptionally valuable material on phases of curriculum study during the past decade. The department of superintendence of the National Education Association has issued a series of yearbooks on the curriculum. Over 300 school systems, colleges, and universities cooperated in the national program of curriculum construction suggested in the Third Yearbook of the department of superintendence. Part I of the Third Yearbook of the department of superintendence presented a plan for a national program of cooperative curriculum construction and included a review of selected studies which the committee regarded of greatest value to superintendents of schools faced with the problem of curriculum construction. Part II raises problems in relation to differentiation of curricula to meet community needs and variations and individual differences and an analysis of research studies in the elementary-school subjects, giving the problems studied, methods of work, and findings. Three issues of the *Research Bulletin of the National Education Association* deal with curriculum construction in the public schools. Both volumes of the Twenty-

<sup>25</sup> Charters, W. W., *Curriculum Construction*. New York, The Macmillan Co., 1924. Pp. 113-117, 169-170.

<sup>26</sup> Preliminary Reports on Approaches to and Theories Regarding Curriculum Construction, General Aims and Guiding Principles of Education for the State of South Dakota. State Department of Public Instruction, Pierre, S. Dak., 1930.

sixth Yearbook of the National Society for the Study of Education cover phases of curriculum construction, Part I presenting the history of curriculum making and Part II giving the principles fundamental to curriculum construction.

Two conferences of national and international significance to the curriculum and the educational process have been held within the past year: The International Congress on Mental Hygiene, and The White House Conference on Health and Protection. The studies and reports of these conferences furnish the basis for consideration of the most vital factors in the determination of the curriculum, including the child's physical, mental, and social capacity, and the environmental factors which influence him. The reports of these conferences challenge many of the assumptions and practices of the elementary-school curriculum and the educational process.

*Curriculum construction in the States.*—Except in California, Delaware, and Maryland, State courses of study are published by State departments of education. The State law of California provided for a State curriculum commission in 1927, and designated that its personnel shall consist of the superintendent of public instruction and 10 additional appointive members to include at least one county superintendent, one city superintendent, one high-school principal, one elementary-school principal, one college teacher of education, and one classroom teacher. The State Department of Education of Delaware adopted the curriculum for the elementary schools of the State of Minnesota, published in 1928, and has since published an outline to supplement it. The State superintendent of Maryland contends that the "State department has no laboratory to test out a course of study. *The making of a course of study is one of the most important instruments of county supervision.*"

State officials no longer limit the entire responsibility for the construction of the curriculum to the members of their own office or assign it to a subject matter or educational specialist. Active cooperation in curriculum construction by all educational agencies in the State is gaining in practice if we may judge by programs of curriculum construction in operation in some of the States and by the personnel of the state-wide committees.

The State Department of Education of Minnesota places the responsibility of curriculum construction primarily upon its own membership. The largest representative groups participating in curriculum construction in California are supervisors and directors of instruction and classroom teachers; in Iowa, heads of departments, directors, professors of education in universities and colleges, and city and county superintendents of schools; in North Dakota, county superintendents of schools and directors and professors of education; in South Dakota, city and county superintendents of schools, di-

rectors and professors of education, and teachers; in West Virginia, teachers in elementary grades and in one and two room schools, and principals of high schools, elementary, and 2-room rural schools.

Participation by the classroom teachers is recognized in programs of curriculum construction which include representatives of educational agencies of the State. In Louisiana all teachers were given opportunity to cooperate in the construction of courses of study. In California 62 per cent of the members of a curriculum committee of 122 persons were classroom teachers in the elementary grades; and in West Virginia 140, or 42 per cent of the 330 members of the curriculum committee, were teaching in the elementary school.

Extensive participation of teachers in the work of curriculum construction in the State of Alabama was made possible by the organization of the program of work upon certain defined basic principles. These principles are: That curriculum construction should be continuous; that many members of interested educational agencies should participate in the work; that the services of curriculum and subject matter specialists should be employed; that responsibility should be placed upon one person, responsible to the State superintendent of public instruction, who would assign responsibility of special work to small committees; and that classroom teachers should participate in the selection and organization of educational materials.

These committees stated specific objectives and criteria consistent with their conception of education. The plan of organization of the curriculum may be illustrated by the section for fourth-grade arithmetic. It includes specific objectives, books and materials needed by the teacher, examples of units of work used by Alabama teachers, suggestions for methods of procedure such as testing, time allotment, difficulties peculiar to the grade, diagnostic and remedial work, arithmetic vocabulary, and desirable standards of achievement for the exceptional and average child. Likewise, in the content studies the suggested units of work indicate points of emphasis, suggested approaches, and suggested activities with desirable attainments for the average child.

Legal provisions affect the construction of courses of study in three ways: (1) By prescriptions with respect to the content of the curriculum; (2) by the requirements of State and county textbook adoption or the printing of State textbooks; and (3) by provision for State curriculum construction committees. Most of the laws enacted in relation to the subject matter of the curriculum vary in nature from general statements requiring the inclusion of a subject in the curriculum to rather specific details. The number of subjects and activities prescribed ranges from 5 in the State of Arizona to 29 in the State of Wisconsin, according to Lide and the report of

the research division of the National Education Association. According to Flanders, prescriptions totaling 926 were in force in 1923. A State curriculum commission for California and a State course of study committee for Alabama are provided by law.

State-wide adoption of textbooks is required in 26 States. The State printing of textbooks is required in the States of California and Kansas. The practice of uniform selection of textbooks throughout some States has exercised a dominant influence upon the curriculum. This influence may seriously affect the educational progress of children by limiting the source of selective material, by requiring that adopted textbooks must be used for a stated length of time, and by designating the personnel which is to make the selection of textbooks.

Certain administrative problems make it difficult for State educational agencies to provide for the varying needs of pupils in the States. Among these are the formulation of plans of organization which will meet the varying needs of children enrolled in all grades and taught by one or two teachers and the provision for children of kindergarten age and for special groups.

The organization of the curriculum which fits a graded school will not facilitate educational progress in one and two teacher schools. Yet consistent efforts to graft upon the one and two teacher schools courses of study designed on an 8-grade basis of organization have been and are to-day predominant in practice. The difficulty of using in one and two teacher schools courses of study organized for schools in which a sufficient number of pupils are enrolled to employ a teacher for each grade has been recognized by the educational officials of the States of California, Illinois, Kansas, Montana, New York, North Dakota, Vermont, Virginia, and Wyoming in the publication of separate bulletins or courses of study for the rural schools. These separate courses of study offer more extensive and complete plans for adaptations, alterations, and combination of grades and of subject matter than is provided in single publications intended for all types of schools.

Experimentation as a method of curriculum construction, which was so successfully reported by Collings, is gaining as a procedure for solving the problems of the one and two teacher schools. Experimental and demonstration schools have been established and conducted in several schools of the State of California; in Wilton, Conn.; Georgetown, Del.; the Rogers Clark Ballard Memorial School near Louisville, Ky.; the Porter School of Kirksville, Mo.; the Quaker Grove School of Warren County, N. J.; and the schools of Cuyahoga County, Ohio. In these schools the utilization of the resources of the environment, the recognition of the needs of children living on

farms, and the peculiar problems inherent in the organization of the one and two teacher schools are recognized as basic curriculum problems.

The needs of special groups are met by separate courses of study in some of the States. Children are admitted to school at 5 years of age in the States of Iowa, Maine, Michigan, Minnesota, Mississippi, Nebraska, New Jersey, New Mexico, and New York, and at 4 years in the State of Wisconsin. Curriculum content for immature and young children unable to do regular first-grade work has been provided in the courses of study in the States of California, Minnesota, Nebraska, New Hampshire, New Jersey, and Ohio. Courses of study for mentally retarded children are provided in the States of Massachusetts, New Jersey, New York, and Wisconsin. The State of Texas prepared a course of study for non-English speaking pupils in 1930. The State of Louisiana published a course of study for negro schools in 1926.

The curriculum and its problems are receiving increasing attention in the State educational surveys. Among the problems studied are length of school year, time allotment, causes of pupil failure, classification and promotion, pupil progress, and principles of curriculum construction. The California Curriculum Study is devoted entirely to the problem of the curriculum. Among other State surveys which have dealt with curriculum problems within the decade are the following:

Report of the Educational Survey Commission and Survey Staff to the Legislature, State of Florida, 1929.

Report of a Commission Appointed to Make a Study of the Entire Public Education System and Suggest Improvements, State of Mississippi [1925].

Eightieth Report of the Public Schools of the State of Missouri, June 30, 1929, Pts. I and II. Jefferson City, Mo.

Report of the Commission to Survey Public Education. Authorized by the State Legislature, New Jersey, 1928.

Rural School Survey of New York State. Ithaca, N. Y., 1922.

Texas Educational Survey Report. Course of Study and Instruction. Vol. V. Austin, Tex., 1924.

Report to the Educational Commission of Virginia of a Survey of the Public Educational System of the State. Richmond, Va., 1928.

*Curriculum construction in city school systems.*—There has been extensive activity in curriculum construction in cities during the past two years. Curriculum construction has been assigned as a function to a department of instructional or curriculum research in 71 cities. Of these 10 were established within the biennium 1928-1930.

The work of curriculum construction in cities has proceeded primarily along three lines of development: The study of problems fundamental to curriculum construction; the establishment of curric-

ulum centers for research and the experimental development of curriculum materials; and city-wide programs for curriculum construction on a cooperative basis.

Problems which are vital to the selection and organization of content of the curriculum are studied by the Division of Curriculum Research in Detroit, and the Division of Educational Research in Philadelphia. The Division of Curriculum Research in Detroit was established in 1928-29, "to determine by scientific methods how instruction \* \* \* may contribute to the goals of education; what should be taught, by what method, and at what maturity level; and to what extent results are in keeping with educational objectives." The method by which the division works is indicated by the investigations made prior to the development of materials of instruction in arithmetic. They were: "(a) A study to obtain an inventory of arithmetical abilities; (b) a comparison of methods by which pupils of the fourth grade solve arithmetic problems; (c) an experiment to judge the difference in effectiveness between a twenty and a thirty minute class period for second-grade pupils; (d) a study in the second and third grades to compare the effectiveness of learning number combinations by direct and indirect methods"; and (e) the preparation of tests on the work of each half grade in cooperation with the Department of Research.

The developments in subject matter have been (1) the organization of a course to provide opportunities for children in the elementary school to become acquainted with nature; (2) provisions for active participation in musical programs; (3) experimental work in the organization of a free activity program in 4B social science; (4) preparation of instructional materials for specific needs, such as a story of Detroit for children in Grade 3; and (5) the development of the Children's Museum. According to the report, "practically every phase of the curriculum is reinforced by materials of the museum \* \* \*. It is hoped to give the child opportunity for working along some line in which he is particularly interested, but which is too specialized to be included in the regular curriculum."

In Philadelphia a study was made of the problem of ability grouping. The conclusions reached according to the Report of the Division of Educational Research and Results for 1930 were that the range of achievement among the schools varies so much that no given curriculum can be assigned to a given group in all of the schools, and that a homogeneous group according to ability may not be homogeneous in all its important traits, consequently it is impossible for teachers to secure superior results by addressing instruction to the average performance of the group. "Ability grouping must, there-

fore, be looked upon, not as a means of reducing the amount and kinds of individualization, but rather as a device for increasing the effectiveness of individualization, by restricting its field of activity."

The curriculum centers in Baltimore and Cleveland will illustrate two methods of experimental work in curriculum construction.

Curriculum study centers were organized in the public schools of Baltimore: "(1) To provide an opportunity for the application of progressive principles of education; and (2) to serve as try-out centers for curriculum materials and methods." During the past year a total number of 98 teachers in 49 schools were studying problems and developing curriculum material in the primary and the intermediate grades. Among the major problems studied were differentiation of subject matter for pupils of different abilities, and the organization of activities material, visual materials, and objective tests. As units of curriculum material developed, their scope and use were analyzed as to reaction of bright, average, or dull children, and adaptations made by the teachers. The results of classroom procedures were checked in various ways. Control and experimental groups were formed to study problem solving in arithmetic. Committees of teachers and subject-matter experts checked and evaluated results obtained in history, geography, and English. In the primary grades narrative records were kept. Every curriculum unit developed was subjected to discussion and evaluated by subject-matter experts before their double try-out in classrooms.

