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BULLETIN NO. 16

BUREAU OF EDUCATIONAL RESEARCH
COLLEGE OF EDUCATION

AN ANNOTATED BIBLIOGRAPHY DEALING
WITH THE CLASSIFICATION AND IN-
STRUCTION OF PUPILS TO PRO-
VIDE FOR INDIVIDUAL
DIFFERENCES

by

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PRICE 50 CENTS

PUBLISHED BY THE UNIVERSITY OF ILLINOIS, URBANA

1923



PREFACE

The making of adequate provisions for individual differences represents one of the most important problems which educators are now facing. The need is beginning to be generally recognized and numerous procedures are being tried out in our schools. Many reports of attempts to provide for individual differences are being made. In order that one who is interested in making such provisions may profit by the experience of others it is necessary that he acquaint himself with the work which they have done. In order to assist the practical school man in this endeavor Dr. C. W. Odell has brought together an extended bibliography on "The Classification and Instruction of Pupils to Provide for Individual Differences." To each of the references he has added a brief annotation which indicates the character of the information which will be found in the reference. Altho the list probably is not complete it is believed to be more so than any other bibliography on this topic which is now available.

WALTER S. MONROE, *Director.*

November 10, 1923

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An Annotated Bibliography Dealing with the Classification and Instruction of Pupils to Provide for Individual Differences

The bibliography which follows was prepared by the writer in connection with his work described in a previous bulletin of the Bureau of Educational Research entitled "The Use of Intelligence Tests as a Basis of School Organization and Instruction," and may be considered in the light of an appendix to that bulletin. It has, however, been revised and brought up to date, that is practically to the end of the school year of 1922-23. No claim is made for its absolute completeness nor that the references given are more important than those not included. An effort has been made to list all important and most unimportant references that have appeared in the twenty-five or thirty leading educational periodicals of this country. In addition to these references many others are included from books, school reports, bulletins, proceedings of various educational bodies, etc. The writer did not make a thoro search through all of the reports of city superintendents and other school officials, proceedings of state and other teachers' associations and various other similar sources.

The references given have been classified into two main divisions. The first part of the bibliography deals with discussions of and provisions for individual differences that involve the use of standardized tests of general intelligence or achievement. The second part contains references about provisions and discussions that do not involve the use of such tests. Articles that deal with both sorts of classification, that based on the results of tests and that upon some other basis, are included in the first part.

PART I.

1. ADLER, MARTHA. "Mental tests used as a basis for the classification of school children," *Journal of Educational Psychology*, 5:22-28, January, 1914.

In a New York school 160 first and fourth-grade pupils were tested with the Goddard Revision. Almost 50 percent of those tested were placed in advanced sections and of these about 60 percent gained one-half year's time. Only two were retarded.

2. ALEXANDER, J. M. "Binet-Simon test in practical use in the public schools of Hinsdale, Illinois," *Elementary School Journal*, 21: 146-48, October, 1920.

Fifty-three first-grade pupils were tested and rearranged on the basis of their ability in three sections, the best of which did extra work. Also special classes in other grades were tested and handled in accordance with the results.

3. ALMACK, J. C. and J. L. "Administrative problems connected with gifted children," *Educational Administration and Supervision*, 8:129-36, March, 1922.

In the junior high school of Eugene, Oregon, about 800 pupils were tested with the Army Alpha, Otis and Stanford Revision. Fifty-one with I. Q.'s above 100 were selected for superior sections.

4. ANDERSON, ROSE G. "Methods and results of mental surveys," *Journal of Applied Psychology*, 6:1-28, March, 1922.

A general discussion of a number of mental surveys and of the number of pupils selected as feeble-minded. This varied from .16 percent to 6.4 percent.

5. ARMENTROUT, W. D. "Classification of junior high-school pupils by the Otis scale," *Journal of Educational Psychology*, 11:165-68, March, 1920.

Four hundred junior high-school pupils in Lawrence, Kansas, were tested with the Otis scale and three or four groups in each half year selected according to their I.Q.'s.

6. ARMENTROUT, W. D. "Grouping pupils by intelligence tests," *School Review*, 28:249-51, April, 1920.

Another account of procedure in the Lawrence, Kansas, Junior High School.

7. ARMENTROUT, W. D. "Classification and promotion of pupils," *Education*, 42:506-12, April, 1922.

A discussion of several flexible plans. Advocates seven, eight, and nine year courses for the elementary school with classification based upon intelligence, physical and educational tests, school marks and teachers' estimates.

8. ARMENTROUT, W. D. "Classification of junior high-school pupils by the Otis scale," *Education*, 43:83-87, October, 1922.

Another account of the classification of the junior high-school pupils at Lawrence, Kansas.

9. ARTHUR, GRACE. "An application of intelligence tests to the problem of school retardation," *School and Society*, 10:614-20, November 22, 1919.

In a St. Paul elementary school, group and individual tests were used and pupils placed according to the results. In two years failures were reduced from 11 to 2.9 percent, special promotions increased from 1.5 to 9.4 percent and \$4000 saved.

10. AYER, F. C. "The present status of promotional plans in city schools," *American School Board Journal*, 66:37-39, April, 1923.

Gives questionnaire replies from 124 cities. Thirty-six different plans are listed. The cities average about ten plans apiece. It was found that there is little evidence as to the value of the various plans.

11. BADANES, JULIE E. "The first practical steps in selecting gifted children in a large city school." New York: Continental Printing Company, 1921. 22p.

A brief history of intelligence testing discussing especially the work and writings of Burt, Meumann, Allen, Pearson and others.

12. BAER, J. A. "Individual differences among pupils," Cleveland, Ohio; Cuyahoga County Public Schools, 1922. 28p.

A general discussion of the individual differences that exist followed by suggestions as to different bases and plans of classification and what the teacher can do to look after individual differences in the different subjects. This is followed by a short bibliography.

