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BIENNIAL SURVEY OF EDUCATION IN THE UNITED STATES 1928–1930

CHAPTER III
SECONDARY EDUCATION

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CHAPTER III

SECONDARY EDUCATION

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CONTENTS.—The numbers of schools and pupils—Reorganization—Junior college—Private secondary education—The curriculum—Articulation—National survey of secondary education—Conclusion.

Among the many factors in the recent development of secondary schools in the United States the following appear to be of especial significance and for that reason have been selected for treatment in this article: (1) The numbers of schools and pupils; (2) the reorganization movement which presents the junior high school as its outstanding contribution to education; (3) the growth in junior colleges; (4) the important part played by private secondary schools; (5) the interest in curriculum revision; (6) the articulation of units which offers especial difficulties for secondary schools; (7) the cooperative attack on the problems of secondary education through an extensive survey national in scope.

THE NUMBERS OF SCHOOLS AND PUPILS

The latest statistics on a national scale available at the time of writing are for the school year 1927–28. In that year 18,116 high schools of all types filed reports with the Office of Education indicating a total enrollment of 4,217,313 pupils. Since some high schools requested to file reports did not do so, it is understandable that the above figures do not represent a complete count. There are on the mailing lists of the Office of Education 22,354 high schools which, according to the best information obtainable, were in operation during the school year, 1929–30.

A feature in the development of secondary education has been the steady increase in the average size of high schools. In 1918 the average enrollment was 124 pupils; in 1920, 133; in 1922, 178; in 1924, 199; in 1926, 211; in 1928, 233. While no one has ascertained in a scientific way what the optimum size of school should be, it is quite

generally agreed that certain obstacles to efficient and economical operation are encountered in the extremely small high school. It is, therefore, significant that the average registration has increased 88 per cent during the 10-year period and that the average gain in enrollment between 1920 and 1928 was 100 pupils per school. That this average size is affected by mounting enrollments in a relatively small number of large high schools is unquestioned; that it would be affected in the opposite direction by a large addition of small high schools is equally true.

REORGANIZATION

In 1928 the Office of Education had record of 4,885 reorganized high schools; that is, high schools which due to a reorganization of units were no longer parts of a system having an elementary school seven or eight years in length followed by a 4-year high school. This figure exceeds by 1,341 the number of schools which two years earlier reported that they had abandoned the 7–4 or 8–4 plan for some type of reorganization. The biennium before that showed an increase of 996 in the number of reorganized schools. The percentage of increase is lower with each succeeding biennium, but the actual gain in the number of reorganized schools is steadily rising. The trends since 1922 may be studied in Table 1. Comparable data for the years before 1922 are not available.

TABLE 1.—*Number and types of reorganized high schools by bienniums, 1922 to 1928*[1]

Type of school	1922	1924	1926	1928
Total	1,566	2,548	3,544	4,885
Junior	387	879	1,127	1,566
Senior	91	181	414	632
Junior-senior	1,088	1,383	1,407	1,486
Undivided (5-year and 6-year)		105	596	1,201

[1] It is not possible to segregate the enrollments in these various types of schools for all bienniums represented in Table 1. It may be of interest to note the relationships which total enrollments in reorganized schools bear to total enrollments in all public high schools. In 1922, 23 per cent of all secondary-school pupils were registered in reorganized schools; in 1924, the percentage had risen to 30; in 1926, to 41; and in 1928, to 46. It is evident that in 1928 the reorganized schools, comprising slightly more than one-fourth of the high schools of the Nation, enrolled nearly one-half of the pupils.

It is apparent that the segregated school is found in increasing numbers. Consistent and significant gains have been registered since 1922 for schools which are units by themselves, namely, junior high schools and senior high schools. Nonsegregated schools, included in the table as junior-senior high schools, show only slight gain in numbers.

The most convincing increase has occurred in the case of undivided, i. e., 5-year and 6-year schools. Their number more than doubled

during the biennium 1926–1928. Losses occurred in only four States; no one of these States had any considerable number of such schools. Increases were distributed over 41 States and were most pronounced in those States which in 1926 had the largest number of undivided schools. Four States (Indiana, Michigan, Ohio, and Pennsylvania) in 1926 had 356 undivided schools; these same States had a total of 558 undivided schools in 1928. In 1926 there were only four States (the ones already mentioned) which had 20 or more undivided schools; in 1928, 14 States had 20 or more such schools. The trends indicate that the undivided school will shortly displace the junior high school as the reorganized school most frequently found.

The growth in the number of undivided schools is an indication that the reorganization movement is finding its way into smaller school systems. The junior and senior segregated schools have been developed principally in larger centers. Examination of the lists from which Table 1 was prepared quickly reveals that the undivided schools are located more often in smaller communities. In this connection it is of interest to note that the average of the enrollments in reorganized schools for 1928 was 401 pupils, a decrease from an average enrollment of 423 in 1926. Thus the trend in enrollment of reorganized schools is in the opposite direction from that observed to be operative in high schools generally.

Distributions of reorganized schools by States, for 1928 are given in Table 2. Parallel information for 1926 is to be found in the chapter on secondary education included in The Biennial Survey of Education, 1926–1928.