Nine curriculum centers were organized in Cleveland in 1928. The report <sup>27</sup> states that the curriculum centers are a logical development of Cleveland's educational policy of research and experimentation. The system aims to reduce failure to a minimum, if not to eliminate it altogether. This is done by placing emphasis upon progress; by the elimination of formal, useless, and meaningless lessons; and by the development of educational activities best adapted to subjects or groups of related subjects. Among the problems studied are the organization of the school, ability grouping, the organization of curriculum materials and size of groups which may be handled to advantage. In relation to the question of organization the report states:

"Whether the organization of a school shall be traditional, departmental, or platoon, or some combination of the three, and whether the best method of teaching be project, Dalton, or unit, are questions still to be decided. The value of any organization or method of teaching must be measured in terms of pupil learning."

<sup>27</sup> The Special Schools and Curriculum Centers. Report of the Superintendent of Schools to the Board of Education, Cleveland, Ohio. 1929-30.

Curriculum construction on a city-wide committee basis may be illustrated by the programs developed in Kansas City, Mo., and Beaumont, Tex.

The initial step in the formulation of a program in Kansas City was the preparation of guiding principles as bases underlying: "(1) The nature of subject matter; (2) the selection and organization of subject matter; (3) method; (4) the evaluation of outcomes of educational experiences." The work is carried on at the three levels, elementary, junior high, and senior high schools at one time to insure continuity and proper sequence of subject matter. Outside specialists are brought in for conference as needed. The literature of research was utilized and a number of research studies made as permitted by available funds. The studies included: A list of misspelled words, a needed writing vocabulary; in arithmetic, pupil difficulties, teachers' judgments as to number experiences, and abilities mastered, and methods used in number work; questionnaire to determine children's interests in nature, and the development of tests to aid in evaluating curriculum materials. The report concludes: "The greatest good to be derived from a program of curriculum revision, however, is not to be reckoned in the number or kind of courses of study issued, but in the amount and type of teacher growth."

Steps in the development of curriculum construction in Beaumont, Tex., included the preparation of a tentative list of objectives under the Cardinal Principles of Secondary Education; and the evolution of a plan of work under direction of curriculum specialists, including a study of references, writing of subject matter to be taught in the form of a project, preparation of a draft for the course of study indicating the organization, the contents of curriculum in subject matter divisions by grades, and the criticism of the plan by an expert in curriculum construction.

*Recent developments.*—Among the recent developments in the new courses of study certain ones are of especial interest. The courses for the States of Alabama and California organize all content around the experiences of children. The following quotation from the Teachers' Guide to Child Development<sup>28</sup> explains the points of departure in curriculum construction in California:

When [the curriculum] committees attempted to set up objectives and determine principles for the proposed course they were forced to the conclusion that they could no longer support the teaching of reading as an isolated subject based upon a separate course of study. \* \* \* This group of representative educators concluded that there was urgent need for a comprehensive consideration of the entire work of the primary grades, and for concrete interpretation which should clarify for teachers generally the educational philosophy and the actual operation of a school program based upon rich and

<sup>28</sup> Office of Education Bulletin, 1930, No. 26. Pp. XIII-XIV.

carefully guided experiences, as contrasted with that based upon the more traditional, logical, formal organization of school subjects.

The course of study for the elementary schools of Alabama<sup>29</sup> is organized in the light of educational principles relating to the individual and to society formulated by the curriculum committees. The basic principle applied to the organization of the curriculum reads:

These social objectives must be accomplished through individual members of society. Therefore, the nature of the individual requires consideration. The general point of view growing out of the principles relating to the individual is that, since experience is the basis of learning, the objectives of the school can be best achieved through purposeful child activities. Thus the child is recognized as an active agent in the educative process. In line with the point of view just stated attempts were made to develop many units of work based upon child experiences rather than logically organized subject matter.

The findings of research are contributing to the determination of curriculum content. Illustrations may be selected from the field of English. The State course of study in English for Iowa is based upon studies of common errors and an analysis of life situations. The course of study for Dallas, Tex., is based upon surveys of social usage among children. Other innovations in English are the integration of the related subjects of reading, spelling, and English into a single course, the functional use of English in the exchange and record of experiences in courses of study organized on an activity basis, the publication of courses for non-English speaking groups in Austin, Tex., and a course for slow-learning groups in English in Denver.

Curricula in music are beginning to provide opportunities in which increasing numbers of children may participate in school bands, orchestras, and festivals and may listen to national radio programs designed for children.

Techniques of procedure in curriculum construction have developed along three lines: (1) Administrative, (2) experimental, and (3) investigative. By administrative is meant the procedures developed for determining the policies for programs of curriculum construction and the development of principles for organizing the educational agencies of a school system into a working unit, and for the coordination and integration of the work of different groups. The programs developed in Denver, Cleveland, St. Louis, Baltimore, and other cities, and the studies of Cocking, Harap, Holloway, and Hopkins, are illustrative. Techniques of procedure for the experimental development of curriculum materials are being developed in those

<sup>29</sup> Course of Study for Elementary Schools Authorized by the State Board of Education, Montgomery, Ala., 1930. P. 23.

schools which depart from courses of study in current use and in the light of an educational philosophy attempt to develop a curriculum consistent with that philosophy. Such procedures can be illustrated from the reports of curriculum in the laboratory schools of the Lincoln School, the Ethical Culture School, the elementary schools of the University of Iowa and Southern California, and in the public-school systems of Rochester, N. Y., Long Beach, Calif., Raleigh, N. C., and experimental schools of the State of California, the Demonstration School of Georgetown, Del., and others. The third, or investigative technique, is also characterized by its departure from the traditional and seeks by an analysis of a wide range of sources to determine goals and objectives, or by investigations of social problems to determine the basic goals and the curriculum content essential to their realization. Examples of these types of integration are the studies by Curtis and Craig in Science; *The Technique of Curriculum Making*, by Harap; and the studies by Rugg of the crucial problems of contemporary life based upon the writings of frontier thinkers.

*Curriculum activities of national educational organizations.*—The committee of the National Council for the Social Studies has committees working on the investigation of social studies. According to the report, "the commission is feeling its way to the point where it can lay hands on certain necessary fundamental major problems."<sup>80</sup> Two subcommittees deal with curriculum problems, one on objectives and another on content and study method.

The National Council of Teachers of English is conducting a nation-wide study of the English curriculum looking toward the construction of a recommended course of study in English. One of its major studies is upon the problem of the correlation of English with other subjects of instruction. The place of English will be studied in relation to the organization of the curriculum as a whole, in its larger subdivision such as the use of the auditorium, recreation, etc. Other problems relate to the place of English in relation to single subjects, groups of subjects, and to isolated projects or activities. The whole field of subject matter will be surveyed for possibilities of correlating the work of English with other subjects for the enrichment of the entire curriculum.

#### TEXTBOOKS AND OTHER INSTRUCTIONAL MATERIALS

Textbooks have always played an important part in American education. With the increase in the number of subjects to be included

<sup>80</sup> In *Historical Outlook*, Vol. XXII, No. 2, February, 1931, p. 64.

in the curriculum, in amounts of subject matter considered of real social worth to pupils, and in numbers of pupils for whom individual teachers are responsible, textbooks have become more and more responsible for carrying such instructional responsibilities as developing or stating the problems for study, calling attention (by marginal or topical headings) to important points, supplying tests or measures of understanding or ability to explain or apply, suggesting how to study, memorize, or practice the unit of work outlined. So generally have textbooks included such phases of instruction and so generally have they dictated both study and class periods that the statement is common that the textbook dominates American education.

It is therefore highly important that textbooks shall embody the best we know both in the selection and organization of content and also in the principles of learning exemplified in the study exercises and directions to the student. With a view to showing the extent to which the elementary school textbooks in certain fields are conforming to present-day educational principles, changes in elementary school textbooks are summarized from various sources in the following paragraphs.

*Reading textbooks.*—In an analysis of the change in content of schoolreaders over a period of two centuries.<sup>31</sup> Doctor Robinson shows that readers in current use are the product of two important influences: First, that of many studies to determine what children at different ages like to read, and second, that of changed objectives in reading which have emphasized the development of many interests, habits, attitudes, and skills as opposed to the former religious-moral-civic aim of readers. An analysis of more than 212 readers in use in 1926 showed that the following types of content occur in relatively large amounts: Selections concerning animals and birds, boys and girls, fairy stories and fables, adventure, nature study, and folklore; there seems to be a tendency toward increases in materials pertaining to thrift, geography, biography, and history, which is in line with progressive recommendations for the inclusion of worth-while informational content in readers.

A recent study of basal reading texts<sup>32</sup> furnishes the score cards with which the committee representing the elementary schools of Rochester attempted to evaluate and select basal literary readers and study readers from a collection of more than 50 series. The

<sup>31</sup> Robinson, R. R. *Two Centuries of Change in the Content of School Readers*. George Peabody College for Teachers, Nashville, Tenn., 1930.

<sup>32</sup> Simpson, Mabel E. *An Analytical Study of Basal Reading Texts for the Elementary School*. *Journal of Educational Method*, 7: 400-411, June, 1928.

following points selected from the two score cards show how the two types of books are expected to differ:

## SCORE CARD I

*Material of a literary type*

- I.6. Relative proportion of stories, poems, and dramatic material.
- I.4. Does the arrangement provide for consistent growth by placing the less difficult stories at the beginning of the book?
- II.4. Is there a definite plan which aims to arouse the desire to read stories of a similar type or other stories by the same author?

## SCORE CARD II

*Material of a study type*

- I.1. Type of content: Informational—study—test material.
- I.4. Does the arrangement allow for consistent growth through the provision made for the development of specific study habits?
- I.6. Do frequent checks and tests make it possible for the reader to determine his own achievement?

*Language textbooks.*—A study made by Dr. Elizabeth Baker of the language textbooks published since 1843<sup>33</sup> reports that—†

The child of to-day has more variety in the kind of English exercises than has any child that went before; he has less grammar to learn; he has less writing to do; he has more training in oral use of the language; he has less to say about objects; he has less memorizing to do than any child since the eighties; he writes and talks less about pictures than any child since the nineteen hundreds; he gets more training for the situations of life than any child ever got before.

A similar study made of 24 language-composition textbooks for the seventh and eighth grades, all published since 1920, furnishes this summary<sup>34</sup>:

In general, they are still overstressing grammar but are attempting to teach that subject from the functional point of view. Some texts which reduce grammar to sensible proportions find thereby increased opportunity to create expressional situations calling for natural writing and speaking from boys and girls. Moreover, such expressional situations are in a respectable number of cases tied up with the activities of school and home life, with the duties of junior citizens, with the pleasures and recreations of adolescents. Vocational outlooks, at present entirely neglected in these texts, represent a regrettable oversight. Oral composition is not as yet receiving the amount of attention it deserves in view of the fact that language, both in school and out, is used orally as compared with writing in the ratio of 100 to 1. The presence of study helps indicates that modern textbooks are making language, as it should be, a "laboratory" or "shop" subject, utilizing the social nature of communication to secure and maintain interest and to establish a language conscience. Nevertheless, it is to be regretted that only one of 24 books makes a respectable effort to compel that language conscience to carry over into the language experiences of subjects other than English.

<sup>33</sup> Baker, Elizabeth Whitmore. *The Development of Elementary English Language Textbooks in the United States.* George Peabody College for Teachers, Nashville, Tenn., 1929.

<sup>34</sup> Lyman, R. L. *A Study of Twenty-Four Recent Seventh and Eighth Grade Language Texts.* *Elementary School Journal*, 24: 440-452, February, 1924.

Of particular interest is the evidence that present-day language texts are cooperating in the movement to base language instruction on the social situations which demand language use, rather than on the academic classification of language forms.

*Geography textbooks.*—Fundamental changes in geography textbooks indicate important developments both in the content and in the method of geography study. Zoe A. Thralls, of the University of Pittsburgh, submits the following analysis of present-day geography texts:

Since 1925 there has been a decided shift from the 2-cycle plan in geography to the one cycle. All but one geography textbook series published since 1925 are on the 1-cycle plan. As a result the amount and type of subject matter for each region has changed. An increase in number of pages usually means increased detail in treatment, which implies more interesting material.

The subject matter is selected to show the interrelations between man's activities and the natural environment. This has resulted in a greater emphasis upon man and his activities, also upon cause and effect rather than locational and factual material. The methods of organization and presentation have also changed. In the former texts the topical outline—surface, drainage, climate, area, population, and industries—was usually followed in the discussion of every continent and country. In many of the modern texts the organization is in the form of stories telling of the life and activities of a family in a specific region, as Switzerland. Through the story, the conditions under which the people live are developed in relation to the family's activities. In other instances the organization is varied but always beginning with the activities and interests of man and leading on to the factors of the natural environment which explain or affect the activities.