13. BAGLEY, W. C. "Educational determinism; or democracy and the I. Q.," *School and Society*, 15:373-84, April 8, 1922. *Educational Administration and Supervision*, 8:257-72, May, 1922.

A strong plea against classifying or instructing pupils according to their I.Q.'s as yielded by mental tests.

14. BAGLEY, W. C. "Professor Terman's determinism: A rejoinder," *Journal of Educational Research*, 6:371-85, December, 1922.

An answer to Terman's criticism of Bagley's address on Educational Determinism.

15. BAGLEY, W. C. "Educational determinism again: A rejoinder to Professor Whipple's reply," *School and Society*, 16:141-44, August 5, 1922.

A further argument against the use of intelligence test results for classifying school children.

16. BARTON, J. W. "School organization on an objective basis," *Educational Administration and Supervision*, 6:187-97, April, 1920.

In Elk River, Minnesota, 323 pupils in grades one to twelve were tested with the Kansas Silent Reading and an opposites test. Thirteen percent were given extra promotion on the basis of test results and of these all but three made good. Not a single one was injured physically.

17. BATES, GRACE M. "The work of the students' welfare committee of Erasmus Hall High School," *Bulletin of High Points in the Work of the High Schools of New York City*, 5:20-24, June, 1923.

In this school, group intelligence test results are used to classify the pupils on the first day of actual high-school work. Whatever adjustments seem advisable are made later but it has been found that the original classification is fairly accurate.

18. BATSON, W. H. "The South Dakota group intelligence test for high schools," *School and Society*, 15:311-15, March 18, 1922.

An account of testing almost 1500 pupils in South Dakota. Shows how test results compare with teachers' estimates, also the amount of variation between pupils and schools.

19. BERRY, C. S. "Classification by tests of intelligence of ten thousand first-grade pupils," *Journal of Educational Research*, 6:185-203, October, 1922.

An account of the plan used in Detroit. First-grade pupils are tested and divided into X, Y and Z groups according to their ratings. The course of study differs for the three groups.

20. BIDDLE, ANNE E. "The superior group," *News Letter*, 17:3-4, May, 1923.

A brief account of grouping by ability in the high schools of a certain city during the last several years with individual accounts of a number of bright pupils. Superior pupils were selected by the judgment of the teachers verified by intelligence tests. The writer is heartily in favor of the plan.

21. BLISS, D. C. "The application of standard measurements to school administration," *Fifteenth Yearbook of the National Society for the Study of Education*, Part I. Bloomington, Illinois: Public School Publishing Company, 1916, p. 69-77.

A general discussion of the question with some illustrations drawn from Montclair, New Jersey.

22. BOOK, W. F. "Variations in mental ability and its distribution among the school population of an Indiana county," *Fifth Conference on Educational Measurements*, *Bulletin of the Extension Division*, Vol. 4, No. 4. Bloomington: Indiana University, 1918, p. 100-31.

An account of the use of Indiana Schedule B in all the schools of a county. Discusses the differences found between pupils, the distribution of ability, the reliability of the scale used and the adjustments that should be made in the schools.

23. BRACEWELL, R. H. "The Freeman-Rugg general intelligence tests as an aid to economy in school administration," *School Review*, 29:460-66, June, 1921.

In the Burlington, Iowa, High School, pupils were tested with these tests and the average of the test results and teachers' rankings used for purposes of placement.

24. BRANSON, E. P. "An experiment in arranging high-school sections on the basis of general ability," *Journal of Educational Research*, 3:53-55, January, 1921.

In the Long Beach, California, High School, freshmen were grouped in English according to their scores on the Otis scale. This scale appeared to select inferior pupils better than superior ones, altho it was fairly efficient in both respects.

25. BREED, F. S. "Shall we classify pupils by intelligence tests?" *School and Society*, 15:406-9, April 15, 1922.

A general discussion listing a number of principles, cautions, conditions, and steps in using intelligence tests. The conclusion is that altho intelligence test results, the will, and the emotions, etc., are important factors in classifying, the achievement secured must be the final determining factor.

26. BREED, F. S. and BRESLICH, E. R. "Intelligence tests and the classification of pupils. II." *School Review*, 30:210-26, March, 1922.

An account of an experiment in the University of Chicago High School in which it was found that Otis test results divided pupils better than measures of their ability in arithmetic. The conclusion reached was that no test gives a reliable basis for permanent classification.

27. BROOKS, S. S. "Some uses for intelligence tests," *Journal of Educational Research*, 5:217-38, March, 1922. *Improving Schools by Standardized Tests*. Boston: Houghton Mifflin Company, 1922. p. 96-123.

Recommends that pupils be placed by intelligence test results rather than by those from achievement tests.

28. BUCKINGHAM, B. R. "Suggestions for procedure following a testing program-I. Reclassification," *Journal of Educational Research*, 2:787-801, December, 1920.

States that intelligence tests alone are not a safe guide for promotion but should be supplemented by subject-matter tests and measures of non-intellectual qualities.

29. BURKARD, W. E. "Grouping by ability in the Robert Treat Junior High, Newark," *News Letter*, 19:4-5, April, 1921.

In Newark there were accelerated, normal and retarded groups in grades I-IX based on measurements by a modified form of the Binet Scale. The same course of study was followed but at different rates. The plan appears to have given satisfaction.

30. CALLIHAN, T. W. "An experiment in the use of intelligence tests as a basis for proper grouping and promotions in the eighth grade," *Elementary School Journal*, 21:465-69, February, 1921.

Almost 300 eighth-grade pupils were divided into sections according to ability. The basis was a combination of results from the Illinois General Intelligence Scale, Monroe's Silent Reading Test, and to some extent teachers' estimates and marks.