TABLE 2.—*Reorganized high schools classified according to type of organization, 1928*

State	Total	Segregated junior high schools									Segregated senior high schools							Junior-senior high schools												Undivided high schools							
		Total	Grades 6 and 7	Grades 6-8	Grades 6-9	Grades 7 and 8	Grades 7-9	Grades 7-10	Grades 8 and 9	Grades 8-10	Total	Grades 8-11	Grades 9-11	Grades 9-12	Grades 10-11	Grades 10-12	Grades 10-13	Total	Grades 6 and 7, 8-11	Grades 6-8, 9-11	Grades 6-9, 10, and 11	Grades 7 and 8, 9-11	Grades 7 and 8, 9-12	Grades 7-9, 10, and 11	Grades 7-9, 10-12	Grades 7-10, 11-12	Grades 8 and 9, 10-12	Grades 8 and 9, 10-13	Grades 8-10 11 and 12	Total	Grades 6-11	Grades 7-11	Grades 7-12	Grades 8-12	Grades 8-13	Grades 9-13	Unclassified
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Continental United States	4,885	1,566	3	40	8	216	1,118	154	22	5	632	3	31	171	1	426		1,480	12	15	2	18	592	3	829	5	8	2		1,201	32	52	925	103		1	85
Alabama	238	44				6	24	12	2		6		1			5		149					2		147					30		1	28	1			9
Arizona	23	3				1	2				3			2		1		8					6		2					9			5	4			
Arkansas	94	17				1	8	8			6			1		5		50					7		42		1			16		1	13	2			5
California	166	93				2	89	2			23			1		22		23					2		21					17			17				
Colorado	93	22				5	17				10			3		7		48					28		20					13			11	2			
Connecticut	38	21				1	20				5			1		4		3							3					9			8	1			
Delaware	5																	4					1		3					1			1				
District of Columbia	12	12					12																														
Florida	124	47					27	20			15					15		37					5		32					23			23				2
Georgia	44	18	1	1	3		10	3			7					7		7	3	1		3								11	2	5	2	2			1
Idaho	16	5				2	3				3			1		2		5					4		1					3			1	2			
Illinois	82	45				12	33				18			11		7		15				1	10		4					4			2	2			
Indiana	362	37				13	24				22			16		6		60				1	33		26					232		4	228				11
Iowa	187	41				14	26		1		25			11		14		91					56		33		3			27			19	8			1
Kansas	165	57				20	37				50			22		28		51					25		26					7			7				
Kentucky	88	14				3	10				6			3		3		39					21		18					29			29				
Louisiana	14	6				4	1	1			2		1		1			1	1											5	4	1					
Maine	51	13					6	5	2		13			4		9		19					8		10	1				6			4	2			
Maryland	23	14					14				1					1		8				1	3		4												
Massachusetts	253	145				32	111	2			59			20		39		29				1	18		8		1	1		18			15	2		1	2
Michigan	347	73				11	51	5	2	4	30			9		21		126					51		74					114			98	16			5
Minnesota	114	41				5	29	7			17			4		13		48					6		42					7			5	2			1
Mississippi	113	20				3	3	14			6			3		3		43				1	37	1	9					34		3	18	13			5
Missouri	149	35				7	25	3			21		3	5		13		69					32		37					21		1	19	1			3
Montana	22	7				4	3				4			4				6					6							5			4	1			

Nebraska	86	30				10	14	5	1		20			10		10		25					9		15			1		11			4	7			
Nevada	10	2					2				2					2		5					3		2					1			1				
New Hampshire	47	18				12	3	3			10		1	7		2		1					1							18			18				
New Jersey	73	44				3	40	1			17			2		15		8				1	4		3					2		1	1				1
New Mexico	14	2					2				1					1		10					7		3					1				1			
New York	213	86				1	81		4		10			1		9		86					49		36	1				30			19	11			1
North Carolina	27	8					5	2	1		1					1		7	3			2		1	1					10	3	4		3			1
North Dakota	25	6					5	1			2					2		15					10		5					2				2			
Ohio	372	103				11	87	4	1		46			11		35		81				1	40		40		1			132		2	123	7			10
Oklahoma	141	32				1	31				14					14		60					32		28					25			23	2			10
Oregon	27	10				4	6				16			4		12		1							1												
Pennsylvania	336	132				9	90	30	3		47			4		43		70					6		64					80		3	26	1			7
Rhode Island	12	8					7	1			2					2		1					1							1			1				
South Carolina	11	4				3	1				2		1	1				2	1			1								3	1	1		1			
South Dakota	17	6					6				3					3		4					1		3					4			4				
Tennessee	49	15					12	3			5					5		17					13		3		1			7			7				5
Texas	129	46	2	32	5	7					25	3	22					24	4	14	2	4				4				34	19	15					
Utah	59	33				2	20	5	5	1	7			2		5		15					9		5		1			4		1	1	2			
Vermont	49	4				2		2			2			2				20					16		1	3				20			19	1			3
Virginia	37	21		7			12	2			3		2			1		5				1	1		3					8	3	4	1				
Washington	44	12					12				5			2		3		22					10		12					3			1	2			2
West Virginia	167	76				2	63	11			14			2		12		20					2	1	17					54		5	48	1			3
Wisconsin	90	34				2	31	1			14			1		13		28					6		22					14			13	1			
Wyoming	28	4				1	3				2			1		1		14					11		3					8			8				

Comparison of Table 2 with the similar table for 1926, already referred to, shows that a loss in the number of reorganized schools occurred in only two States, namely, Louisiana and New Hampshire; the total loss was negligible—six schools in the two States. The increases are decisive. In 1926 eleven States had more than 100 reorganized schools; in 1928 seventeen States are so classified. In 1926 five States had more than 200 reorganized schools; by 1928 seven had passed this mark. No State in 1926 had as many as 300 reorganized schools; four States had by 1928 exceeded this figure by a considerable margin.

The detailed classification into types of reorganized schools reveals the 3-year junior high school of grades 7–9 to be ascendant in its class, the 3-year senior high school of grades 10–12 outstripping all competitors in its group, and the 6-year high school of grades 7–12 dominant among undivided schools. These three types predominated also in their respective classes in 1926. No pronounced movement is apparent in the junior-senior schools but a tendency toward the 3–3 plan consisting of grades 7–9 and 10–12 is discernible.

Because of enrollments and their importance special interest attaches to status and trends of reorganization in larger cities. In Table 3 is presented a summary of data secured for the school year 1929–30 in one of the studies conducted as a part of the national survey of secondary education. The returns, while incomplete, cover responses from 55 cities of over 100,000 population and from 102 cities of 30,000 to 100,000 inhabitants.