In recent texts the findings of research have been utilized. The vocabulary is graded in difficulty, and the ideas are presented in order of estimated difficulty. Facts are chosen with the idea of developing and illustrating principles; later the child is given the opportunity to apply principles already mastered.

The new texts give a great variety of study and checking exercises. They also make provision for a variety of drill work.

The type of pictures has changed. Where formerly at least three of five pictures were of interiors of factories, monuments, city streets, and public buildings, in the new texts four of five are now of natural scenes, and scenes showing man's activities in their natural setting. The pictures are larger, giving more detail. Furthermore, the pictures are now an integral part of the textual material, while formerly they were usually not even referred to in the text.

*Hygiene and physiology textbooks.*—What help American children are receiving from their textbooks in learning how to keep physically fit is summarized by Dr. James F. Rogers, senior specialist in health education, Office of Education, as follows:

1. The textbooks of 1920-30 are more interesting to the adult (and presumably to the child) than in previous years.
2. Textbooks a few years ago were intended only for pupils of high-school age, but attempts are now made to furnish books suitable for all ages, and the

efforts seem successful. There has been some reaction, however, from the fairy-tale method of presenting hygiene to elementary pupils.

3. As regards content, there is little that is new relative to the structure and function of the body. The laws of personal hygiene have been known for ages, and the field of public health and human relationships as affecting health is that in which most additions are being made.

4. In the selection of matter there is comparatively less of anatomical detail than was the case some years back. Nevertheless the principal bones are still "named," as they deserve to be.

5. All recent books are characterized by an effort not merely to furnish facts but to arouse a health conscience in the child and to secure his practice of the information offered.

6. Not only is the text more human, but the illustrations are more numerous and attractive than formerly.

*Spelling textbooks.*—Authors and lecturers on methods of educational research have long illustrated their principles by reference to the field of spelling, since the problems of selection, grade placement, and organization of subject matter and the problems of method have in that field been so definitely defined. An analysis of the scientific techniques which the authors of 10 spelling textbooks claimed to have used yields the following summary points:<sup>35</sup> Most word lists have been checked against two sources—words written by adults and words written by children. The grade placement of words has usually been decided on the basis of difficulty and initial or frequency of usage. There seems to be no general agreement as to the amount of repetition needed for drill or the desirability of grouping words on some basis of similarity, but there is a definite tendency to limit the word lists to 3,000 or 4,000 words. Most authors advocate the test-study method but rarely refer to remedial teaching of spelling. Referring to the lack of instructional material in textbooks, the authors say: "It appears to be difficult for authors to write spelling books that will really teach, that will be something more than mere word lists."

Dr. Ernest Horn summarizes three recent trends in spelling textbooks:

I think that there are trends in the last few years, first, to recognize clearly the point of view of social utility in selecting the word lists; second, to demand that the words taught in a given grade are related to the writing needs of the children in that grade, at least for grades one to six; and third, a desire to find some principle by which one can escape from the necessity of teaching each and every word which the child needs to spell. This involves some principle of rationalization.

*Civic attitudes in textbooks.*—In a recent study of about 400 American school textbooks,<sup>36</sup> an attempt was made to discover what civic

<sup>35</sup> Schorling, Raleigh, and Edmonson, J. B. *The Techniques of Textbook Authors*. Thirtieth Yearbook, Part II, National Society for the Study of Education, Ch. III.

<sup>36</sup> Pierce, Bessie L. *Civic Attitudes in American School Textbooks*. The University of Chicago Press, 1930.

attitudes pupils in American schools are apt to develop. Ninety-seven histories, 67 books in civic, sociological, and economic problems, 45 geographies, 109 readers, 50 music books, besides foreign-language texts were examined in order to find out, as Doctor Pierce says, "from a study of textbooks frequently found in the schools, what opinions can American boys and girls of the present form concerning their own country and of other countries." She concluded that American children are taught through their textbooks to respect American patriots and their contributions to the Nation, and American characteristics and activities. They are, however, through histories and readers encouraged to see in the people of other nations certain racial or national characteristics and activities which do not always redound to their credit. Geographies include considerably less material which may lead toward civic education than to the other textbooks, but when they do include material other than physical geography it is apt to be such as is conducive to an understanding and tolerance of the people of other lands. Civics and citizenship books commonly emphasize the rights, privileges, and duties of citizenship.

In view of the important place textbooks play in developing the thought patterns of thousands of students, Doctor Pierce's concluding statements are arresting: "The chief part of man's life is remembering," said James Harvey Robinson. What do the American people wish their children to remember?"

*Other instructional materials.*—Among other instructional materials which play an important part in determining classroom procedure two may be selected for special mention: Children's books for recreational reading, and work-books and practice materials.

Nowhere in the world are children provided with so varied, so attractive, and so plentiful recreational reading materials as in this country. Classrooms and libraries testify to the use schools are making of them.

Anne T. Eaton, librarian at Lincoln School of Teachers College, and an authority on children's books, makes the following summary of trends in children's books in the last 10 years:

1. A greater number of books of actual merit are published. There may be nothing to supersede or even equal some of the outstanding books of the past but there are a larger number of good books.
2. More attention is paid to illustration and format.
3. There is an increased number of artistic picture books for children, especially of picture books with a single simple story.
4. There is a constantly increasing number of books which try to explain the things that a child sees and comes in contact with in his daily life—for example: Bruère: Sparky for Short (A fairy tale that explains the principles of electricity); Jones: How the Derrick Works; Gimmage: Picture Book of

*Ships; Jones: An Alphabet of Aviation; and Van Metre: Trains, Tracks, and Travel.*

5. More books are written about foreign countries by people who know the countries so well they can give to children not only correct facts but atmosphere and sympathetic understanding, for example: Wells, Rhea: *Beppo the Donkey* (Sicily), *Peppi the Duck* (Austrian Tirol); Coatsworth, E.: *The Boy with the Parrot* (Guatemala); and Brann, Esther: *Lupe Goes to School* (Spain).

There has been an amazing activity among authors and publishers in the last few years in the production of work books. Through them authors seem to have accepted, in addition to the task of supplying the content, the responsibility of supplying instructional material for "setting the problem," directing the study, providing varied activities (such as drawing, constructing, coloring, matching, illustrating, graphing, outlining, arithmetic drill), and testing the results of individual study. More than 60 such work books in reading and arithmetic by 14 different publishing companies are listed in the recent *Teacher's Guide to Child Development* of the California State Department of Education, and work books in geography and history are also available. The definiteness and usefulness of these materials commend them to the busy teacher, but if we consider a child's day as made up of a transition from one work book to another it appears that they may not be altogether an unmixed good.

It is worth while noting that the newer instructional materials in content subjects are coming to be less and less "textbooks," in the old meaning of the term, and are instead extended well-written accounts of a major topic or problem. This is in line with the recommendations of progressive courses of study for the use of large units or blocks of subject matter. And likewise following out progressive recommendations for increased facilities for the individualization of instruction, texts in the skill subjects are more and more providing the instructions and self-checking lessons which make individual progress through a given course possible.

### III. PROGRESS OF PUPILS

#### SUCCESS AND FAILURE

From reports on pupil progress issued by city and State school systems within the past two years it can be seen that certain specific factors influencing pupil progress are being studied. Among these are school entrance regulations, grade placement and classification of pupils, school attendance, and the adjustment of curricula to individual needs. Other influencing factors that need further study are systems of pupil accounting and the relation of the number of pupils enrolled in a class to their success in meeting grade requirements, definitions of "promotion" and the possibilities of flexible promotion programs, the cooperative work possible between be-

havior or mental hygiene clinics or institutes, and the remedying of school progress difficulties in the elementary school.

"Normal progress" has the generally accepted meaning of allotting one year of school life to each grade. Because of the different ages at which children enter school an age range of one and one-half or two years is generally accepted for each grade. This is a desirable definition for purposes of local and national comparison. It is well to recognize, however, that different interpretations may be made for individual cases as to what constitutes normal progress. For one child from an impoverished home, or one in which a foreign language is spoken, normal progress may mean spending two years on the task of meeting first-grade reading requirements and making adequate social adjustments. For another child from a home where these handicaps do not exist normal progress may mean spending but half a year on the work of the first grade.

*Age-grade distribution.*—The following distribution of 116,651 boys and girls among grades of the elementary school according to their chronological ages shows the number who are in each grade at the age expected and the number of those younger and older for their grades.

This age-grade distribution is assembled from reports of 1 typical school building in each of 56 school systems in cities of different population sizes and representing all parts of the United States.

TABLE 5.—Summary of age-grade distribution of 116,651 white pupils in elementary grades of 56 cities<sup>1</sup>

Grades	Enrollment	Average age in years	Age range in years	Percentage distribution		
				Under age	Normal age	Over age
1	19,445	6	4-7	25.7	68.6	5.7
2	17,071	7.21	5-16	21.4	69.5	9.1
3	16,334	8.39	5-16	17.7	70.5	11.8
4	15,743	9.43	7-17	17.6	67.0	15.4
5	14,882	10.54	8-18	16.7	64.1	19.2
6	14,618	11.54	8-19	17.2	62.7	20.1
7	10,707	12.44	9-18	18.6	65.2	16.2
8	7,851	13.30	10-19	21.8	65.3	12.9
Total	116,651			19.7	66.9	13.4

<sup>1</sup> From an unpublished study in the Office of Education of acceleration and retardation in elementary grades. Cities reporting data represent all population sizes and all parts of the United States. Ages were taken as of September 1 and 2 years are allowed for each grade's normal age group beginning with 6 and 7 years for grade 1.

A summary of age-grade distributions for 7,623 children enrolled in 45 consolidated<sup>2</sup> schools shows a marked similarity to those in the preceding table for city schools.

<sup>2</sup> An Age-Grade Study of 7,623 Elementary Pupils in 45 Consolidated Schools. D. T. Blose. Office of Education, Pamphlet No. 8, June, 1920.

TABLE 6.—*Age-grade distribution in city and in consolidated schools*

Number of children	Percentage distribution of enrollment		
	Under age	Normal age	Over age
Data for 116,651 children in 56 city school systems .....	19.7	66.9	13.4
Data for 7,632 children in 45 consolidated schools .....	21.3	63.5	15.2

In comparing overageness for schools in city and in rural districts, it should be remembered that pupils enrolled in special classes provided by city school systems are seldom included in the general elementary age-grade distribution. Few, if any, rural districts are able to provide for special classes and records for pupils eligible for them are necessarily thrown in with those for normal children.

The figures given above offer a basis for comparison with local situations. Probable variations are indicated by reports of enrollments from the State of Pennsylvania of a 29 per cent overage for grade for the year 1929-30, and from a study made in San Francisco for 1929 which gives 11.1 per cent underage, 58.5 per cent normal age, and 30.4 per cent overage. A possible cause for the wide variations among these reports is the date from which ages are reckoned, e. g., reckoning a pupil's age as from his nearest or from his last birthday.

The wide range of ages within a grade may be partially explained by a lack of special classes for late school entrants and for handicapped children, by a lack of kindergarten opportunity for children below 6 years of age, or of adequate provisions for classification of school entrants according to ability and past experience.

The greatest number of children underage for grade are in the first grades and the load of pupils overage for grade reaches its highest point in the intermediate grades. This is generally apparent in age-grade distributions and is the natural result of the high rate of pupil retention in the primary grades. From grade 5 or 6 the proportion of overage pupils diminishes until in the high school there is a larger number of underage pupils. The change is probably due to the gradual elimination of overage pupils, pupils who go to work or who leave school due to a sense of inability to succeed.

*Reduction of retardation.*—Progress in the reduction of retardation is reported from several State and city school systems. For Maryland "the percentage reported as overage appears to be from 1 to 3 per cent lower in 1929 than in 1927 in all of the high-school years and in all elementary grades, except first and second, in which grades the per cent overage appears to have increased slightly."<sup>24</sup>

<sup>24</sup> Overage Pupils in Maryland County White Schools. Maryland School Bulletin, State Department of Education, Baltimore, Md., Vol. XI, No. 6, June, 1930.

Efforts have been made to reduce the number of first-grade failures, but poor attendance, late entrance, lack of understanding by parents of the value of each day's experience in the first grade are factors that have yet to be conquered.