31. CAMPBELL, CORA. "Intelligence tests as a basis for classification," *The Technique of Supervision by the Elementary School Principal. The First Yearbook of the Department of Elementary School Principals.* Washington: National Education Association, May, 1922, p. 45-49.

As a result of a number of experiments Kansas City adopted the policy of classifying pupils upon the basis of individual intelligence tests given in the kindergarten and first grade, group tests given in other grades, and health, attendance, school attitude and certain other factors.

32. CAMPBELL, L. H. "Age gradation and grade grouping," *American School Board Journal*, 58:36, May, 1919.

States that in Providence, Rhode Island, pupils were grouped according to their age and placings verified by the Stanford Revision. Ten good results are listed.

33. CARBACK, CLARENCE. "Grouping of children by abilities and consequent change in school procedure. 3. Procedure in Philadelphia." *Ninth Annual Schoolmen's Week Proceedings. University of Pennsylvania Bulletin*, Vol. 23, No. 1, p. 269-72.

States that in Philadelphia there are about twenty elementary schools with some or all pupils grouped according to their abilities. The bright pupils take an enriched curriculum.

34. CAYCO, F. and PRESSEY, S. L. "Three refinements of method in school surveys," *Educational Administration and Supervision*, 7:433-38, November, 1921.

A discussion of the need of relating age-grade, achievement and intelligence test data to each other. Also a brief account of testing the pupils of a small system.

35. CHASSELL, C. S. and CHASSELL, L. M. "A survey of the three first grades of the Horace Mann school by means of psychological tests and teachers' estimates and a statistical evaluation of the measures employed," *Journal of Educational Psychology*, 12:72-81, 243-52; February, May, 1921.

The average of results according to the Stanford Revision, Pressey and Myers Tests and teachers' estimates of maturity and reading ability was found and used as a basis of forming three fairly homogeneous groups.

36. CLERK, F. E. "Providing for individual differences by grouping by abilities. Organization and practical working of the plan." *Eighth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin*, Vol. XXI, No. 37, Philadelphia, June 18, 1921, p. 243-49.

An account of procedure in Winchester, Virginia, in which teachers' judgments, school marks, achievement and intelligence tests, etc., are used in placing pupils. Accelerated, normal and slow groups are formed in high school as well as grades. A number of cautions are given.

37. CLEVELAND, ELIZABETH. "Detroit's experiment with gifted children," *School and Society*, 12:179-83, September 11, 1920.

The best five percent of seventh and eighth-grade pupils are selected and placed in special classes. The first basis of selection was the teacher's judgment, later the Binet Tests were used and finally group tests. The pupils selected gain a little time and take an enriched course.

38. CLEVELAND, ELIZABETH. "Some further studies of gifted children," *Journal of Educational Research*, 4:195-99, October, 1921.

A study of 144 bright and the same number of average children in Detroit. Health, home conditions, tastes, etc., were studied.

39. COLE, L. W. "Mental age and school entrance," *School and Society*, 8:418-19, October 5, 1918.

In Denver pupils entering the first grade are tested. It is found that the I.Q. of five-year-olds is high, of six-year-olds next and that of seven-year-olds lowest. The conclusion is that better results could be obtained by selecting new entrants by the Binet Scale than by chronological age.

40. COLE, L. W. "Prevention of the lockstep in schools," *School and Society*, 15:211-17, February 25, 1922.

An account of the use of the Binet, and Cole and Vincent Tests in the first grade. It is shown that six-year-old children are not a homogeneous group and that there is a great difference between the best and worst entering the first grade. States that classes should be organized on a mental-age basis.

41. COLVIN, S. S. "The present status of mental testing," *Educational Review*, 64:196-206, 320-37; October, November, 1922.

A brief account of the testing movement and present knowledge concerning it and a discussion of the use of tests for the classification of pupils, their validity, cautions to be observed in their use, etc.

42. COLVIN, S. S. et al. "Intelligence tests and their use," *Twenty-first Yearbook of the National Society for the Study of Education*. Bloomington, Illinois: Public School Publishing Company, 1922, 289 p.

The most complete discussion of the subject published. Part I deals with the nature, history and general principles of intelligence testing and Part II with the administrative use of intelligence tests. The latter part contains both theoretical discussion and actual accounts of what is being done.

43. COX, E. M. "Report of committee on promotions and rates of progress." *Superintendent's Report*, Oakland, California, 1917-18, p. 77-79.

History of acceleration, retardation, special progress, mental testing, special classes, etc., in Oakland. States that the results of special promotions, classes and mental testing have been good.

44. COX, P. W. L. "Providing for individual differences by means of grouping by ability." Ninth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 23, No. 1, p. 233-44.

An account of grouping pupils in junior and senior high schools according to results from the Otis Test, various achievement tests and their interests and aptitudes.

45. COXE, W. W. "School variation in general intelligence," Journal of Educational Research, 4:187-94, October, 1921.

Gives results of giving the Otis Test in twenty-four Cincinnati elementary schools as a basis for selecting pupils for a special six-year classical course. Great variation in intelligence was found.

46. CUMMINS, R. A. "Educational measuring sticks and their uses," American School Board Journal, 63:33-5, August, 1921.

Contains a discussion of the use of intelligence and subject-matter tests.

47. DAWSON, C. D. "Classification of kindergarten children for first grade by means of the Binet scale," Journal of Educational Research, 6:412-22, December, 1922.

In Grand Rapids 64 percent of 2000 kindergarten children were classified in the first grade on the basis of test results. Three groups were formed. Eighteen percent had to be shifted from the original classification.