TABLE 3.—*Reorganization status and reorganization plans in larger cities, 1929–30*

Population size	Number of cities in which reorganized schools enroll—						Number of cities in which development is toward—										
	No pupils	1 per cent to 50 per cent of the pupils	51 per cent to 75 per cent of the pupils	76 per cent to 90 per cent of the pupils	91 per cent to 99 per cent of the pupils	All pupils	8-4	7-4	6-6	6-3-3	6-3-3-2	6-2-4	6-1-4	5-3-3	6-2-3	6-4-2-2	7-2-3
Total	26	8	17	18	9	79	11	3	6	107	9	4	4	5	2	1	1
55 cities of 100,000 population or more	7	4	10	9	4	21	5	2	1	35	5	1	....	3	....	....	....
102 cities of 30,000 to 100,000 population	19	4	7	9	5	58	6	1	5	72	4	3	4	2	2	1	1

It is of significance to note that only 26 of the 157 cities have taken no steps looking toward reorganization, while 79 report themselves entirely on a reorganized basis. Seventeen per cent of the cities have

no reorganized schools, 50 per cent have all schools on a reorganized basis, and the remaining 33 per cent are in various stages of reorganization. In four-fifths of the cities at least one-half of the pupils are attending reorganized schools.

These same city-school superintendents were asked to indicate the type of organization toward which their respective school systems were developing. With the exception of four cities this trend was indicated as being definitely in the direction of some one form of organization. A glance at this section of Table 3 reveals how extensively the school systems of larger cities are committed to the 6–3–3 type of organization, sometimes with the addition of a junior college. Another interesting fact is that while, as stated in the preceding paragraph, 26 cities have introduced no reorganization plan, only 14 of these 26 are apparently committed to continue organization on the 8–4 or 7–4 basis.

JUNIOR COLLEGE

Just as the junior and undivided high schools represent extensions of secondary education into years formerly regarded as belonging to elementary education, so the junior college evidences the expansion of secondary education into years formerly reserved for the college.

In the majority of cases where the junior college has been introduced it has been added as a 2-year institution to an already developed 11-year or 12-year system. In some cases it has become part of an extensive reorganization plan. Among innovations may be mentioned the plans of the reorganization of secondary education into two 4-year units in Hillsboro, Tex., and in Pasadena, Compton, and Ventura, Calif.; the development of 4-year institutions representing consolidation of high-school and junior college years in Johnstown, Pa., and Stephens College, Columbia, Mo.; and the experimental plans which have been evolved for articulation of high schools and junior colleges and for economizing the time of pupils in Tulsa, Okla., Kansas City, Mo., and Joliet, Ill.

According to a directory compiled in the fall of 1930 by Doak S. Campbell, secretary of the American Association of Junior Colleges, there were 436 junior colleges in existence in the United States; 178 of these were classified as public and 258 as private.[1] The number and growth of public and private junior colleges, as well as their enrollments, are shown in Table 4, which has been compiled from studies made at various times between 1921 and 1930.

[1] The directory is published in the January, 1931, issue of the Junior College Journal, Stanford University Press.

TABLE 4.—*Growth in number and enrollments of junior colleges, 1921 to 1930*

School year and authority	Total		Public		Private	
	Colleges	Enrollment	Colleges	Enrollment	Colleges	Enrollment
1	2	3	4	5	6	7
1921–22						
Koos, Leonard V.: The junior college. Education Series, No. 5. University of Minnesota, 1924	207	[1] 16, 121	70	8, 439	137	7, 682
1926–27						
Koos, Leonard V.: Recent growth of the junior college. School Review, April, 1928	[2] 325	[3] 35, 630	136	20, 145	189	15, 485
1927–28						
Whitney, Frederick L.: The junior college in America. Colorado State Teachers College, 1928	382	[4] 44, 372	146	24, 777	236	19, 595
1930–31						
Campbell, Doak S.: Directory of the junior college. Junior College Journal, January, 1931	436	[5] 74, 088	178	45, 021	258	29, 067

[1] A number of colleges did not report enrollment.
[2] Includes 18 junior colleges beginning operation 1927–28.
[3] Enrollments for 41 colleges are not included.
[4] Enrollments were not reported for ten colleges.
[5] Enrollments for 4 public and 6 private institutions were not reported.

Due to the failure of some institutions to report enrollments, averages derived from figures in Table 4 carry conviction only for certain years. If one makes the necessary subtractions from the figures from 1926 and 1930, one arrives at an average enrollment of 125 for the earlier year and 174 for 1930. In 1930 the average enrollment was 259 for public junior colleges and 115 for private institutions. The means are, however, somewhat misleading, since a few large institutions raise the averages materially. From data gathered by Doak S. Campbell [2] during the school year 1928–29 it is apparent that one-half of the junior colleges at that time had enrollments of 85 or less. That even this small registration represents considerable increase is clear when one remembers that Leonard V. Koos [3] found the median enrollment in junior colleges, 1921–22, to be 47.

This reported increase in median size is in part due to greater care exercised in locating new junior colleges. During the past two years outside experts were called in to study the situations in Boise, Idaho,[4] and in Siskiyou County, Calif.,[5] preliminary to the establishment of

[2] Campbell, Doak S. A Critical Study of the Stated Purposes of the Junior College. George Peabody College for Teachers, 1930, p. 7.
[3] Koos, Leonard V. The Junior College. 2 vols. University of Minnesota, 1924, p. 11 of vol. 1.
[4] Dr. Leonard V. Koos, of the University of Chicago, made this study. The report was printed by the board of education, Boise, Idaho, September, 1930.
[5] Nicholas Ricciardi, Ira W. Kirby, William M. Proctor, and Walter C. Eells. Junior College Survey of Siskiyou County, Calif. Board of Supervisors of Siskiyou County, Yreka, Calif., 1929.

junior colleges. In both of these surveys anticipated enrollments as well as ability of the districts to finance the added unit were considered.

A survey recently conducted in Western Pennsylvania[6] likewise inquired carefully into the number of students that might be expected to attend. Other local studies of similar nature are known to have been made in various sections. It is apparent that accrediting standards, State laws, and surveys are influencing people to weigh such important factors as supply of pupils and ability to finance the new unit when the question of establishing a junior college is under consideration.