Progress in promotions and holding power of the elementary schools of San Francisco analyzed for the years 1915, 1927, and 1929 is reported in the annual report of the public schools of the city and county of San Francisco for the year 1929 as follows:

A comparison of the enrollment by grades in 1915 with 1927 and 1929 shows a very great increase in the holding power of the schools and an equally great improvement in the progress of pupils through the grades. A decided trend which favors the years 1927 and 1929 is evident. In other words, our public schools to-day have more effective instruction, less retardation, and the schools themselves are more attractive to the children of all age groups than they have been in the past.

The following comparisons, chosen from many which could be made, support the above statements, show the children to be moving steadily through the grades with but little lost motion. The clustering and massing in grades 1, 2, and 3, so common in the past, is very greatly reduced and the number continuing on beyond the sixth and eighth grades for more schooling is much greater than formerly.

In grades 1 to 8 in 1915 there were 495 children out of each 1,000 in the first three grades. In 1927 in the same grades there were 390 out of each 1,000 in the first three grades, and in 1929 there were 404 out of each 1,000 in the first three grades.

In 1915 the number of pupils in the eighth grade was 35.5 per cent of the number in the first grade. In 1927 the number in the eighth grade was 90.9 per cent of the number in the first grade. In 1929 the number in the eighth grade was 81.8 per cent of the number in the first grade.

Continued progress in reducing the extent of overageness and in increasing the proportions of pupils who are normal and underage for grade is given in a report from Philadelphia.<sup>39</sup> This report shows that—

there were 29 per cent of pupils who were overage for grade. This is 3.4 points lower than the per cent of overageness for 1927. The 1927 overage per cent was 3.5 points lower than that for 1925. Thus we have indication of a constant tendency throughout the system to reduce the proportions of overage pupils. Compensating this general decrease in the proportions of pupils overage, there is recorded a consistent increase in the proportions of pupils of normal age and underage. In each biennium, from 1925 to 1927, and from 1927 to 1929, the proportion of underageness has increased by approximately 20 per cent, and the proportion of overageness has decreased 10 per cent.

#### FACTORS INFLUENCING PROGRESS

*Entrance ages.*—The large proportion of underage pupils in the first grade suggests possible slow future progress. According to

<sup>39</sup> Age-Grade Survey. Board of Public Education, Division of Educational Research, Philadelphia, Pa. Bulletin No. 146, February, 1930.

Doctor Cooper's study<sup>40</sup> children entering rural schools under 6 years of age make slower progress than do any other entering age group. "Seven out of every ten spent the first two years in grade 1, and only two out of every ten were able to complete the eight grades of school work in the 8-year period." On the other hand, it has been proved, in one instance at least, that if chronologically underage children are admitted to school on the basis of mental age that they are not only able to maintain their scholastic accomplishment on equal terms with their classmates but are decidedly superior in some phases of the work.<sup>41</sup>

A large number of 5-year-old children are reported as enrolled in the first grades of many States. The proportion of 5-year-old children living in rural districts enrolled in first grades and kindergartens is shown by data for 3,177 5-year-old children living in 22 counties.<sup>42</sup> Of this total number of 5-year-old children, 78 per cent were enrolled in school and 33.1 per cent of these were attending kindergartens while the remaining 66.9 per cent were enrolled in first grades.

A comparison of the extent to which kindergarten opportunity is offered in rural and city school systems is indicated by a percentage distribution of enrollments in kindergarten and the first three grades for approximately 3,000,000 children in 3,000 city school systems<sup>43</sup> and for 21,000 children enrolled in the rural schools of 22 counties in 5 States.

TABLE 7.—Percentage distribution of enrollments for the unit of kindergarten-primary grades

Kindergarten and grades	City schools	Rural schools
Kindergarten.....	15.7	5.46
Grade I.....	33.0	38.43
Grade II.....	26.5	27.14
Grade III.....	24.8	28.97

*Graded and ungraded schools.*—The problem is intensified in the 1, 2, and 3 teacher schools. Fifty per cent of all nonprogress in the 1-teacher schools is found in grade 1 while only 35 per cent is found in grade 1 of the graded school. It is evident that young

<sup>40</sup> Progress and Attendance of Rural School Children. Hermann Cooper. Teachers College Contributions to Education No. 442. New York, Teachers College, Columbia University, 1930.

<sup>41</sup> The Later Performance of Underage Children Admitted to School on the Basis of Mental Age. Edward A. Lincoln. Journal of Educational Research, 19: 1-22-30, January, 1929.

<sup>42</sup> Availability of Public-School Education in Rural Schools. W. H. Gaumnitz. Office of Education, Bulletin, 1930, No. 34.

<sup>43</sup> Kindergarten-Primary Education. A Statistical and Graphic Study. Mary Dabney Davis. Office of Education, Bulletin, 1930, No. 30.

children need time and attention from the teacher to get an adequate start in school and to avoid developing habits of mental inertia or bad habits in the use of time. Teachers who are responsible for children's progress in all the elementary grades apparently are not free to give enough time to the youngest children.

Differences are reported from Maryland in the progress made by boys and girls and in the progress made in one or two teacher schools as compared with that in graded schools. The number and per cent of boys and girls who are overage in each grade shows the disadvantage boys suffer in accomplishing the work planned for the elementary school. The ungraded school places children at a disadvantage in relation to their progress. The following table from a study made in the State of Maryland<sup>44</sup> gives a summary of the difficulties faced in that State.

TABLE 8.—Per cent of Maryland county white pupils overage, November, 1929

	1-teacher schools	2-teacher schools	Graded schools
Boys.....	23.6	20.8	17
Girls.....	16.4	13.7	10.7

*Pupil classification.*—Several administrative devices have been developed in attempts to reduce retardation. Their purpose is to care for the child overage for grade, the child temporarily handicapped by absence or illness, the child with ability to progress more rapidly than others, and other cases of maladjustment. Among these devices are homogeneous or ability grouping of pupils in "slow, normal, and fast" or "X Y Z" programs; the organization of pre-primary classes for children chronologically eligible but mentally unready for first-grade work; the provision of coaching teachers working with small groups of children needing special attention; and the adjustment of a flexible program for promotions.

Within the past two years there have been many arguments for and against the use of these several plans with but little scientific experimentation to produce conclusive evidence. Of those studies which have been made, some seem to favor homogeneous grouping and others emphasize the large number of factors qualifying the success of such grouping.<sup>45</sup> Arguments advanced in favor of homogeneous grouping and others against this type of organization have been clearly outlined and discussed in an article by Doctor Mc-

<sup>44</sup> Overage Pupils in Maryland County White Schools, November, 1929. Maryland School Bulletin, Vol. XI, No. 6. State Department of Education, Baltimore, Md.

<sup>45</sup> Bibliography of Research Studies in Education, 1928-29. U. S. Office of Education, Bulletin, 1930, No. 23.

Gaughy,<sup>46</sup> in which he brings out the strength and weakness in both sides of the argument.

Preprimary classes have been organized in a number of city school systems to care for children 6 years old chronologically but not 6 years old mentally. For Seattle the work is described as placing special emphasis upon work which will develop the children and build up a condition of readiness for first-grade work. In some places the second-year kindergarten curriculum is designed to meet the same needs as those described above. An instance of this is reported from Mount Vernon, N. Y., where an effort is made to avoid admitting children to first grade without a mental age of 6 and to make necessary adjustments through the 2-year kindergarten program. Additional emphasis upon the problem faced in the first grade has been made by Carlton E. Douglas, assistant superintendent of the Baltimore schools:

Of first importance is the common requirement that pupils 6 years of age chronologically must be admitted to regular first-grade work. Yet at least 50 per cent of failing first-grade pupils fail because they are not mentally mature enough to make the pursuit of reading profitable. Rarely have school systems of the country had the courage and the legal authority to meet this situation squarely. The very natural result is that there is the highest percentage of failure in the first grade, a rate of nonpromotion quite out of keeping with that in later grades.<sup>47</sup>

*Standards for promotion.*—As would be expected variations exist throughout the country as to standards for promotion. These variations are both according to individual grade requirements and in keeping with the general educational philosophy underlying the whole program of a school system. In general, school admission on a chronological basis moves to a mental achievement basis for promotion within one year. Major weight is given to scholarship and minor weight to the development of personal, social, and intellectual habits. Promotion schedules which elementary schools follow are reported for a National Education Association study by 225 cities as semiannual and as annual for 300 cities. The most significant change anticipated by the administrative officers of these school systems is for a flexible program allowing promotion at any time during the year. Five city-school systems report that they anticipate accepting this program. The desirability of trial promotions has been advocated by many school superintendents. Facts showing that three-fourths of the children so promoted retain their place in the advanced grade are given in the study by Doctor Buckingham.<sup>48</sup> A definite

<sup>46</sup> Homogeneous Grouping of Pupils. J. R. McGaughey. *Childhood Education*, Vol. VI, No. 7, March, 1930, pp. 291-296.

<sup>47</sup> Baltimore Bulletin of Education, VIII; 7, April, 1930.

<sup>48</sup> Administration of Pupil Personnel. Arch. O. Heck. New York, Glun & Co., 1929, p. 372.

advantage accrues from such a program in stimulus to effort for both the receiving teacher and for the child promoted on trial.

*School attendance.*—Daily attendance, another factor in pupil progress, seems to be more of a problem in rural schools than in city schools. For all elementary grades of city schools the average daily attendance is 83 per cent against 78 per cent for rural schools.<sup>49</sup> The greatest problem of attendance occurs in the kindergartens and first grades where health, transportation facilities, and the parents' attitude toward necessary regularity of school attendance at this early age are important factors. Doctor Cooper's study of the causes for slow progress in school reports that some form of nonattendance accounts for 95 per cent of the reasons given by teachers for retaining pupils a second year in the first grade.

Definite help for first-grade attendance is being given through the work with parents in the preschool clinics that are being established in State and city departments of education.

In the State of Pennsylvania "preschool clinics are becoming an integral part of the school nursing program. At these clinics the children who will enter school the following fall are given a complete health examination and an effort is made to have remedial handicaps corrected or treated as early as possible. From an economic as well as a humanitarian standpoint, correction of remediable handicaps should be made before a child begins school life. This would mean a saving of time, money, and worry for all and would help to limit the number who have to repeat the first grade because of absence due to illness or other physical handicaps."<sup>50</sup>

A "Beginner's day" program instituted in the State of North Carolina is accomplishing a similar purpose, particularly with the children in rural districts. Somewhat similar help is given school attendance, and, indirectly, to a reduction of retardation, through the visiting teachers' work. These workers are responsible for getting the children into the school, for arousing interest and enthusiasm among teachers, pupils, and parents in keeping children in school, and for carrying out attendance campaigns.

One visiting teacher in the State of Delaware (1927-28) made personal contacts with the parents of more than 300 children before school opened to insure a prompt beginning of the school year. "The visiting teacher acts as a friend and advisor rather than as an officer to enforce law, taking the attitude always that an understanding of home conditions and environment interpreted to the teacher and the point of view of the teacher interpreted to the home

<sup>49</sup> Some Comparative Statistics of Public-School Education in Urban and Rural Communities. W. H. Gaumnitz. Office of Education. Rural School Circular No. 27.

<sup>50</sup> Report of the Superintendent of Public Instruction of the Commonwealth of Pennsylvania for the Two-Year Period Ending May 31, 1930.

makes for better understanding and cooperation on the part of both."

Among the duties reported for the school visitor of a city school<sup>51</sup> system are the following: Compiling school census, making home and school visits, holding office conferences, tracing and completing working permits, referring cases for psychiatric study, and for juvenile court adjustment, and tracing pupils transferred or lost through changes in residence. By far the most frequent problem handled is that of attendance. It is interesting to note the variety of cooperating agencies which assisted the home visitor in her work. These included: The Cleveland Foundation, Child Guidance Clinic, probate court, juvenile court, Mount Sinai Hospital, Jewish Social Service Bureau, Associated Charities, Catholic Charities, Women's Protective Association, Cleveland Heights police, Cleveland Board of Education, East Cleveland Board of Education, Fairmount Presbyterian Church (men's club).

This type of home visitation and home cooperation is being carried on in many city-school systems under the department of child accounting. In others a special guidance program is followed.