48. DEAMER, ARTHUR. "An experiment in acceleration," Fargo, North Dakota; Board of Education, 1919, 32 p.

Pupils for fast sections in the upper grades were selected according to their school marks. When measured with standardized tests they showed that their achievement was satisfactory. Likewise their high-school records were good.

49. DICKSON, V. E. "The relation of mental testing to school administration." The Normal Seminar Bulletin A, No. 1. Cheney, Washington, June, 1917.

A study of the differences of pupils according to sex, chronological and mental age, I.Q., school mark, and teacher's estimate. The study shows a high correlation between mental ages and school marks.

50. DICKSON, V. E. "What first-grade children can do in school as related to what is shown by mental tests," Journal of Educational Research, 2:475-80, June, 1920.

In Oakland, California, first-grade pupils are classified in three groups on the basis of test results and school marks. Pupils with a mental age below six cannot do regular first-grade work and should be put in a special group.

51. DICKSON, V. E. "The use of group mental tests in the guidance of eighth-grade and high-school pupils," Journal of Educational Research, 2:601-10, October, 1920.

On the basis of scores on part of the Otis Scale and school marks an accelerated class was formed which covered eighth-grade work in fifty-five days, entered high school immediately and made better marks than the average. Two similar groups are also discussed.

52. DICKSON, V. E. "The use of mental tests in school administration," Monograph, Vol. IV. Berkeley, California: Board of Education, June, 1922. 44 p.

Advocates the use of test results in determining the grade placement of pupils. Shows that individual intelligence tests are rather highly reliable and group tests fairly so, also that the I.Q. is a fairly safe measure of prognosis.

53. DICKSON, V. E. "The treatment of gifted children in Oakland and in Berkeley." Proceedings of the First Annual Conference on Educational Research and Guidance, San Jose State Teachers College. Sacramento, California: State Printing Office, 1923, p. 26-28.

A discussion of the basis of segregation and what should be done after segregation. Argues that children should be treated differently according to their differences in ability. Also that gifted children should not merely gain time but should also have a broader and surer foundation.

54. DICKSON, V. E. *Mental Tests and the Classroom Teacher*. Yonkers-on-Hudson: World Book Company, 1923. 231 p.

This is, as its name indicates, a general discussion of the use of mental tests in school. The author maintains that group tests are fairly reliable for predicting school success and that pupils should be classified at the time of entering school on the basis of their ability. The results of mental tests should be an important factor in this classification.

55. DOTEN, WILLARD. "Tests for ability grouping," *American School Board Journal*, 63:37-38, October, 1921.

The Montclair, New Jersey Junior High School pupils were grouped according to the results from the National and Haggerty Tests. The work for the groups was differentiated. Satisfactory results followed.

56. EDMONDSON, MARGARET B. "A mental survey of first-grade school pupils," *Pedagogical Seminary*, 27:354-70, December, 1920.

A discussion of the mental ages, I.Q.'s, school marks, chronological ages, and teachers' estimates of some grade pupils in Eugene, Oregon. Shows the lack of homogeneity of the group and the relationship between the various data.

57. ETTINGER, W. L. "Economy in school administration," *School and Society*, 14:409-15, November 12, 1921.

An argument that much of the waste in school is due to crude classification.

58. ETTINGER, W. L. "Crude classification causes waste," *School Life*, 7:66, November, 1921.

A general statement of the need of careful classification.

59. FORDYCE, CHARLES. "Intelligence tests and classifying children in the elementary school," *Journal of Educational Research*, 4:40-42, June, 1921.

An account of the use of the Haggerty Test on over 1000 pupils. Discusses relation of test results and teachers' estimates.

60. FRANK, C. D. "A ray of light let in by a study of first-term failures," *Bulletin of High Points in the Work of the High Schools of New York City*, 5:6-7, May, 1923.

An account of an experiment showing that elementary-school marks furnish a better basis of predicting high-school marks than do intelligence test results.

61. FREEMAN, F. N. "Bearing of the results of mental tests on the development of the child," *Scientific Monthly*, 12:558-70, June, 1921.

States that the traditional method brings together pupils of very different mental ability, while grouping by mental ability brings together pupils whose intellectual processes are not equally developed. Ideal grouping would bring together pupils alike in both.

62. FREEMAN, F. N. "Bases on which students can be classified effectively," *School Review*, 29:735-45, December, 1921.

States that classification should be based upon mental ability, chronological and physical age, social and intellectual stages of development. Both tests and teachers' judgments should be used.

63. FRASIER, G. W. "The measurement of intelligence as an aid to administration," *Educational Administration and Supervision*, 6:361-66, October, 1920.

An account of administering the Stanford Revision in Spokane and giving pupils special promotions and demotions according to the results. In general the placement of pupils was satisfactory.

64. GLASS, J. M. "Classification of pupils in ability groups," *School Review*, 28:495-508, September, 1920.

In a Rochester junior-high school pupils were placed by results from several intelligence tests. Most of those so placed did satisfactory work but a few had to be shifted.

65. GODDARD, H. H. "Two thousand children tested by the Binet measuring scale for intelligence," *Addresses and Proceedings of the National Education Association*, 49:870-78, 1911.

An account of using the Binet scale to find New York children three years or more below normal.

66. GOLDSTONE, G. A. "Differentiation of method in teaching reading to slow and bright pupils," *Bulletin of High Points in the Work of the High Schools of New York City*, 5:11-14, April, 1923.

An account of an experiment in grouping high-school pupils into bright, medium and slow groups according to the results of the Thorndike-McCall Reading Scale. After the groups were formed each was taught by a different method but with practically the same subject matter. The results were satisfactory.

67. GRAY, P. L. and MARSDEN, R. E. "An application of intelligence tests," *Journal of Experimental Pedagogy and Training College Record*, 6:33-38, March 5, 1921.

An account of testing a small group of pupils with the Stanford Revision. Compares the results with those from examinations, teachers' estimates and vocabulary tests.