An important decision affecting the junior college was rendered in August, 1930, by the Supreme Court of North Carolina. This decision affirmed the right of the board of education in Buncombe County to operate a junior college as a part of the public-school system and to pay expenses of its operation from public funds. The decision brings to mind that of the famous Kalamazoo case of 1874 which settled the issue of use of public funds for high-school support.

There was begun during the biennium a national study dealing with the history, mental and scholastic rating, persistence in school, and judgments of students who graduated from junior colleges between 1926 and 1929 and then continued their education at regular colleges or universities. Registrar Wyatt W. Hale, of Birmingham-Southern College, holder of a Phi Delta Kappa fellowship, is in charge of this study, which is conducted with the cooperation of the national survey of secondary education. The study repeats in part on a national scale significant inquiries which have been conducted in the field of student personnel by Dr. Walter C. Eells,[7] of Stanford University.

PRIVATE SECONDARY EDUCATION

To the provisions for education on the secondary level already described should be added the important facilities available in private secondary schools. In 1930 reports were received by the Office of Education from 2,760 private high schools and academies having an enrollment of 309,052 pupils. Nearly three-fourths of these schools are under some type of denominational control; more than one-half of them are Roman Catholic in affiliation.[8] The number of

[6] Morris, John T. Considerations in Establishing a Junior College. Contributions to Education No. 348. Teachers College, Columbia University, 1929.

[7] See reports made before the ninth and tenth annual meetings of the American Association of Junior Colleges, as well as the California Junior College Mental-Educational Survey, published by the California State printing office, Sacramento, in 1930.

[8] For a discussion of the growth of these schools see Francis M. Crowley's article, Rapid Development of Catholic High Schools in the Past Decade, in February, 1929, issue of SCHOOL LIFE, Washington, D. C.

nonsectarian schools has fluctuated from time to time but has not materially changed during the last 25 years; the number of students registered in them has, however, increased nearly 60 per cent during this period.

Reports have appeared of results of two extensive testing programs administered in private schools during the biennium. One of these reports is entitled "The Educational Achievement and Interests of Independent School Children, 1929–30."[9] The other is included in Leonard V. Koos's book on Private and Public Secondary Education.[10]

Doctor Koos finds from the study of more than 14,000 test scores of pupils in denominational and independent schools that the pupils of denominational schools excel those of public schools slightly in mental ability, while the pupils of independent schools are distinctly superior mentally. He finds further that in achievement "typically, although not universally, they (public schools) compare favorably with all groups but the independent schools—in a few only of the measures taken do these schools (independent schools) not rank highest." In the report of the Educational Records Bureau results are analyzed of approximately 40,000 tests administered in independent schools. The same superiority of the independent-school group is noted here as in Doctor Koos's findings. It is found that as measured by intelligence tests 62 per cent of the pupils in independent schools studied are recruited from the upper fifth of a normal distribution of American children. The achievement of these pupils is high but the significant statement is made that "it is doubtful that the academic superiority of independent school pupils is as great as their intellectual superiority warrants."[11] The same implication is present in Doctor Koos's comment on his findings.

In both studies it is observed that great variation exists among schools of the same general classification and among pupils in the same school. Consequently the reader is repeatedly warned not to apply the generalizations to specific schools or to individual pupils.

THE CURRICULUM

Interest in the curriculum during the decade stimulated the production of a number of studies and yearbooks national in scope. There passes in review a series of yearbooks of the Department of Superintendence on the curriculum and on articulation. The

[9] Published by Educational Records Bureau, 437 West Fifty-ninth Street, New York City. Earlier reports for the years 1927–28 and 1928–29 have also been published by this bureau.

[10] Published by the University of Chicago Press, 1930.

[11] Quoted from the report, p. 182.

National Society for the Study of Education published one of its yearbooks on the curriculum, another on the extracurriculum, and a number on individual subjects of the curriculum. The Office of Education made studies in 1922 and 1928 of enrollments by subject in grades 9 to 12 for the United States as a whole. The Institute of Administrative Officers of Higher Institutions gave its 1929 meeting to discussion of the junior-college curriculum. In the subject fields mathematics was represented by the report of the National Committee on Mathematics Requirements [12] and foreign language by the Classical Investigation [13] and the Modern Foreign Language Study.[14] As this is written national inquiries in English [15] and in social studies [16] are in progress in addition to the curriculum studies described elsewhere in this chapter as a part of the national survey of secondary education.

Concomitantly students of the curriculum have produced a number of outstanding books in the techniques of curriculum making. Important contributions to literature in this field from Bobbitt, Charters, Harap, Hopkins, and Williams have appeared within the last 10 years.

A large number of significant curriculum studies are continuously being conducted regionally, in the several States, in cities, and in individual schools. The work of the Commission on Unit Courses and Curricula of the North Central Association; the inquiry addressed by the Associated Academic Principals and the State Department of New York State; to teachers and pupils for the purpose of discovering curriculum attitudes; the study of curriculum revision sponsored by the Michigan Schoolmasters' Club; and the publications regarding the unit assignment, issued within the past two years by the Virginia Committee for Research in Secondary Education, are cases in point. A recent study [17] of curriculum researches, covering the one year, 1929, lists 74 investigations which were considered sufficiently scientific to merit inclusion.

An important outcome of the curriculum movement has been the frequent revision of programs of study and of courses of study by States, cities, and individual schools. An inquiry sent out in connec-

[12] Reorganization of Mathematics in Secondary Education. Boston, Houghton Mifflin Co. Prof. J. W. Young, of Dartmouth College, was chairman of the committee.

[13] Report of the classical investigation. Princeton University Press. Dean Andrew F. West, of Princeton University, was president of the American Classical League while the study was in progress.

[14] Reports of the Modern Foreign Language Study. (17 vols.) New York, The Macmillan Co. Prof. Robert H. Fife, of Columbia University, was chairman of the committee.

[15] A Nation-wide Survey of English Usage. This study is sponsored by the Psychological Corporation and is made under the direction of Dr. L. J. O'Rourke, U. S. Civil Service Commission.