*Specific aids for pupil progress.*—Irregular attendance was found by Doctor Cooper to be a major cause for retention in the lower grades. In upper elementary grades retention was attributed largely to some form of lack of development. This idea of inadequate development as a cause for retardation is also emphasized in a study by Doctor Percival.<sup>52</sup> According to teacher judgment, the most frequent cause of failure in all grades is the pupil's slow-learning ability and the second cause for failure is the pupil's lack of application and attention. Both of these causes cast a reflection upon the amount of work required and the difficulty of the work prescribed in the course of study. It also suggests that the course of study or the method of teaching employed by the teacher fails to arouse the interest of pupils to make adequate effort to achieve the standards outlined. Included in many supervisory programs are plans to help correct this difficulty. The advanced program for 1930-31 of the Baltimore public schools proposes curriculum study groups; continuous curriculum revision with special reference to the differentiation of courses in order to meet the needs of slow, average, and rapid moving groups; evaluation by the teachers of the city of certain proposed standards of promotion; and expansion of the guidance instituted in the elementary schools the preceding year.

An aid for pupil progress has been offered during the past two years through experimentation with reading clinics. These function-

<sup>51</sup> Annual Report of the Cleveland Heights Schools 1929-30.

<sup>52</sup> A Study of the Causes and Subjects of School Failure. Walter Pilling Percival. Berkeley, Calif., 1926. 55 pp.

as means of discovering causes for reading disabilities and of remedying them. The clinic at Western Reserve University diagnoses the possible causes of a pupil's reading difficulties from such angles as the oculist's report, the psychiatrist's examination, and a social worker's study of the child's home environment and prescribes individual treatment. Satisfaction with the results of the remedial program in individual cases has been expressed by teachers doing the "follow-up" work.<sup>53</sup>

During the past year a scale has been developed for the study of behavior problems and problem tendencies in elementary school children.<sup>54</sup> Many cautions are given to those using the scale to avoid blanket or general conclusions being drawn from scores attained by the test. The scale is a means of bringing to the teacher's consciousness certain specific behavior reactions for individual pupils. In this respect it is especially helpful. Furthermore, the manual accompanying the scale emphasizes the need for more than one estimate of pupil behavior, and for estimates taken under different situations.

Another type of attempt to assure normal school progress through understanding individual pupil behavior is the use of child guidance or behavior clinics. Montclair reports in 1928 as follows:

The child guidance department rendered invaluable aid in testing and classifying pupils. The department did a large part of the work in developing the diagnostic card now in use in the elementary grade. \* \* \* All kindergartners were given an individual mental test and the results were used in promoting these pupils. It is interesting that we have practically eliminated failures in the first grade as a result of this service.

A visiting child guidance clinic in California gives the local school system an opportunity to test the value of the service rendered. Fresno, Calif., reports the result of a visit from workers of the California Bureau of Juvenile Research as follows:

Ten children were studied intensively during the week. Members of the school department aided in the work by selecting cases to be studied, preparing case histories, getting physical examinations, and furnishing other information for use of the clinic. Two staff meetings, open to those interested in the work, were held. At each meeting a case was discussed in detail by the visitors. After the conclusion of the work in Fresno complete reports of each case, together with detailed suggestions for treatment, were sent to the school department. With the aid of principals, counselors, teachers, and nurses an effort was made to put into effect the recommendations of the clinic.

The need of relating home environment and behavior to learning ability and school achievement has been recognized in Garret County, Md. The following outline for individual case studies of pupils reported as "failures" is being used by teachers especially interested in the problem:

<sup>53</sup> Annual Report of the Cleveland Heights schools, 1929-30, p. 15.

<sup>54</sup> Haggerty—Olson—Wickman. Behavior Rating Schedules. World Book Co., New York, 1930.

## A SUGGESTIVE OUTLINE FOR A CASE STUDY

- I. Name, age, date and place of birth of child.
- II. Story of physical condition of child.
  - A. Height and weight (normal and actual).
  - B. Condition of eyes, ears, teeth, etc.
- III. Story of home and environmental conditions.
  - A. Economic condition—father's occupation.
  - B. Number in family—ages of other children in family.
  - C. Community activities of the family.
  - D. Child's eating and sleeping habits.
  - E. Child's duties at home.
  - F. Child's out-of-school associates besides his family.
- IV. Educational history, story of school attendance, behavior and achievements.
  1. Age of child when enrolled.
  2. Date of entrance.
  3. Names of different schools attended with attendance record from each, if possible.
  4. Grades passed, repeated, etc.
  5. Behavior record.
  6. Previous teachers' comments concerning the child.
  7. Child's ability in various subjects (standard test results, if possible—his M. A. and I. Q.).
  8. Ability of child to adapt himself socially to the school group.
  9. Extracurricular interests.
- V. Story of child's likes, dislikes, aptitudes.
- VI. Miscellaneous items.
- VII. *Remedial program* proposed by the teacher in the light of the information in items I to VI above inclusive, which enables her to understand the child so that she may be more able to win his friendship and help him through better guidance to benefit from his school work.

That this problem of progress still looms large on the horizon of the school program is evident from the following statements made by Superintendent Gerling, in the 1930 report of the board of education of the city of St. Louis:

For many years the retardation of pupils has been a subject for discussion and research study. No adequate solution of the problem, however, has been advanced \* \* \*. Retardation has continued in the elementary schools, particularly in grades 3 to 6. In the higher grades, particularly in the upper high-school grades, the percentage of accelerated pupils more than offsets the retardation. \* \* \*

The adaptation of methods and curriculum matters to the needs of pupils who are unable to make normal progress is undoubtedly needed. It is well known that such adaptation is attempted widely throughout the system. There is no exact evidence, however, as to the prevalence of such efforts. The greatest contribution to be made toward the prevention of retardation is probably to be found in pedagogical adaptations rather than administrative procedure.

## IV. SUPERVISION OF INSTRUCTION

Many studies and surveys of supervisory programs have been made during the past biennium.<sup>55</sup> Analyses have been made of the organization of supervision in State and city school systems and the allocation of responsibility for different phases of the program devised to improve instruction. These studies have also described and evaluated the variety of supervisory technics.

Every effort is being made to provide the classroom teacher with expert leadership and with the physical environment best suited to good teaching. This program enlists the active support of the superintendent of schools in establishing a supervisory organization that assures continuity of experience for children from grade to grade, help for the teacher's immediate problems and guidance in gradually attaining goals requiring consecutive work for a period of time. The program enlists the help of research departments in analyzing pupil achievements and in consequent recommendations for grouping of pupils, for special learnings to be strengthened, and for individual treatment of children with social, mental, or physical handicaps. Upon the general and special subject supervisors and upon the building principal are placed the responsibilities for helping teachers to analyze their individual difficulties and successes and to develop with the teachers such remedial or expansion programs as are needed.

<sup>55</sup> Direction and Coordination of Supervision, Current Practices of City Superintendents. William G. Brink. Northwestern University. Contributions to Education, School of Education Series No. 3. Public-School Publishing Co., Bloomington, Ill., 1930.

National Conference of Supervisors and Directors of Instruction. Educational Supervision, a Report of Current Views, Investigations, and Practices. The National Conference of Educational Method, First Yearbook. Compiled by a Committee of the Conference; L. J. Brueckner, Chairman. New York City, Bureau of Publications, Teachers College, Columbia University, 1928, 270 pp.

National Conference of Supervisors and Directors of Instruction. Scientific Method in Supervision. Second Yearbook of the National Conference of Supervisors and Directors of Instruction—Compiled by a Committee of the Conference; L. J. Brueckner, Chairman. New York City, Bureau of Publications, Teachers College, Columbia University, 1929, 307 pp.

Department of Supervisors and Directors of Instruction. National Education Association. Current Problems of Supervisors; an Analysis of the Status of Supervision in American Public Schools in 1929. Third Yearbook of the Department of Supervisors and Directors of Instruction. Compiled by a Committee of the Department; J. Cayce Morrison, Chairman. New York City, Bureau of Publications, Teachers College, Columbia University, 1930, 252 pp.

Department of Superintendence. National Education Association. The Superintendent Surveys Supervision. Eighth Yearbook. Washington, D. C., 1930, 471 pp.

Department of Elementary School Principals. National Education Association. The Principal and Supervision. Tenth Yearbook of the Department, National Education Association. Washington, D. C., 1931, 652 pp.

Association for Childhood Education (Nursery, Kindergarten, Primary Education). Supervisory Practices. Prepared by the Committee on Supervision, Mary G. Waite, Chairman. Washington, D. C., April, 1930, 49 pp.

## FROM THE STATE DEPARTMENT OF EDUCATION

*State department staff members assigned to the direction, supervision, or inspection of elementary schools.*—Paralleling the remarkable increase in the number of staff members in State departments reported by Schrammel<sup>66</sup> is the increase in the number of staff members assigned to the direction, supervision, or inspection of the various fields of elementary education. To show the variety and extent of such provision a list of such administrative or supervisory officers for each State is here presented, checked in each case except two by a State department official. In order to avoid unwarranted comparisons certain facts should be kept in mind: Certain State departments and certain functions within other State departments are organized vertically (that is, a supervisor of a certain subject may or may not supervise that subject through both elementary and secondary schools), and, therefore, it is difficult to list those persons specifically assigned to elementary education. In some States the State superintendent or commissioner or his assistant or deputy spends considerable time in the direction or supervision of elementary schools, but this is not always so stated in the reports. In other States, supervisors of rural schools work out from the teachers colleges under the direction of the State department, but they are not included in these reports. In some instances, it is not specified whether the director or supervisor of elementary schools works with urban schools, with rural schools, or with both. It is possible that in the omission of some positions from those enumerated in the following list (such as administrator of the equalizing fund, director of research, director of libraries, etc.) some have been omitted whose services include the supervision of instruction. The list has been prepared, however, to indicate the extent to which State departments of education have provided officials who work directly with elementary schools. Since the work of State departments in special education has been included in another section of the biennial, staff members in charge of this phase of work are not included here.

**Alabama:** 1 director of elementary education (director also of teacher training and certification); one supervisor of elementary education; 1 director of negro education; 3 supervisors of negro education; 1 (acting) director of physical education. "These individuals work mostly in rural schools, although they have some connection with urban schools."

**Arizona:** None.

**Arkansas:** 1 elementary school supervisor; 1 supervisor of negro education.

**California:**<sup>67</sup> 1 chief, division of rural education; 1 chief, division of health and physical education; 1 chief, bureau of physical education for girls.

**Colorado:** None.

<sup>66</sup> Schrammel, Henry E. *The Organization of State Departments of Education*. The Ohio State University Press, Columbus, 1926.

<sup>67</sup> Not checked by State officials.

Connecticut: 1 field supervisor of urban education; 1 senior supervisor of rural education; 26 supervisors of rural education; \* 1 senior supervisor of health and physical education; 1 assistant in health and physical education; 1 assistant in art education; 1 assistant in nature study.

Delaware: 1 assistant superintendent in charge of elementary schools (rural schools); 4 visiting teachers; 7 rural supervisors; \* 1 director of physical education; 1 director of art; 1 supervisor of art; 1 director of music; 2 supervisors of music.

Florida: 1 supervisor of elementary schools (works with both rural and urban schools); 1 agent for negro rural schools; 1 supervisor of physical and health education.

Georgia: 2 supervisors of negro education; 3 supervisors of rural education.

Idaho: "The State superintendent is director of elementary education for all districts except independent class A and chartered and is general director of rural education."

Illinois: 1 supervisor of city elementary schools; 1 supervisor of country and village elementary schools; 1 supervisor of physical education.

Indiana: 1 director of elementary education (also director of high-school education); 1 assistant director of elementary education (also assistant director of high-school education); 1 director of school relief; 1 assistant director of school relief. "All of these individuals work in both rural and city schools, the latter two doing most of the inspection in the poorer school districts of the State."

Iowa: 1 inspector of graded and high schools; 1 inspector of rural schools; 1 inspector of consolidated schools; 1 inspector of mining-camp schools. "All of these inspectors except the one for the rural schools have to do with both grade and high school inspection."

Kansas: 2 rural school supervisors. "Our two high-school supervisors spend part of their time inspecting the 50 or 60 junior high schools of the State, two-thirds of whose work may well be classified as elementary."

Kentucky: 2 supervisors of rural schools; 1 rural school agent; 1 director of music.

Louisiana: 1 supervisor of elementary schools; 2 assistant supervisors of elementary schools; 1 agent of schools for negroes; 1 assistant agent of schools for negroes; 1 supervisor of home economics; 1 assistant supervisor of home economics; 1 supervisor of agriculture; 1 assistant supervisor of agriculture. "The members of our elementary division make no distinction between country and city schools."

Maine: 1 deputy commissioner of education and supervisor of teacher training and elementary instruction; 2 agents for rural education; 1 general agent for schools in unorganized territory; 1 director of vocational education and supervisor of manual training (in elementary and secondary schools); 1 supervisor of home economics (in elementary and secondary schools).