68. GREENBERG, B. B. "Intelligence tests as a basis for reclassification," *The Technique of Supervision by the Elementary School Principal. The First Yearbook of the Department of Elementary School Principals*. Washington: National Education Association, May, 1922, p. 55-58.

An account of the reorganization of a New York school on the basis of results from individual and group intelligence tests, several achievement tests, sensory and motor tests, etc. Reclassification on the basis of these tests resulted in increased homogeneity in each grade.

69. HAGGERTY, M. E. "Recent developments in measuring human capacities," *Journal of Educational Research*, 3:241-53, April, 1921.

States that intelligence must be supplemented by other traits as a basis for estimating capacities.

70. HANSON, W. A. "Mental measurement and the special class system in New London, Connecticut," *American School Board Journal*, 63:37, 119, September, 1921.

Twenty-seven hundred children were tested with the Dearborn and Haggerty Tests. Special classes were formed and the results also used to guide teachers in their instruction. In some cases individual tests were given.

71. HARPER, MAY M. "Intelligence tests as a basis for homogeneous grouping," *Elementary School Journal*, 22:781-82, June, 1922.

In a junior high school in Xenia, Ohio, pupils were classified in three groups according to the Haggerty and Terman tests. Reclassifications were made at the end of every two months. About half of the pupils were changed at the end of two months and about one-fourth at the end of four months.

72. HENMON, V. A. C. "The measurement of intelligence," *School and Society*, 13:151-58, February 5, 1921.

An argument in favor of the cautious use of tests for purposes of classification. States that these tests should measure social and mechanical as well as abstract intelligence.

73. HENRY, MARY B. "Mental testing as an aid in guidance and classification of school children." *Department of Research of the Santa Ana Public Schools, Bulletin No. 1*. Santa Ana, California: Board of Education, 1919. 23 p.

A general account of the use of mental tests in the Santa Ana schools. Discusses their agreement with teachers' estimates, their use for the purpose mentioned above, etc. Pupils are grouped in three sections on the basis of test results and other information.

74. HERRIG, ANNA B. "Promotions in the practise school as determined by the use of standard tests and educational measurements," *Educational Administration and Supervision*, 7:217-25, April, 1921.

A theoretical discussion.

75. HINES, H. C. "What Los Angeles is doing with the results of testing," *Journal of Educational Research*, 5:45-47, January, 1922.

Gives various details connected with the use of both intelligence and achievement tests in Los Angeles.

76. HINES, H. C. "Measuring the intelligence of school pupils," *American School Board Journal*, 64:35-37, 135, April, 1922.

A rather good theoretical discussion giving criticisms on both sides of the question and listing what are considered the best tests for the different grades.

77. HOLLEY, C. E. "Mental tests for school use." *Bureau of Educational Research Bulletin*, No. 4, *University of Illinois Bulletin*, Vol. 17, No. 28, March 8, 1920. University of Illinois, 91 p.

A study of the use of a number of mental tests with some theoretical discussion.

78. HOLMES, H. W. "The general philosophy of grading and promotion with relation to intelligence testing," *School and Society*, 15:457-61, April 29, 1922.

An argument for an enriched course for superior pupils.

79. HUGHES, W. H. "Provisions for individual differences in high-school organization and administration," *Journal of Educational Research*, 5:62-71, January, 1922.

A questionnaire study of plans actually used by high schools.

80. HUNTER, F. N. "Report of the superintendent of schools for the year 1917-18." Oakland, California: Board of Education, 1919. 353 p.

Contains considerable discussion of the Otis and Simon-Binet Tests, flexible promotion, etc.

81. IRVING, M. LOUISE. "Classification into ability groups in Santa Rosa," *Journal of Educational Research*, 6:362-64, November, 1922.

In the junior high school of Santa Rosa classification is based upon two or three intelligence tests and several achievement tests.

82. JAHRLING, ROBERT. "Educating gifted children in Hamburg," *Pedagogical Seminary*, 30:35-39, March, 1923.

Gifted children are selected by a combination of tests, teachers' estimates and school marks. A special course is provided for them.

83. JOHNSON, O. J. "Teachers' estimates of qualities of gifted pupils as related to classroom activities," *School and Society*, 17:466-69, April 28, 1923.

Thirty-three teachers of 900 pupils, mostly in high school, answered a questionnaire of ten questions on the general topic given above. The teachers favored separating bright pupils from others and giving them special work.

84. JORDAN, R. H. "An example of classification by group tests," *Educational Administration and Supervision*, 6:198-201, April, 1920.

In a Minnesota grade school the seventh and eighth-year pupils were tested with several mental tests. Those above the 75 percentile of the next higher class were considered for extra promotion, those below the 25 percentile of the next lower class for failure or demotion.

85. KEENER, E. E. "The use of measurements in a small city school system," *Journal of Educational Research*, 3:201-06, March, 1921.

This article mentions a few instances of readjustment in school based upon test results. The averages given are from the Richmond, Indiana, schools.

86. KELLEY, T. L. "Again: educational determinism," *Journal of Educational Research*, 8:10-19, June, 1923.

The writer states that he is in sympathy with Bagley's belief in democracy and Terman's insistence upon the reality of individual differences. His conclusion is that instruction should be properly differentiated.

87. KENT, R. A. "An experiment in the grading and placing of children," *American School Board Journal*, 62:40-41, February, 1921.

In Duluth, pupils were placed according to results from the Otis test. Discipline was made easier, interest was increased, better work was done and other good results secured.

88. KETNER, SARAH P. "Grouping by standardized tests for instructional purposes," *Journal of Educational Research*, 2:620-25, October, 1920.

A Denver school grouped pupils in reading, arithmetic and penmanship according to the results of tests. The experiment seemed to be successful and the plan was to be extended to other schools.