[16] American Historical Association. Investigation of the social studies in the schools. Prof. A. C. Krey, of the University of Minnesota, is director.

[17] Douglass, Harl R. Types and Fields of Curriculum Research in Secondary Education During 1929. School Review, November, 1930.

tion with the national survey of secondary education brought responses from approximately 250 cities and schools in which important revisions are reported to have been made within the last five years.

The nature of changes in the program of studies has been set forth in studies by Glass,[18] Counts,[19] Bradley, Lide, and numerous other investigators whose studies have not been so extensive as those named. As indicated in the footnotes, Glass's study of junior high school curriculums in 14 cities and Counts's study of high school curriculums in 15 cities have been published. Dr. Raymond J. Bradley's study, as yet not in print, involves programs offered in more than 400 schools distributed throughout the Nation. One of Dr. Edwin S. Lide's studies compares for 60 junior high schools the present programs of studies with those offered in these same schools before 1920; this and a number of other studies referred to in another section of this chapter will be published as parts of the report of the national survey of secondary education.

In the course of study revisions there is apparent a disposition to secure the advantage of expert judgment without sacrificing intimate contact with the classroom. In an increasing number of cases the organization for revision is so set up as to give responsibilities to both teachers and curriculum specialists. Recent revisions of State courses which emphasize this principle are those now in progress in Connecticut, Florida, Idaho, Indiana, Iowa, Minnesota, New Mexico, New York, Oklahoma, and South Dakota. In these cases the central State offices either carry the responsibility for direction or delegate that function but provide always for cooperation by teacher committees which prepare, review, or criticize the courses.

City schools carry out this policy in diverse ways. Denver and Los Angeles, pioneers in extensive curriculum revision, spread participation to a considerable number of teachers—Denver by rotating membership on subject committees and Los Angeles through having every school represented on each of the subject-field committees which pass upon the work of those preparing the courses. The Vocational School of Bayonne, N. J., and the high schools in Saginaw, Mich., have organized plans for securing reactions to their courses from agencies outside the school. Tulsa, Okla., follows the principle of paying part of the expenses of attendance by selected teachers at certain specified summer schools where course of study syllabi are prepared under the direction of specialists in the curriculum. In Bessemer, Ala., a contract has been entered into with the

[18] Glass, James M. Curriculum Practices in the Junior High School and Grades 5 and 6. University of Chicago. Supplementary Educational Monograph No. 25.

[19] Counts, George S. The Senior High School Curriculum. University of Chicago. Supplementary Educational Monograph No. 29.

University of Alabama through which the department of education cooperates with the city teaching staff for a 3-year period in revising the local courses of study. It is obvious that the methods employed in these cases vary greatly, but that the ultimate object in all of them is to have the resulting courses of study embody the most advanced theories of the curriculum and the most practical judgments as to what may be attained under public-school conditions.

ARTICULATION

The Department of Superintendence has been active in its recognition of the problem of articulation as evidenced by devoting its yearbooks of 1929 and 1931 to the subject. The 1929 yearbook treated articulation on all levels, having parts assigned to the elementary school, junior high school through junior college, professional and higher schools, and adult education. The forthcoming 1931 yearbook deals with five unifying factors in American education.

Various accrediting bodies have evinced an abiding interest in the questions relating to articulation of secondary schools and colleges. The New England College Entrance Certificate Board has for years studied the success of high-school graduates in college; in fact, the entry and continuance of a high school upon its certificate list are dependent upon the college success of the graduates of the high school. The Southern Association of Colleges and Secondary Schools has since 1918 produced a series of 12 comprehensive reports on marks earned as college freshmen by the graduates of Southern Association high schools. The North Central Association of Colleges and Secondary Schools made elaborate studies of the success in college of high-school graduates of 1924 and 1928 and is encouraging higher institutions to submit regularly reports of marks of college freshmen to the association and to the secondary schools from which the students were graduated. Beginning in 1928 the Association of Colleges and Secondary Schools of the Middle States and Maryland has been gathering data on the success in college of students who were graduated from member secondary schools; approximately 80 colleges and universities are cooperating with the association in this project.

The studies made by regional associations generally have followed the student through the first semester or the first year of his college course. It is interesting to note that in Pennsylvania there is in progress under the direction of the Carnegie Foundation for the Advancement of Teaching a study which aims to follow students through their complete high-school and college careers. One project in this study has for its purpose to ascertain and record over a period of six years the capacities, achievements, interests, and activities of

more than 12,000 pupils in 18 school systems who entered the seventh grade in September, 1928, and will normally be graduated from senior high school in June, 1934. In another project more than 26,000 Pennsylvania high-school seniors were given achievement tests in the spring of 1928. In the fall of 1928 the high schools from which these pupils were graduated supplied a statement regarding the location and occupation of these 26,000 tested pupils. The careers of those who entered college will be followed until they leave college or are graduated in 1933; it appears that no provision is made for following the careers of those who do not enter college.

A movement was started at the 1930 meeting of the Association of Colleges and Secondary Schools of the Middle States and Maryland for a comprehensive study of college entrance requirements and selective processes. It is contemplated to secure the cooperation of other regional associations to the end that there may be appointed a commission which will give the problem of college entrance the careful and thorough scrutiny which it needs.

These studies and movements indicate a more serious intention than has ever before been evident of considering the question of articulation cooperatively. The fundamental attitude is that the college should not impose its standards upon the junior college or the high school; that the senior high school should not attempt to dominate the junior high school or the elementary school; but that there should be integration of the work and a mutual understanding of the problems. The schools are separate units, but the pupil who pursues his way through them is one; and since the schools are there for his benefit, it is proper that they should serve his purposes.

NATIONAL SURVEY OF SECONDARY EDUCATION

In 1929 work was begun on the National survey of secondary education. On July 1 of that year $50,000, the first installment of a total authorized amount of $225,000, became available. An expenditure of $100,000 for the second year and $75,000 for the third year was contemplated.