Maryland: 1 assistant State superintendent in charge of elementary instruction (rural and urban); 1 supervisor of elementary schools (rural and urban); 1 supervisor of colored schools; 1 supervisor of music; 1 supervisor of physical education (part time).

Massachusetts: 1 director of elementary education (also director of secondary education and normal schools); 1 supervisor of elementary education; 1 supervisor of physical education (in elementary and secondary schools); 1 assistant supervisor of physical education (in elementary and secondary schools);

\* Since these officials are assigned to a definite territory they are sometimes enumerated in lists of local supervisory officials.

1 supervisor of safety education (in elementary and secondary schools). "All of these supervisors deal with elementary education in both rural and urban schools."

Michigan: 1 superintendent of rural education division; 5 supervisors of rural schools; 1 director of physical education; 1 assistant director of physical education; 1 director of music education.

Minnesota: 1 director, graded elementary schools; 1 director, ungraded elementary schools; 3 assistant directors, ungraded elementary schools; 1 director of physical and health education (covers both divisions of the elementary field and also high school).

Mississippi: 1 supervisor of negro schools; 1 agent of negro schools; 1 supervisor of rural schools; 1 supervisor of music.

Missouri: 1 director of negro education; 1 director of rural school supervision; 4 rural school inspectors; 1 director of physical education; 1 assistant director of physical education; 1 supervisor of music.

Montana: 2 rural school supervisors.

Nebraska: 1 director of rural education.

Nevada: 5 deputy superintendents.<sup>28</sup> These officials supervise both elementary and secondary schools, urban and rural.

New Hampshire: 1 elementary school agent; 1 supervisor of health.

New Jersey: 1 assistant commissioner of education in charge of elementary schools; 1 director of health and physical education; 1 assistant in physical training; 1 assistant in health education; 55 helping teachers (8 are for music, 1 for health).<sup>29</sup> "These helping teachers are assigned by the State Department to the various counties to supervise elementary schools."

New Mexico: 1 rural school supervisor.

New York: 1 assistant commissioner in charge of elementary education (both rural and urban); 1 chief, rural education bureau; 3 supervisors of rural education; health and physical education division; home economics education bureau; visual instruction division. The education department is organized both on a horizontal and vertical basis. Individuals in each of the divisions starred give time and attention to both elementary and secondary education.

North Carolina: 1 director of elementary instruction; 2 supervisors of elementary instruction; 1 inspector of elementary schools; 1 director of negro education; 1 assistant director of negro education; 1 supervisor of colored elementary schools.

North Dakota: 1 director of rural education; 2 supervisors of elementary education (during a large part of the year work with teachers in rural schools).

Ohio: 1 consultant in elementary education (conducts a model school); 1 rural school supervisor; 1 supervisor of physical education; 1 supervisor of music; 1 director of visual education; 1 director of radio education; 1 assistant director of radio education.

Oklahoma: 1 rural school supervisor; 2 assistant rural school supervisors.

Oregon: 1 supervisor of rural education (also supervisor of club work).

Pennsylvania: 1 deputy superintendent, school visitation and advice; 1 director of elementary and kindergarten education (both rural and urban schools); 1 director of rural service bureau; 2 assistant directors, rural service bureau; 1 director of health and physical education; 4 supervisors of health and physical education; 1 director of art education; 1 director of music; 1 director of visual education; 3 supervisors of industrial arts education; 2 supervisors of home economics; 3 supervisors of agricultural education.

Rhode Island: None.

<sup>28</sup> Since these officials are assigned to a definite territory they are sometimes enumerated in lists of local supervisory officials.

South Carolina: <sup>11</sup> elementary school supervisor; 1 rural school supervisor; 1 agent for negro schools; 1 assistant agent for negro schools.

South Dakota: 1 supervisor of elementary education (works exclusively with rural schools).

Tennessee: 1 agent for negro schools; 2 rural elementary school supervisors.

Texas: 1 chief supervisor of rural schools; 11 supervisors of rural schools; 1 special rural school agent in negro education.

Utah: 1 supervisor of grammar grades and junior high school; 1 supervisor of primary grades. "Appointed to work with both urban and rural schools, outside of five cities of the first and second class."

Vermont: 2 deputy commissioners (probably four-fifths of their time is devoted to the elementary schools); 2 helping teachers (supervision and direction of elementary schools).

Virginia: 1 supervisor of negro education; 1 supervisor of rural education; 1 assistant supervisor of elementary education; 1 director of physical and health education; 8 assistant supervisors of health and physical education.

Washington: 2 elementary and rural school supervisors; 1 supervisor of home economics. "About one-half of her time is devoted to the particular problems found in the graded and rural schools."

West Virginia: 1 supervisor of negro schools; 1 supervisor of rural schools; 2 assistant supervisors of rural schools; 1 director of physical education.

Wisconsin: 3 supervisors of elementary schools; 2 supervisors of rural schools; 3 supervisors of State graded schools.

Wyoming: The commissioner of education has rural education as one of his special duties. The State superintendent and deputy State superintendent also work in this field.

*Supervision program in Alabama.*—An effective organization of a State supervisory staff has been made in the State of Alabama. Here a close connection is made between pre-service and in-service training for teachers through a system of supervision conducted cooperatively by the State teachers colleges and the counties. This method of organization makes it possible to follow students into the field of teaching, to discover their chief difficulties, and to strengthen those phases of work in the curriculum of the teachers colleges. The following report is given by the State Department of Education of Alabama for the year 1930:

The work of supervision (of the public elementary schools outside of the cities of the State of Alabama) has been carried on during the year through 5 regional and 52 county supervisors of elementary instruction. \* \* \* The services of the 5 regional supervisors are contributed by the 4 teachers colleges and the 1 normal school for white teachers in Alabama. These regional supervisors conduct county institutes, visit counties which have supervision and those which do not have supervision within their respective territories, and furnish general leadership and direction in the field of elementary supervision. The 52 county supervisors render a similar service to the schools and teachers of their respective counties.

During the year the work of 100 beginning elementary teachers and 60 beginning secondary teachers has been closely followed up by the 5 elementary

<sup>11</sup> Not checked by State officials.

regional supervisors and 3 of the secondary supervisors. The purpose of this follow-up work has been twofold: First to help the beginning teacher adjust herself to the problems of teaching; second, to discover what if any changes need be made in the method of training teachers. Each regional supervisor assumed responsibility for a close follow-up study of 20 beginning teachers.

Each of these 20 beginners was visited three times during the session. This follow-up study has resulted in the tabulation by each regional supervisor of a mass of information relative to each beginner. When this is properly organized, it is believed it will prove helpful both to teacher-training institutions, to supervisors, and to the beginning teachers themselves.

#### WITHIN CITY SCHOOL SYSTEMS

*Organization of supervisory units in city school systems.*—In city school systems necessary coordination of programs of work from grade to grade is greatly assisted by the administrative organization of supervisory units. The greatest number of cities of all population sizes places the general supervision of elementary grades and kindergartens under one supervisor or under one director who coordinates the programs of supervision delegated to the kindergarten-primary or primary grades in cities not maintaining kindergartens, and to the intermediate grades. The following table shows the types of general supervisory organization in 620 cities for the year 1929-30. Comparison with a similar distribution for the year 1926<sup>59</sup> shows that no material change has been made in the ratio of cities having unified or segregated supervisory units.

TABLE 9.—Types of supervisory organization in city school systems

Population: Size of cities*	Number and per cent of cities		Number of cities having each type of supervisory organization											
	Number	Per cent of total number of cities	Reporting general supervisors		Combined					Separate				
			Number	Per cent of cities replying	Kindergarten - primary	Kindergarten - elementary	Kindergarten - elementary in 2 units (K-3) (4-6)	Elementary		Kindergarten and primary	Kindergarten and elementary	Kindergarten and elementary in 2 units (K) (1-3) (4-6)	Primary only	Kindergarten only
100,000 and over.....	67	93.6	65	97	10	7	16	7	3	4	5	0	1	4
30,000 to 100,000.....	153	82	126	82	10	31	24	21	12	1	6	4	12	5
10,000 to 30,000.....	337	65	173	52	10	45	12	50	10	1	4	1	33	9
2,500 to 10,000.....	953	48	254	26	12	51	4	61	26	8	8	7	49	28
Total.....	1,540	76.5	620	40	42	134	56	139	50	14	23	21	95	46

\* 1920 census.

<sup>59</sup> Includes 1 unit of nursery school through the sixth grade.

<sup>60</sup> Includes 1 unit of (nursery school-2) (3-6).

<sup>61</sup> Nursery-Kindergarten-Primary Education in 1924-1926. Mary Dabney Davis. U. S. Bureau of Education, Bulletin, 1927, No. 28.

*Variety of a supervisor's responsibilities.*—There is strong contrast between the former notion of general supervision as an inspectorial process and the many demands for leadership and guidance which the present school program requires. The variety of activities and responsibilities included in a general supervisor's year are suggested in the report of the kindergarten-primary department given in the Annual Report of the Public Schools of the City and County of San Francisco for the year 1929. The section of this report entitled "The Year's Program" is given as follows:

During the year seven principals' conferences were held for demonstration of work, reports, and discussion. Regular monthly demonstration lessons were conducted for probationary and substitute teachers. Ten open-house days and demonstrations were given for experienced teachers.

The main developments in the work may be summarized as follows:

(a) Research and committee work: (1) Textbook evaluation. (A committee of principals and teachers assisted the director of kindergarten and primary grades in the scoring of books for State adoption.) (2) Home and school cooperation committee. (A large committee of expert teachers participated in a study of home and school cooperation. Parents of children kept records of home reactions of children.) (3) Bulletin, "An Activity Program in the Social Studies for Kindergarten and Primary Grades." (4) Book committee. (Recommendation made concerning books to be purchased for next year.) (5) Records of junior primary work looking toward a bulletin. (6) Lesson plan committee. (7) Committee on evaluation of original songs and poems by the children. (This work has been in progress for two years and is now ready to go to press.)

(b) Decided growth in work of experienced teachers. (Occasioned largely by demonstration and committee work.)

(c) Continued growth of probationary teachers. (Occasioned largely by meetings, demonstrations, conferences, and visits of helping teachers.)

(d) Closer cooperation and better understanding on part of principals. (Occasioned by conferences and demonstrations for principals and by bulletins issued.)

(e) Marked growth in teacher initiative as shown in committee, research, and experimental work.

(f) A better understanding of a broad and varied reading program.

(g) Growth of children's use of library reading copies and in children's records of reading done.

(h) Growth in teachers' ability to place responsibility on the children. (Group planning, group criticism of results, and children's committees.)

(i) Improvements in music and art work in all lower grades—special skill shown in creative work.

*Supervisory aids.*—Two ways of using demonstration lessons as effective help for teachers have been reported from Seattle<sup>60</sup> and Baltimore.<sup>61</sup> For the past four years Seattle has designated one entire school building as a demonstration center. The school exem-

<sup>60</sup> Triennial Report of the Public Schools. Seattle, Wash., 1930.

<sup>61</sup> Annual Report of the Board of School Commissioners. Baltimore, Md., 1929.

plifies approved teaching method and superior teaching technics and the program for making it an effective agency for helping classroom teachers throughout the city has developed gradually.

At scheduled times teachers from other schools within the city observe the work of the demonstration teachers. Following the observation they join in a discussion with the teacher in charge, the principal of the school and other visitors. Teachers report that this program of seeing classes in action gives them a clearer idea and leads to more lasting impressions than does participation in abstract discussions.

This plan for aiding teachers also gives the supervisory and administrative staffs an opportunity to study problems related to their particular fields of work before city-wide recommendations are made.

In Baltimore<sup>62</sup> after-school demonstration courses for teachers were offered in seven centers for the intermediate grades, and eight centers for the primary grades. This type of teacher-training in service was started in 1925 when new courses of study contained new material and new methods of teaching were required.

In order to make these courses of study effective, a series of demonstration lessons was given for principals and later for teachers. The interest in these lessons was so great that plans were made to develop them into extension courses of college grade carrying college credit. Centers were organized in various sections of the city in grades 4, 5, and 6, the classes enrolling for two hours a week throughout the year. The initial registrations were so heavy that the number of centers was immediately doubled and the following year centers were opened in the kindergarten and grades 1, 2, and 3.

In the four years the courses have been offered, about 80 per cent of the teachers in the elementary schools of Baltimore have been in regular attendance for at least one year.