89. KUHLMANN, F. "What constitutes feeble-mindedness," *Journal of Psycho-asthenics*, 19:214-36, June, 1915.

Reaches the conclusion that the I.Q. is the most reliable criterion of an individual's grade of intelligence.

90. KUNTZ, E. E. "Grouping of children by abilities and consequent changes in school procedure. 3. Procedure in Lansford." Ninth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 23, No. 1, p. 267-69.

The Haggerty, National and Terman Tests were used as a basis for grouping pupils. Two or three sections were formed in each of the lower grades and more time given to slow pupils in the upper grades.

91. KYTE, G. C. "An experiment in the education of gifted children in the first grade," The Technique of Supervision by the Elementary School Principal. The First Yearbook of the Department of Elementary School Principals. Washington: National Education Association, May, 1922, p. 71-80.

In a public school at Berkeley superior first-grade children are selected on the basis of results from the Stanford Revision and certain other data and allowed to gain time. A reading test showed that nothing was lost in achievement. On the whole the plan was satisfactory.

92. LAWS, A. R. and BOWIE, S. "Intelligence tests in examinations for junior scholarships," Journal of Experimental Pedagogy and Training College Record, 6:155-69, December 5, 1921.

Found that the correlation between intelligence test results and terminal marks ranged from $-.04$ to $+.96$. Concludes that no one test is sufficient as a basis for judging pupils.

93. LAYTON, W. K. "The intelligence testing program of the Detroit public schools," School and Society, 15:368-72, April 1, 1922.

Much the same as contained in the reference by same author in the Twenty-first Yearbook. Especially describes the X, Y and Z groups in the first grade, membership in which is determined by test results and which have different work.

94. LINDSAY, M. D. and GAMSBY, R. S. "Where test scores and teachers' marks disagree," School Review, 29:679-87, November, 1921.

An account of the use of the Terman Test in Palo Alto Union High School. It was found that in all cases of poor work by superior students the teachers could have secured better work if they had known the pupils' ability.

95. LLOYD, S. M. and ULLRICH, O. A., JR. "The progress of pupils in an ungraded class," Psychological Clinic, 11:276-87, February 15, 1918.

Several subject-matter tests were used with the pupils of an ungraded room in Austin. Pupils gained by being placed in this room.

96. LOWELL, FRANCES. "An experiment in classifying primary grade children by mental age," Journal of Applied Psychology, 6:276-90, September, 1922.

In the practise school of the City Normal School of Rochester, pupils of grades I to III were grouped with the Kuhlmann Revision as a chief basis.

97. MADSEN, I. N. "Interpreting achievement in school in terms of intelligence," *School and Society*, 14:59-60, July 30, 1921.

A rather short discussion of the E. Q., A. Q. and I. Q.

98. MADSEN, I. N. "Intelligence as a factor in school progress," *School and Society*, 15:283-88, March 11, 1922. *American School Board Journal*, 64:37-38, June, 1922.

A number of towns, mostly in Idaho, gave the Haggerty Test in the elementary school and the Army Alpha in high school to over 12,000 pupils. It was found that the I.Q.'s of the same age group varied directly with the grade placement.

99. MARSHALL, JESSICA. "Using the results of testing," *The Technique of Supervision by the Elementary School Principal. The First Yearbook of the Department of Elementary School Principals*. Washington: National Education Association, May, 1922, p. 49-55.

An account of the use of tests for purposes of placing pupils in a Toledo school. In the lower grades classification was chiefly according to the results of various intelligence tests, in the upper grades according to those from achievement tests.

100. MARTENS, ELISE H. "Better classification," *The Journal of the National Education Association*, 12:174-75, May, 1923.

A statement of the problem and our failure to meet it at present followed by an argument that individual differences must be recognized. It is implied that mental and subject-matter tests should be used for this purpose.

101. MILLER, W. S. "General intelligence tests," *School Review*, 28:94, February, 1920.

A brief statement that the University of Minnesota High School has been classifying entering students according to mental test results with a list of favorable results. States that the highest correlation between mental test results and achievement is in mathematics and science.

102. MITCHELL, DAVID. "Psychological examination of pre-school age children," *School and Society*, 15:561-68, May 20, 1922.

Discusses the results of testing 1000 New York children, advocates special classes, differentiated curricula, etc.

103. MONTGOMERY, E. W. "Group tests for intelligence in the Bedford (Indiana) schools," *Sixth Conference on Educational Measurements, Bulletin of the Extension Division, Vol. 5, No. 1*. Bloomington: Indiana University, 1919, p. 54-55.

The Binet-Simon Test was used to select pupils for special classes. In addition group tests were used in high school as the basis of organizing fast sections.

104. MURDOCH, KATHARINE. "Rate of improvement of the feeble-minded as shown by standardized educational tests," *Journal of Applied Psychology*, 2:243-49, September, 1918.

The Stanford Revision and a dozen or so subject matter tests were used on a small number of feeble-minded children. Conclusion reached was that the mental age of a feeble-minded is not equivalent to the same mental age of a normal child.

105. MYERS, A. F. "Reclassification of children on basis of tests in Port Clinton schools," *Journal of Educational Method*, 1:24-25, September, 1921.

In Port Clinton, Ohio, a change was made from the annual to the semester system by promoting the upper 40 percent of each grade one semester and demoting the lower 10 percent one semester. The basis of classification was a combined intelligence and achievement test score.

106. MYERS, C. E., MYERS, G. C. and LAYTON, S. H. "Group mental testing in Altoona, Pennsylvania," *School and Society*, 13:624-28, March 28, 1921.

The Myers' Mental Measure was used. It was recommended that special classes for sub- and super-normal children be formed, that several parallel courses be organized, that pupils be classified according to their I.Q.'s and school marks, etc.