The Commissioner of Education as director of all major educational surveys appointed Leonard V. Koos, of the University of Chicago, associate director of the survey of secondary education. The writer serves as coordinator. A board of consultants of 9 members, a professional advisory committee of 30 members, and a general advisory committee of 56 members complete the administrative organization of the survey. The consultants meet upon call to consider plans and to make recommendations regarding the general policies to be followed in the survey. The professional advisory committee is representative of different sections of the country and of a wide

variety of interests in secondary education. It is the function of this committee to suggest studies to be undertaken, to advise on policies, and to interpret the survey and secure cooperation for it while it is in progress. The general advisory committee is composed of persons interested in education but not actively engaged in educational work. Every State in the Union is represented in its membership. The committee has responsibility for advising upon important procedures while they are yet provisional, for reacting to the report while it is still in tentative form, and for interpreting the survey to the taxpayers and the general public after it is completed.

Obviously not all problems of secondary education could be studied in the 3-year period and with the amount of money available. After careful consideration the following aspects of secondary education were chosen for investigation: (1) The organization of schools and districts; (2) the secondary-school population and related problems; (3) administrative and supervisory problems, inclusive of administrative and supervisory personnel and activities; (4) the curriculum and the extra curriculum.

These major problems have been broken up into 24 projects for study. The titles given to these projects, the specialists [20] engaged in each, and a brief description of each study are given in the paragraphs which follow.

Project A. Secondary school reorganization (*Francis T. Spaulding, Harvard University; O. I. Frederick*).—In this study effort is made to discover the extent of reorganization; the prevailing characteristics of junior high school, senior high school, and regular high-school education as offered in existing schools; circumstances favoring or opposing reorganization plans; outstanding movements in junior high school education; outstanding plans in individual reorganized and unreorganized high schools; feasibility of reorganization in rural and small urban districts. Nearly 1,000 schools have been canvassed. A careful study is being made of those schools that appear to be outstanding because of their organization.

Project B. Horizontal organization of secondary education and the secondary school population (*Grayson N. Kefauver, Columbia University; Victor H. Noll; C. Elwood Drake*).—This twofold investigation concerns itself with the prevalence and distribution of different types of provisions for secondary education, specialized and

[20] Those specialists who are regularly employed by agencies other than the Office of Education may be identified by the fact that the agency regularly employing them is named; these specialists give part time to the survey. The names of specialists on the regular staff of the Office of Education assigned to the survey for part time are marked by asterisks. Those whose names are followed by neither of the distinguishing marks mentioned above are employed by the Office of Education for full-time work with the survey, but only for the period of the survey. The person whose name appears first with each project is the directing specialist of that project.

unspecialized; programs offered in different types of secondary schools; effectiveness of specialized training offered under different types of organization; considerations other than outcomes of teaching affecting the horizontal organization of secondary education; special types of education on the secondary-school level; occupations that may be entered from the secondary-school level of training; provisions for guidance under different types of organization of secondary schools; and articulation of secondary schools with the community developed under different types of organization. The approach is partly through general study of practice and partly through intensive study in 15 cities representative of different types of secondary education in various sections of the country.

Project C. School district organization for the administration and supervision of secondary education (*Fred Engelhardt, University of Minnesota; William H. Zeigel*).—This study inquires into types of school districts under which secondary education is administered; the extent to which these types of district organization bring secondary schools within reach of the potential secondary-school population; analysis of laws which control creation, consolidation, or abandonment of school districts; relationship of school district organization to methods of support of secondary schools; study of types of district organization which are distinctive in that they make possible an efficient and economical secondary-school program. The problem is approached through materials gathered by the Office of Education for the biennial survey of education and through forms sent to the State departments of education and to individual schools and school systems. The data thus obtained are analyzed and from the returns certain schools and school systems are selected for intensive study through visitation.

Project D. Special problems in reorganization (*William M. Proctor, Stanford University; Scovel S. Mayo, Stanford University*).—California was selected as the place for this study because of the problems present in establishing junior high schools and junior colleges in union high-school districts of that State. Data were gathered for six counties so selected as to represent the various difficulties encountered in reorganization. In each county study was made of the present educational situation and of possibilities of achieving more extensive areas for administrative purposes.

Project E. The characteristics of small high schools (*W. H. Gaumnitz;* P. Roy Brammell*).—Five groups of schools have been chosen for this study: The first group includes schools having fewer than 30 pupils registered; the second, 50 to 75 pupils; the third, 100 to 150; the fourth, 200 to 300; and the fifth, 400 to 600 pupils. Re-

* On regular staff of the Office of Education; gives part of time to the survey.

turns are being gathered from a representative sampling consisting of 100 schools in each of these groups. As a result of the study, it is planned to present a picture of the actual situation found in the schools of these various-size groups with respect to development and status; principalship; provisions for supervision other than by principal; teaching and staff problems; student problems; curriculum and extracurriculum provisions; housing and equipment; other evidences of the extent and quality of education provided.

Project F. Study of selected secondary schools in smaller communities and rural areas (*Emery N. Ferriss, Cornell University; P. Roy Brammell*).—Against the background presented by the study which has just been described it is intended that this study shall throw into relief the practices in outstanding small schools. The investigation in these selected schools centers around the same characteristics mentioned under project E, but those features which mark the school out from the regular type of small school are sought and noted. A total of 200 schools are cooperating in the study.

Project G. Guidance (*William C. Reavis, the University of Chicago; George E. Van Dyke, the University of Chicago*).—Case studies of guidance programs are being made in six cities selected because of their emphasis upon guidance. The cases studied present a wide practice under varying conditions, such as emphasis upon placement, group guidance of the individual pupil, guidance in rural areas, extensive programs in large city schools, and the like.