Teachers of exceptional ability are chosen for demonstration work and placed in school centers which are accessible for a large section of the city. All demonstrations are held after school hours, in order that there may be no interruptions to the regular work of the schools. No difficulty has been experienced in securing the voluntary attendance of pupils at these 4 o'clock sessions.

Alabama has offered its teachers reading circles, supervisors' study courses and extension classes as part of the supervisory program for the State. An indication of the progress in professional spirit among the teachers is shown by the large number enrolling. The trend is toward enrollment in extension classes and away from study circles. During the year 1929-30 there were 45 per cent of the 16,795 negro and white teachers enrolled in these extension courses.

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<sup>62</sup> Annual Report of the Board of School Commissioners. Baltimore, Md., 1929.

Talking pictures, introduced within the past two years by a research division of a commercial electric company, have contributed a new device for in-service training for teachers. The subjects for these pictures have been chosen and their development supervised by highly trained educational specialists. Limitations of time and space are eliminated by the pictures which bring lectures and classrooms in operation before a group of teachers prepared to study the teaching technics and the underlying educational philosophy presented. These pictures have an advantage over observation of actual classrooms in that it is possible to repeat incidents or sections of the film and verify activities or clear confused ideas. The range of possibility for service offered by these films is practically limitless.

One rather strategic opportunity for cooperation which can be a material aid to supervision is the large group of teachers' professional organizations. In some instances, the teachers' clubs are for purely social purposes or for a combination of social and professional work. In other instances, the meetings formerly called by supervisors are incorporated in educational programs planned for the teachers' club. In still other instances, the topics presented in the supervisory meetings become material for discussion groups sponsored by the teachers' club. Such discussions offer opportunity for teacher-initiated studies of school procedures. State and national relationships of teachers' organizations are helping to broaden local points of view and to arouse widespread interest in new methods and materials of education.

The value of assistance for supervision from a division of educational research can not be overestimated. A continuing survey of the measurable products of instruction throughout a school system gives an objective picture of achievement and indicates the points of strength and weakness in school instruction. Both survey and diagnostic testing programs suggest to the supervisory force bases for revisions of curricula, methods of teaching and of classroom organization as well as for remedial work to improve both group and individual performance. The following quotation illustrates a supervisor's use of a testing program:

A comprehensive diagnostic testing program in the fundamental operations of arithmetic was administered at the beginning of the term in September, 1929. School, district, and city summaries of results were analyzed and general diagnosis was made. Supervisors of the division visited principals in the several schools and planned with them detailed remedial procedures suggested by the analysis of test results. One of the first needs that developed through these contacts was that of satisfactory drill and test material in the fundamental operations. In consequence, supervisors and principals designed material to aid in the correction of individual and group difficulties. \* \* \*

On a basis of these general recommendations teachers and principals were encouraged to work out procedures which were likely to produce the greatest improvement in pupil performance in each local school and class situation. As an aid to school and class diagnosis, a progress chart was designed and a procedure developed for the maintenance of individual pupil records on the several subtests, each of which represented a particular type of difficulty in the fundamental operations.<sup>62</sup>

Arguments in favor of active participation by teachers in the program of research are given in the 1930 report from the board of education of the city of St. Louis.<sup>64</sup>

In general, the purpose in the use of tests is to improve the educational situation for the particular child tested. Benefits will not accrue to a child by homogeneous grouping, segregation, retardation, accelerated promotion, or any other kind of administrative device, except in so far as the device contributes to an improvement of the conditions upon which learning depends. If the teacher is given sufficient liberty in adapting the curriculum, sufficient freedom in exercising her judgment as to method and technique, she will be able to diagnose most of her educational problems by using the various available tests and to apply the needed remedies. Principal and supervisor will help the teacher, of course, to interpret test results.

#### V. RESEARCH AND INVESTIGATION IN ELEMENTARY EDUCATION THE SERVICE OF RESEARCH TO ELEMENTARY EDUCATION

Compilations and analyses of research studies in all phases of elementary education testify to the continuing dependence of those concerned with the education of elementary-school children upon research and investigation as a means of answering important questions concerning the administration, organization, curriculum, and methods of the schools and measurement of the results of their practices. In a recent analysis<sup>65</sup> of the amount and character of scien-

TABLE 9.—Amount of research produced in various levels of education

Level	1920-1929		Total for 40-year period	
	Number of articles	Per cent	Number of articles	Per cent
Elementary.....	597	29.85	932	22.86
Elementary-secondary.....	124	6.2	203	7.16
Secondary.....	520	26.0	756	26.65
Secondary-higher.....	44	2.2	67	2.36
Higher.....	715	35.75	879	30.98
Total.....	2,000	100	2,837	100

<sup>62</sup> Report of Division of Educational Research and Results. School District of Philadelphia, June 30, 1930, p. 52.

<sup>64</sup> Seventy-sixth Annual Report of the Board of Education. St. Louis, Mo., 1930.

<sup>65</sup> Franke, Paul B., and Davis, Robert A. Changing Tendencies in Educational Research, *Journal of Educational Research*, 23: 133-145.

tific research in education in representative educational periodicals over a period of 40 years, the authors concluded that although the greatest increase in research in the last decade has been in the level of higher education, nevertheless in total research over the 40-year period "the elementary level has been considered the most important by research workers."

Irrespective of the school levels it is interesting to see which fields of education and which research methods have received greatest emphasis in the last decennial period.

TABLE 10.—Amount of research in various fields, 1920-1929

Field	Number of articles	Per cent
Educational measurement and statistics.....	844	42.20
Administration.....	233	11.65
Methods.....	189	9.45
Curriculum.....	161	8.05
Educational psychology.....	140	7.00
Teacher training.....	125	6.25
Guidance.....	119	5.95
Child-psychology.....	102	5.10
Character.....	72	3.60
Physical education.....	15	.75
Total.....	2,000	100

TABLE 11.—Amount of research produced by each method, 1920-1929

Method	Number of articles	Per cent
Statistical.....	852	42.37
Experimental.....	514	25.56
Questionnaire-correspondence-interview.....	303	15.06
Job analysis, activity analysis, social survey.....	206	10.24
Comparative-survey.....	88	4.38
Case studies.....	31	1.54
Historical-legal.....	17	.85
Total.....	2,011	100

#### AGENCIES CONDUCTING RESEARCH

Many agencies—National, State, and local—and many individuals are contributing in this field of educational work. Some description of their programs and publications in phases of elementary education may serve to indicate the extent and character of the work now being carried on.

National professional organizations of teachers, principals, supervisors, and others tend to pass through three stages—organization, expansion of membership and program, research or investigation of problems within their own fields. Some of these research programs are very extensive, including the organization of nation-wide committees for several years of work, and the publication of year-

books or other summaries. Some are less extensive, serving rather to foster and publish the results of individual study. The published results of the research in elementary education of some of these national professional organizations are listed below:

TABLE 12.—*Published research in elementary education by national professional organizations, 1928-1930*

Organization	Form of publication	Title of publication	Character of publication
Department of Superintendence of the N. E. A.	Seventh year-book, 1929.	The Articulation of the Units of American Education.	Studies and summaries of studies bearing on articulation problems of different levels.
Department of elementary School Principals of the N. E. A.	Seventh year-book, 1928.	The Elementary School Principalship.	Reports of investigations conducted under the direction of the committee and also independently on standards and training for elementary principalship.
National Conference of Supervisors and Directors of Instruction (now department of N. E. A.).	Eighth year-book, 1929.	Activities of the Principal.	Studies of administrative and supervisory activities of the principal.
	First yearbook, 1928.	Educational Supervision.	Individual contributions in (1) organization of supervision; (2) activities and training of supervisors; (3) technique; (4) philosophy.
	Second year-book, 1929.	Scientific Method in Supervision.	Individual contributions on present status, various techniques in supervision.
Department of Classroom Teachers of the N. E. A.	Periodical.....	Educational Method	Shorter reports of experiments and practices.
	Third year-book, 1928.	Problems and Opportunities in Teaching.	Reports unusual opportunities in teaching, teaching standards, teacher load, and activities of teacher organizations.
	Fourth year-book, 1929.	Creative Teaching and Professional Progress.	Descriptive accounts of creative activity.
National Society for the Study of Education.	Twenty-eighth yearbook, 1929.	Preschool and Parental Education.	A survey of the fields and bibliography of research.
National Council of Geography Teachers.	Twenty-ninth yearbook, 1930.	Arithmetic.....	Reports of modern thought and research in arithmetic.
	Periodical.....	Journal of Geography.	Contains reports of research as well as descriptive accounts of classroom activities.
National Council of Teachers of English.	Periodicals, reports, etc.	English Journal and Elementary English Review.	Contain reports of research as well as descriptive accounts of classroom activities.
National Council for the Social Studies.	Periodical.....	The Historical Outlook.	Contains reports of research as well as descriptive accounts of classroom activities.

Other national professional organizations, such as the Association for Childhood Education, the American Educational Research Association, and the National Council of Supervisors of Elementary Science report the formulation of research programs on important problems in their own fields.

The most extensive research combining the efforts of specialists in the fields of education, health, and social welfare was, of course, that of the White House Conference on Child Health and Protection. The following limited list of some of the studies carried on by various committees and individuals will serve to show the range of problems included and their implications for elementary education: The attitude of medical schools, physicians, and parents toward

health examinations; the utilization of preventive measures in both urban and rural areas; health service in rural areas; the home environment of 8,000 school children; social and economic factors affecting family life to-day; standards of expenditures for adequate provision for children; survey of institutions for the education and training of young children; survey of the education and training of the young child in the home; the school health program; the training of teachers for the responsibilities of the health program; child labor laws; and the recreational facilities for school children.<sup>66</sup>

The point of view of State departments of education in establishing research programs seems to be well stated by Dr. W. J. Osburn in describing the work of the Division of Educational Research of the Ohio State Department of Education, when he says that research is becoming increasingly necessary in the development and administration of a State's educational policies. Many State programs include research and investigation in problems pertaining to the elementary field. The following brief list of studies selected from those reported by State departments of education for the year 1929-30<sup>67</sup> will indicate something of the types of studies carried on by State departments:

TABLE 13.—List of research studies, 1929-30

Type or field of study	Title	State
Survey.....	A survey of educational conditions in rural and city schools in Wisconsin.	Wisconsin.
Do.....	Census of handicapped children in Iowa.....	Iowa.
Do.....	Rural school conditions in general, including equalization, school taxes, and all school problems.	Michigan.
State-wide testing.....	Achievement of North Dakota high-school pupils in the minimum essentials of English.	North Dakota.
Curriculum principles.....	Guiding principles, educational objectives, and committee members for the elementary curriculum revision.	South Dakota.
Do.....	Guiding principles of elementary curriculum revision for the State of Indiana.	Indiana.
Curriculum evaluation.....	Report form for evaluation of course of study.....	Do.
Method.....	Present practices in health teaching in elementary schools.....	New York.
Teacher supply.....	A study of teacher supply and demand and teacher training in the State of Oregon.	Oregon.
Age-grade.....	Age-grade conditions in Maryland county colored schools as of November, 1929.	Maryland.
Pupil accounting.....	Uniform financial and child accounting system for Alabama.	Alabama.
Costs.....	A study of elementary and high-school costs in districts maintaining class A high schools and high-school departments.	Minnesota.

State teachers' associations, although probably most concerned with tenure, salary, certification, and related problems, do, however, engage in other types of studies, as is shown by the following illustrations

<sup>66</sup> White House Conference. New York, The Century Co., 1930.

<sup>67</sup> Educational Research Studies of State Departments of Education and State Education Associations. Edith A. Wright. Office of Education Circular No. 31.

also from Office of Education Circular No. 31, all of which concern phases of elementary education:

TABLE 14.—Types of studies reported by State teachers' associations

Type or field of study	Title	State
Objectives	Objectives in arithmetic	Oregon.
Principalship status	Standards and status of the elementary school principalship in North Carolina.	North Carolina.
Teacher supply	The relation between the demand and supply of elementary teachers in Ohio in 1928-29, with special reference to the question of raising the statutory training requirements for admission to the profession.	Ohio.
Child accounting	Uniform child accounting system for Iowa	Iowa.
School-study progress	The school-study progress of the transported pupil	Washington.
State aid	A study of State aid for public education	South Carolina.