107. MYERS, G. C. "Economy in intelligence classification," *Educational Administration and Supervision*, 6:309-12, September, 1920.

A theoretical discussion of the grouping of pupils, maximum and minimum curricula, etc. Also an account of the testing and grouping of 1500 illiterate soldiers into four groups in each grade.

108. MYERS, G. C. "Intelligence classification and mental hygiene," *Pedagogical Seminary*, 28:156-60, June, 1921.

An argument for complete mental surveys of school systems.

109. NICHOLS, M. L. "The teaching of science to classes divided according to ability." *Ninth Annual Schoolmen's Week Proceedings, University of Pennsylvania*, Vol. 23, No. 1, p. 324-26.

In the South Philadelphia High School for Girls science classes were divided according to results of intelligence tests. Different methods of teaching were used in the different sections.

110. OMANS, A. C. "Provision for ability grouping in junior and senior high school," *American School Board Journal*, 65:55-58, 138, October, 1922.

Gives questionnaire replies from fifty schools in all parts of the country. Shows that in general grouping on an ability basis is favored over individual promotions. Slightly over one-half classified on intelligence tests and teachers' estimates, about two-fifths on intelligence tests and school marks and a few on school marks alone. This is a good discussion and summary of practises.

111. PATTERSON, D. G. "A mental survey of the school population of a Kansas town," *School and Society*, 7:84-89, January 19, 1918.

This is well described by the title. A comparison is also made with Pintner's results in Ohio.

112. PINTNER, R. "A mental survey of the school population of a village," *School and Society*, 5:597-600, May 19, 1917.

An account of the survey of an Ohio village with a group of tests.

113. PINTNER, R. *The Mental Survey*. New York: D. Appleton and Company, 1918, 116 p.

This contains an account of using a number of intelligence and achievement tests, the results obtained from surveying school systems and the relation between educational accomplishments and mental ability, etc.

114. PINTNER, R. and CUNNINGHAM, BESS V. "The problem of group intelligence tests for very young children," *Journal of Educational Psychology*, 13:465-72, November, 1922.

A brief account of the organization of three sections in grade I of a school at Toledo, Ohio. The Pintner-Cunningham Primary Tests were used.

115. PINTNER, R. and MARSHALL, HELEN. "A combined mental-educational survey," *Journal of Educational Psychology*, 12:32-43, January, 1921.

A discussion of the necessity of combining the results of mental and educational tests. Also states that the schools have been best adapted to dull pupils.

116. PINTNER, R. and MARSHALL, HELEN. "Results of the combined mental-educational survey tests," *Journal of Educational Psychology*, 12:82-91, February, 1921.

A comparison of school work with capacity by means of mental and educational indices.

117. PINTNER, R. and NOBLE, H. "The classification of school children according to mental age," *Journal of Educational Research*, 2:713-28, November, 1920.

About 5000 pupils in a Columbus, Ohio, school were tested with the Stanford Revision. Fifteen percent were either given extra promotion or demoted. Special classes and an ungraded class were formed, acceleration and retardation were both reduced, discipline, work and interest were bettered.

118. PRESSEY, L. C. "The relation of intelligence to achievement in the second grade," *Seventh Conference on Educational Measurements, Bulletin of the Extension Division, Vol. 6, No. 1*. Bloomington: Indiana University, 1920, p. 68-77.

Describe the use of the Indiana Primer Scale and Scale of Attainment No. I. in an Indiana city. It was found that no inferior pupils were high in achievement but that many superior pupils were low.

119. PRESSEY, S. L. "A systematic plan for selecting sub-normal and super-normal children in the public schools," Fifth Conference on Educational Measurements, Bulletin of the Extension Division, Vol. 4, No. 4. Bloomington: Indiana University, 1918, p. 92-99.

Recommends that a group test be used first and then the Stanford Revision.

120. PRESSEY, S. L. "The 'efficiency' of a group scale of intelligence in prognosticating success and failure in the junior high school," Journal of Applied Psychology, 3:381-85, December, 1919.

Discusses the use of the Indiana Group Point Scale in Bloomington. States that results are rather highly correlated with failure and success in school work.

121. PRESSEY, S. L. "School surveys by means of group tests of intelligence," Sixth Conference on Educational Measurements, Bulletin of the Extension Division, Vol. 5, No. 1. Bloomington: Indiana University, 1919, p. 46-53.

Discussion of the use of the Indiana Cross-Out Scale which is useful for general survey purposes.

122. PRESSEY, S. L. "Suggestions with regard to the use of mental tests and in particular with regard to their use in combination with tests of achievement," Seventh Conference on Educational Measurements, Bulletin of the Extension Division, Vol. 6, No. 1. Bloomington: Indiana University, 1920, p. 78-80.

A discussion of general mental surveys, the use of achievement tests, their prognostic value, etc.

123. PRESSEY, S. L. "An attempt to measure the comparative importance of general intelligence and certain character traits in contributing to success in school," Elementary School Journal, 21:220-29, November, 1920.

A study of junior high-school pupils. The correlation of health, attitude, preparation and ability with school marks and with age was studied. Ability and attitude were found to be the most important.

124. PRESSEY, S. L. and L. W. "Measuring the 'usefulness' of tests in solving school problems," School and Society, 12:531-34, November 27, 1920.

The Indiana Cross-Out Scale was given to pupils in the upper grades and fast and slow sections arranged according to its results. Likewise the Primer Scale was given in the first grade. A better agreement was found between placement by test results and semester marks than between placement by teachers' judgments and semester marks.

125. PRICE, E. D. "The Enid plan of classification of pupils according to mental ability." Enid, Oklahoma: Board of Education, 1921. 12 p.