Project H. Administrative and supervisory staff (*Fred Englehardt, University of Minnesota; William H. Zeigel*).—This project is concerned with conditions surrounding administration and supervision by State departments, accrediting bodies, local boards of education, district and county superintendents, central offices of city-school systems, principals and their assistants; duties, functions, activities, and relationships of personnel in staff positions; types of organization to facilitate effective management, to relieve professional staff members of clerical work and routine duties, and to coordinate the work of various administrative and supervisory officers. Inquiries relating to this project have been directed to superintendents of schools, to principals of high schools, and to staff members in individual schools, city systems, and State departments. Intensive studies are made of schools and school systems which are representative of the various patterns of staff organization or which present the most unique practices.

Project I. Practices in the selection and appointment of teachers (*W. S. Deffenbaugh,* William H. Zeigel*).—Three parallel check lists were circulated in the effort to ascertain practices in the selection and appointment of teachers. One was addressed to city superin-

* On regular staff of the Office of Education; gives part of time to the survey.

tendents, another to independently administered high schools (township and county high schools, for example), and the third to county superintendents in States having county unit systems. These check lists inquired into agencies and procedures utilized for making contacts with candidates for teaching positions, methods of collecting information regarding candidates, regulations governing selection, types of appointments made, methods and procedures followed in selection and appointment, and methods of retaining teachers of high quality. Intensive study is made of procedures followed in schools which are unusual or innovating in the methods employed for selection and appointment of teachers.

Project J. Provisions for individual differences; marks and marking systems; plans for promotion of pupils (*Roy O. Billett*).—The first approach to schools in the section of the survey dealing with individual differences was made through a check list in which were enumerated all the important provisions reported in the literature examined. There were 28 of these provisions. The principal was asked to check those utilized in his school and to check twice any provision which he felt was used with unusual success. Fourteen different kinds of follow-up forms were devised and sent to schools which had double-checked items. In connection with 7 of the 13 forms referred to, a study was made of marking systems and promotion plans followed in these schools. In addition, a special form on marking and promotion was circulated to an extensive mailing list of schools. On the basis of information secured a carefully developed program for visiting schools has been developed.

Project K. School publicity (*Belmont Farley, National Education Association*).—This project involves the publicity policies of school systems and the methods employed for interpreting the schools to the pupils, to teachers and school employees, and to patrons and the general public. Emphasis is placed upon discovering, not only the means of publicity but also its character and the control exercised over it by the school. These features are studied in a general way in approximately 500 schools and a special study is made of publicity practices and results in four carefully selected individual schools.

Project L. The curriculum. Part I. Curriculum making and curriculum revision. (*A. K. Loomis, Denver Public Schools; E. S. Lide.*)—Data have been gathered on plans for curriculum making and curriculum revision followed in State school systems, county school systems, city school systems, and individual secondary schools. Studies are included of influences of central agencies on local revisions. Major phases of three analyses of programs of studies are being repeated; the three investigations are James M. Glass's study of junior high school curricula, George S. Counts's investigation of the senior high school curriculum, and Raymond J.

Bradley's comprehensive study of curriculum offerings. Other studies which involve analysis of the programs of studies followed at different periods in the same schools are (1) a comparison of programs followed before reorganization and after reorganization; (2) changes which occurred in recent revisions (comparing programs before revision with those followed after revision); and (3) comparison of programs of studies of junior high schools in existence 10 years ago with programs of these same schools today. A comparison is made of programs in reorganized and unreorganized schools of the present day. Still another project in progress deals with the relationships of programs followed by individual students in high school and college.

Part II. Subject-matter fields. (*Dora V. Smith, English, University of Minnesota; William G. Kimmel, social studies, American Historical Association Commission on Investigation of the Social Studies; E. S. Lide, mathematics; Wilbur L. Beauchamp, science, the University of Chicago; Helen M. Eddy, foreign languages, State University of Iowa; Anne E. Pierce, music, State University of Iowa; Robert S. Hilpert, art, University of Minnesota; P. Roy Brammell, physical education*).—The work in subject-matter fields includes analysis of courses of study and comprehensive plans for visiting schools in which work of a noteworthy character is found. Practical arts fields (industrial arts, home economics, agriculture, and commercial work) are studied in connection with Project B.

Project M. Extracurriculum activities and nonathletic interscholastic contests (*William C. Reavis, the University of Chicago; George E. Van Dyke, the University of Chicago*).—The principal emphases in this project are upon (1) finding out what is actually known regarding the values of extracurriculum activities in secondary-school programs; (2) finding out what has been done to guide and regulate the participation of pupils in extracurriculum activities; (3) surveying and evaluating programs of extracurriculum activities of reputed worth in different types of secondary schools; (4) studying the historical development of extracurriculum activities in several high schools which have adequate records for the purpose; and (5) studying the effects of participation in extracurriculum activities on the subsequent character and activities of graduates. Check lists are sent to schools, to sponsors of activities, and to graduates who occupied positions of leadership in activities while in high school. Selected schools are visited.

Project N. Athletics in high school and other activities involving interscholastic contests (*P. Roy Brammell*).—In this project it is the purpose to discover and study noteworthy plans for administration and supervision of high-school athletic contests. Principal phases included are the financing of contests, relation of athletics to the

physical-education and health programs, pupil participation, values to pupils, and practices designed to solve the numerous problems related to athletics in high schools. Intramural as well as interscholastic contests are given attention. Approximately 700 schools are receiving the inquiry form. Many of the schools are visited in order that better understanding may be gained regarding their practices.

Project O. Articulation of high schools and colleges (*P. Roy Brammell*).—All colleges and universities having liberal arts departments have been approached in an effort not only to learn the status of college entrance requirements but also to identify practices in colleges and universities which are departing from traditional standards in admitting students, to discover innovating methods used for adjusting freshmen to the college situation, and to study methods used by higher institutions for the improvement of articulation of high school and college education. Especially promising readjustments are given special attention.

Project P. Physical education and health supervision (*P. Roy Brammell*).—Approximately 800 schools whose programs of physical education and health were reported as being outstanding have been invited to participate in this study. The practices of these schools are studied through check lists and visiting. Effort is directed especially toward finding schools in which the program of competitive athletics is made to conform to the generally accepted principles of physical education and health through control and supervision by directors in these fields.