Because of their close association with the actual classroom work research divisions in city schools are in a strategic position to make contributions in the fields of setting up performance standards or goals, experimental testing of methods and materials, and case studies of pupils' physical, intellectual, and emotional development. Although many city research divisions must devote a large proportion of their efforts to phases of administrative research, some of the most valuable contributions to elementary-school administrative and instructional improvement have been made by them. The following titles of studies in elementary education reported by several city research divisions show something of the variety of their work:

*Baltimore.* Educational investigations concluded or in progress, December, 1930: Similarities of bright and dull children; geography achievement in our junior high schools; arithmetic test results of 7B's; semiannual city-wide test survey; record of children's response in kindergarten activities; characteristics of bright and dull children; health education course of study; relative difficulty of primary readers; suggestions for teaching reading to slow children; curriculum units of intermediate grades; a supervisory study of remedial instruction in the solution of arithmetic problems; spread of ability in arithmetic and its relation to promotion and curriculum revision; experimental determination of course of study materials in geography and history; adaptation of curriculum to dull and bright pupils; standards of promotion; migrant school child inquiry; influence of environments upon school attendance.

*Los Angeles.* Third Yearbook of the Psychology and Educational Research Division (School Publication No. 185, 1929): Service and studies in elementary schools: A. Surveys with standardized tests; B. Special classes for children who are superior in mental ability, educationally retarded and slow learning, nonreaders, underweight or anemic, subnormal; C. Research studies: An experiment in grading and classifying; predicting ability in art; reading readiness in children entering first grade; personality traits of children of superior intelligence in special classes and in regular grades.

*Houston.* Reported in Office of Education Circular No. 18 (for 1929-30): Effect of setting up curriculum schools on the achievement in such schools in the fundamental subjects compared with the achievement in other schools not

so designated; the effect on achievement of compelling personal hygiene and supplying free breakfasts to pupils in all foreign language speaking families; determine the score necessary on the Park-Franzen test which will indicate readiness to do first-grade work; a study of grade-placement of primers and first readers; a study of the effect of increasing the amount of silent reading in the high fourth grade and diminishing oral reading; a study of natural science reading materials; a study to increase speed in a high second grade; the effect on school achievement of changing the age of entrance from 7 years to 6 years; a study of the effects of proper health habits upon school children's work; a study of the problem of teaching English to foreign-speaking children.

Of particular importance in the work carried on by city research divisions is the growing interest in problems which extend over a period of years. Educational research has been criticized by workers in other fields because of its emphasis upon immediate results. Two studies, each of which extends over a period of several years, are of sufficient interest to be described briefly:

In Berkeley, Calif., the Bureau of Research and Guidance of the Public Schools, with Dr. Virgil E. Dickson as director, is conducting a 5-year study of problem children. The purpose of the study is to discover the most serious behavior problems of about 200 pupils ranging from kindergarten to high school, to analyze the causes of such maladjustments, and to demonstrate the effectiveness of a guidance program which includes the services of physicians, psychiatrist, and social worker. The progress of a group of pupils in correcting their behavior difficulties with such specialized counseling is to be compared with that of two other groups: (1) A group of problem pupils who are receiving only the usual school guidance; and the other, a group of normal children chosen to parallel the experimental group in age, grade, and intelligence. Standardized tests, behavior rating scales, and the opinions of the specialists concerned will be used as measures of progress. Such a study will give us exact information concerning the efficacy of methods of counseling.

In Detroit a valuable experiment has been conducted by the Department of Research during 1928-1930 to measure the effectiveness of several different types and degrees of individualization. In this experiment, involving approximately 13,000 children, 13 elementary schools were organized and instructed on six plans of individualization—the Dalton, the Winnetka, the Detroit, mass instruction, informal individualization, and vertical grouping. The effectiveness of these plans was judged both as to their effects upon pupils' development and as to the feasibility of their operation. An elaborate measurement program included tests at the beginning and end of the 2-year period. In discussing large-scale experimentation Doctor Rankin, director of research, says: "If control experiments had

been carefully conducted on all questions of educational method and materials, and if practice had been changed to conform to the findings, we should be much nearer an educational Utopia than we are at present."<sup>68</sup>

University and college graduate schools and bureaus of educational research contribute each year a very great number of studies pertaining to elementary education. In some cases a series of related studies is undertaken in a certain field, the sum total of which may result in recommendations of very considerable significance. The graduate studies in reading at George Peabody College, the series of "Studies in Character" from the Institute of Character Research at the University of Iowa, the series of circulars from the Bureau of Educational Research at the University of Illinois on how to make courses of study in the different subjects, illustrate the possibilities that schools of education have to influence educational thought and practice. A recent compilation of studies on why pupils fail included 20 which were reported to the Office of Education as being completed during 1927-1929, all but five of which were graduate studies undertaken at a college or university, with such specific titles as "Studying individual differences of pupils with teachers for the purpose of explaining some reasons for failures," "Causes of failures in junior high school among boys of superior intelligence," "A study of causes of failure of pupils in grades 7, 8, 9."

Some of the most helpful material for elementary-school use comes from experimental and demonstration schools of universities and colleges. The following statements received from directors and supervisors of several schools in reply to a letter asking for materials developed experimentally show the contributions made by them and often available in published form:

A. University Elementary School, School of Education, University of Missouri. Dr. C. A. Phillips, director.

"1. We have written material covering all early Americans. \* \* \* This is third and fourth grade material in our curriculum. In this the geography and history are very well integrated. \* \* \* All sorts of activities are featured in connection with the work.

"2. For five years we have been developing the teach-test-study technique in spelling.

"3. For three years we have been attempting to build a course of study in music, based on children's activities and interests in that field.

"4. For three years now we have been attempting to discover children's interests in certain art matters, beginning with our kindergarten.

"5. For five years we have been attempting to discover children's interests in the various types of reading materials. This study has gone on in connection

<sup>68</sup> Rankin, Paul T. The Technique of the Large-Scale Experiment. *Journal of Educational Method*, 8: 499-504.

with books of a juvenile character, but we have written for our own use a large number of stories of home life and relating to our nature environment and other matters.

"6. A very interesting study has been carried on in our kindergarten for three years in which we have attempted to discover children's responses to the various types of rhythm."

B. The Lincoln School of Teachers College. Reported by Gertrude Hildreth, of Lincoln School.

"The unique contributions of the Lincoln School to elementary education include four major achievements—curriculum construction with resulting alteration and improvement of methods and equipment; the construction of new materials of instruction, particularly textbooks and supplementary reading material; provision for creative expression through inclusion in the program of opportunities for self-expression, and the development of a new field of learning and instruction, 'creative music'; the objective study of pupil progress through the use of standardized procedures, the results of which are used in educational guidance and in improving individual pupil adjustments."

The curriculum construction of which Miss Hildreth speaks has eventuated in a series of curriculum units for elementary grades.

C. State Teachers College, Milwaukee, Wis. Dr. Adelalde M. Ayer, Director of Training.

"1. For three years we have been experimenting with report cards in order to do away with the many evils that come from the ordinary system of reporting marks \* \* \*. In this plan children do not see their report cards at all and only with a few children are marks ever discussed or comparison ever made. Instead, each teacher has individual conferences with the parents four times a year (this may be cut down to three times later). In these conferences emphasis is particularly put on character traits and habits of work.

"2. Gradually the entire school is being put on an activity basis. That is as true of the upper grades as of the primary grades."

The "Curriculum Series" reports the activity curriculum.

D. University Elementary School, College of Education, State University of Iowa. Maude McBroom, Principal.

"1. *Music*: Experimental work with method and material to substantiate the theory that music can and should be a matter of leisure and should be enjoyed by all school children.

"Course of study for listening lessons in music; units in correlation of music and literature; course in music for first six grades.

"2. *Reading and literature*: Experimental work with appreciation work, what some of the most profitable methods have been in literature.

"Skills necessary in use of index; survey of the course of study in reading, giving a general outline of what to teach; favorite poems of children in different grades; overlap of teachers' and children's choices in poetry; books which will develop world friendliness.

"3. *Spelling*: The efficiency with which children can be expected to learn to spell in 15 minutes daily 2,840 of the commonest words in writing; the effect of excusing children entirely from the study of spelling, when they make high scores on pretests over the words to be studied.

"4. *Character education*: Experimentation with types and organization of student council over a period of four years; Experimentation with citizenship

sheets as a means of getting desirable character results; Experimentation with the delivery of responsibilities of the school into the hands of children; Rating of habit formation in junior primary to determine the feasibility of using such a scheme in an ordinary public school.

"5. *Social studies*: An endeavor to make some sort of tests or objective criteria for determining, in part, readiness of children to enter grade 1 from kindergarten.

"Curriculum units in Indian history; pioneer history; farm life; history of transportation and communication; food, clothing, and shelter; the clay and pottery industries; the forest industries; fuel and power; the steel industry; the history of agriculture in the United States; our relations with South America; how the race has put itself on record; the history of the improvement of health conditions. Strong and weak points of the socialized recitation after several years of experimentation.

"6. *Number*: Course of study for kindergarten and first six grades built on ideas of child growth.

"Informal tests to measure child's mastery of concepts in junior-primary.

"7. *Language*: Course of study in written composition; Course of study in oral composition; Course in voice training.

"8. *Science*: Attempts to arrive at what to teach in science.

"Experimentation with (1) children's interest in given units of study, (2) grade placement of certain units in science, (3) the arrangement of units around problems."

A large number of nursery schools are conducting research in child development; in fact, a fourth of the schools listed in 1929-30 report research in child development as one of their major purposes. These programs of research not only reveal information about child development but also are concerned with techniques of conducting research so that the approach to children can insure as natural a response as possible and reduce refusals to respond to a minimum. Until the organization of the nursery school as a laboratory it was difficult to find access to groups of young children in natural surroundings for observational and experimental purposes. Neither was it possible to offer a neutral ground for the integrating of research conducted in such a variety of fields as education, psychology, medicine, nutrition, sociology, etc. Many of the nursery schools acting as laboratories of research are located in universities where the several colleges and departments have access to the laboratory under certain regulations which protect the children from an oversupply of observation. Other research laboratories are organized as independent units or as part of the research program of public-school systems.

Difficulties which research in this field of work encounters are the comparatively few children available for observation and study considering the thousands of children of preschool age in the United States. This creates a danger that generalization will be made from inadequate data. Two other difficulties are the short span of atten-

tion of young children and the speed of their growth and development. Despite these difficulties studies are providing data which should be helpful to everyone working both with children of preschool age and with those of school age.

#### SUMMARY

In conclusion, attention may be called to three types of research and investigation of particular value in elementary education, and in which continued interest and activity should be profitable:

1. Summaries of studies in a single field.

The summaries of investigations in reading by Dr. W. S. Gray, in arithmetic by Dr. G. T. Buswell, in language, grammar, and composition by Dr. R. L. Lyman, in spelling by the Catholic University, are all published periodically, thus presenting a continuous record of research findings in these fields. The abstracts or summary statements of the studies multiply the usefulness of the lists. Summaries in other fields, such as study techniques, tests and measurement, pupil accounting, pupil success and failure, would likewise serve to keep workers in the field informed of the results of others' study.

2. Controlled experimentation.

The table on page 53 records the fact that during 1920-1929 about one-fourth of the researches reported in periodicals made use of experimental techniques. This is a higher percentage than a casual examination of most bibliographies of research would indicate. In fact a very careful examination of a report of more than 200 studies in techniques of history teaching revealed fewer than 30 of them to be experimental. This field of the experimental testing of methods of teaching is one in which classroom teachers should help.

3. Case studies.

It is only natural that a majority of researches have dealt with the reactions, activities, interests, and performances of large numbers of cases, in attempts to discover ranges and central tendencies. However, case studies of the learning and behavior difficulties of individuals are adding much to our knowledge of the causes and remedial and preventive measures for such difficulties. The following studies reported in Office of Education Bulletin, 1930, No. 23, indicate how valuable such case studies may be in various fields of elementary education:

1. Hallett, Blanche Mc Nerney. Case study of Ralph ———.
2. Felton, Mrs. B. S. An observational study of the behavior of a preschool child from notes taken by a mother in the home during a 2-year period.
3. Warth, Ellen Wood. A study of the nutrition of a preschool child.

4. Webb, Elmer Ione. Vocabulary of a kindergarten child in a limited sphere of summer activities.

5. McMaster, David D. Case studies of failing pupils in seventh year reading and arithmetic.

6. Carter, H. L. J. An attempt to meet the needs of a group of misfit and retarded children.

It is to be expected that continued research and investigation will develop improved case study techniques which will facilitate the study of the problems of those pupils who vary markedly from the normal in learning and behavior situations, so that schools may, to a greater extent than they now do, make provision for individual differences.