Project Q. Legal and other regulatory provisions affecting secondary schools (*Ward W. Keesecker**; *Franklin C. Sewell*).—The units legally authorized to provide secondary schools, the powers and functions vested in the different units, the types of schools which may legally be established, and the powers and functions of school officials are among the features investigated in this project. It is of especial significance to note that this investigation is not limited to statutory provisions, but is concerned with regulations, standards, rulings, and the like which are adopted by agencies such as State boards of education, university regents, and the commissions of regional accrediting associations.

Project R. Research initiated by the schools (*William H. Zeigel*).—Significant research work conducted in the schools, whether initiated by State or city authorities on an extensive basis, by a principal for his school, or by a teacher in her classroom, come within the province of this project. Special attention is given to those situations in which a director of research is employed. Personnel, nature of activities, and conditions under which the work is carried

* On regular staff of the Office of Education; gives part of time to the survey.

forward are the principal items of inquiry. Schools and systems which appear to have unusual programs of research are visited.

Project S. Supervision of instruction (*Roy O. Billett*).—About 130 high schools distributed throughout the Nation have been reported to the survey staff as having outstanding procedures in supervision. Attempt is made to learn what the supervisory programs of these schools consist of and what the supervisory practices are. Supervision will be studied more intensively by visiting a selected group of these schools.

Project T. Schedule making and registration (*B. Lamar Johnson*).—Inquiry is made into conditions of schedule making, characteristics of the schedule, and practices relating to preliminary and final registration in 300 selected schools. Innovating practices are followed up by visits for the purpose of noting unusual characteristics of the schedule, for securing data on the amount of time which pupils spend in classwork and in study, and for making detailed description of registration and scheduling procedures.

Project U. Library service (*B. Lamar Johnson*).—Inquiry forms relating to the secondary-school library were sent to more than 600 schools recommended by State school officials, city superintendents, library commissions, and directors of library schools as having outstanding library service. In approximately 25 libraries selected for visiting data have been gathered on features of school-library service such as ways of adapting the library to newer methods of teaching, cooperation of the library staff with teachers in promoting use of library facilities, activities of teachers in encouraging or discouraging the use of the library and in facilitating or obstructing the work of the library staff, devices helpful in encouraging pupils to do recreational reading, and use made of the library by pupils.

Project V. Special reorganizations (*Leonard V. Koos, University of Chicago*).—Work on this project awaits the outcome of other studies, especially of projects A, C, D, and O, which obviously are closely related to it. It is contemplated that innovational reorganizations such as the 6–4–4 plan, the completion of grades 1–14 in less than 14 years, and the like will be treated separately unless descriptions logically find places in the reports of other projects.

Project W. Secondary education for Negroes (*Ambrose Caliver* *).—This project is unique in this survey in that it stresses status. This change of emphasis finds justification in that the facts regarding Negro education have never been assembled on a national scale. The general survey emphasis upon outstanding and noteworthy practices is, however, observed as far as possible. A general check list inquiring into organization, school population, administration and

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supervision, curriculum and extracurriculum, teachers and teaching problems, housing and equipment has been sent to 1,400 Negro schools. This check list has been carefully correlated with other forms used in the survey, especially with the forms intended for small high schools. Negro high schools which appear to be outstanding will be visited.

Project X. Growth and trends in public junior colleges (O. I. Frederick).—All junior colleges have been approached for information regarding enrollment, source of financial support, administrative control, and relation to high schools. An almost complete count of responses has been received. The returns are utilized in such a way as to make the findings comparable with earlier studies of the junior college.

In only 2 of the 24 projects, those designated by letters E and W, is the principal emphasis placed upon general status. In projects A, B, C, and I some attention is given to status, but stress is placed upon noteworthy procedures. In all other projects the inquiries are directed principally toward studying the constructive, the unusual, and the innovating—not the average.

A principal first method of approach utilized is the inquiry form. Three of these, dealing with the survey as a whole, were circulated during the spring of 1930 to State departments of public instruction, to city school systems, and to an extensive sampling of secondary schools. From returns on the inquiry forms mentioned and from numerous other sources, data and judgments were gathered enabling the specialists to develop lists of schools with significant practices in each of the various fields of investigation. During the school year 1930–31 these schools received other inquiry forms designed to ascertain the character of these practices more in detail. All told, 49 such inquiry forms having an aggregate total of more than 700 pages were circulated. Care was exercised that no one school should receive a disproportionate number of these forms.

Another technique of investigation employed uniformly in all projects is that of digesting materials already available. A careful examination of reports whether published or in manuscript form of all studies bearing upon the projects has been made preliminary to sending out any inquiry.

A third principal activity common to all projects is that of visiting schools. The purpose of the visit is to give the specialist opportunity to secure information which it would be impossible to obtain through correspondence, to correct and supplement such information as has been secured, and to make possible concrete and clear-cut description of the practices if this appears advisable.

CONCLUSION

Dean William F. Russell, of Teachers College, Columbia University, in his annual report submitted in June, 1930, gave special attention to the problems of secondary education. After reviewing recent statements made by Sir Michael Sadler, Dr. George S. Counts, and Professors Paul Monroe and Thomas H. Briggs, he sums up the problems of secondary education in the following words:

> We must educate all the people and at the same time provide an élite. We must devise an education that serves the State and that overcrowds no special group of vocations or professions. We must fit our pupils to live in the industrial age and vaccinate them against the diseases of the machine.

The solution of problems such as those mentioned by Dean Russell can come only gradually. Furthermore, solution is a continuous process, since in our changing world problems will not stay solved. New ones are continually appearing and those segregated for study frequently have a provoking way of changing their character before the solution is ready.

The tendency in modern education is to rely upon scientific study for solutions. Certain it is that the statements of science are more precise than the pronouncements of philosophy. Few will contend that philosophy of education is unnecessary. Science without an underlying philosophy would be futile, but scarcely more idle than an opinionated philosophy which would ignore scientific investigation. The fact that educational leaders recognize the value of scientific check on educational theories provides the greatest assurance that the disturbing problems of secondary education are in process of solution.

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