Elementary pupils were grouped into three groups according to teachers' opinions. The superior and inferior groups were also tested by the Terman Test, the results of which usually verified the teachers' judgment.

126. PROCTOR, W. M. "The use of intelligence tests in the educational guidance of high-school pupils," *School and Society*, 8:473-78, 502-09, October 19, 26, 1918.

In Palo Alto High School it was found that the Stanford Revision apparently affords as good a measure of success in school as do teachers' estimates or previous school marks. Pupils with I. Q.'s of 95 or below are not likely to be successful in high-school work.

127. PROCTOR, W. M. "Psychological tests and the probable school success of high-school pupils," *Journal of Educational Research*, 1:258-70, April, 1920.

A discussion of the use of the Stanford Revision and the Army Alpha Tests in high school and the connection between intelligence and high-school marks, elimination, retardation, etc. Army Alpha yields a rather low correlation with school marks.

128. PROCTOR, W. M. "The use of psychological tests in the educational guidance of high-school pupils," *Journal of Educational Research*, 1:369-81, May, 1920.

Shows that pupils guided in the choice of subjects according to Stanford Revision results show less elimination and failure than do those who are not so guided.

129. PROCTOR, W. M. "The use of psychological tests in the vocational guidance of high-school pupils," *Journal of Educational Research*, 2:533-46, September, 1920.

A discussion of the occupational levels of intelligence as found by testing in the army, the vocational choices of high-school pupils and the connection between the two. States that pupils should be guided out of vocations that require a greater degree of intelligence than they possess.

130. PROCTOR, W. M. and WARD, HELEN. "Relation of general intelligence to the persistence of educational and vocational plans of high-school pupils," *Journal of Educational Research*, 7:277-88, April, 1923.

Shows that there is a definite relation between results of intelligence tests and vocational plans and persistence and a still higher relation between the former and educational plans and persistence. Implies that groups of pupils formed according to intelligence test results should receive different treatment in our schools.

131. RACE, HENRIETTA V. "A study of a class of children of superior intelligence," *Journal of Educational Psychology*, 9:91-98, February, 1918.

In a Louisville school, pupils with I. Q.'s above 120 were selected. They did one year's work in one-half year without over twenty minutes of home study daily. The pupils appeared to be greatly benefited by this work.

132. RAPP, ANNA A. "Grouping of children by abilities and consequent changes in school procedure. 2. Procedure in Reading." Ninth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 23, No. 1, p. 263-67.

The Terman and Illinois Tests were used in the seventh and eighth grades and pupils classified according to scores.

133. REEVE, W. D. "Homogeneous grouping of high-school students by means of psychological tests," Fourth Yearbook of the National Association of Secondary School Principals. Menasha, Wisconsin: George Banta Publishing Company, 1921, p. 81-94.

States that it is a waste of time to attempt to teach the best and worst 10 percent along with average pupils. Discusses the correlation of tests and school marks and says that classification by test results makes it easier to provide suitable instruction, reduces failures, gives the brighter pupils better training and in general conserves human resources.

134. ROBBINS, CHESTER. "The initial grouping of pupils." Ninth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 23, No. 1, p. 244-48.

A discussion of various articles in books dealing with this subject.

135. ROGERS, AGNES L. "Mental tests as a means of selecting and classifying college students," Journal of Educational Psychology, 11:181-92, April, 1920.

Discusses results of testing about 300 Goucher college students with the Thorndike and Rogers Tests. Correlations with school marks were low for the single tests but high when the test results were combined. Shows that a division of students into three groups by test results would misplace about one-half, whereas by a chance placement two-thirds would be misplaced.

136. ROWLAND, S. V. "Individual difference among elementary grade pupils as evidenced by group intelligence tests." Eighth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 21, No. 37, Philadelphia, June 18, 1921, p. 101-04.

An account of classification based on results of the Stanford Revision and the Dearborn Tests. Special classes for inferior children were formed, also two or three groups of those remaining, and some individual instruction given.

137. RUCH, G. M. "An experiment with forced promotion," Educational Administration and Supervision, 6:71-73, February, 1920.

On the basis of several achievement tests a few pupils in the University of Oregon High School were skipped ahead a semester. Most of them made good.

138. RUCH, G. M. "Study of the mental, pedagogical and physical development of the junior division of the University High School, Eugene, Oregon." University of Oregon Publication, Vol. 1, No. 7, 1920.

A rather good discussion along the lines indicated.

139. RUMML, BEARDSLEY. "Reliability of mental tests in the division of an academic group," Psychological Monographs, Vol. 24, No. 4, October, 1917.

A rather lengthy criticism of the use of marks as measures of ability and of the value of a number of tests for dividing pupils into instructional groups.

140. SAAM, THEODORE. "Intelligence testing as an aid to supervision," Elementary School Journal, 20:26-32, September, 1919. Addresses and Proceedings of the National Education Association, 57:625-29, 1919.

Twenty-three hundred and sixty lower-grade pupils at Council Bluffs, Iowa, were tested with the Stanford Revision. Kindergarten pupils were promoted to first grade on the basis of results. This procedure was satisfactory as a high correlation was found between I.Q.'s and school marks.

141. SCHUTTE, T. H. "A mental survey in the training department of the Moorehead State Teachers College, Moorehead, Minnesota," American School Board Journal, 65:45-47, 53-54, 42-43; October, November, December, 1922.

The Otis, Chicago and Army Alpha Tests were given to elementary pupils and rapid progress groups formed in each grade. Most of the pupils in these groups gained one semester in the year.

142. SEASHORE, C. E. "Sectioning classes on the basis of ability," School and Society, 15:353-58, April 1, 1922.

Presents the following plan which was found successful in college. Two or three competitive exercises are set up at the first of the year and the marks thereon supplemented by mental tests and high-school marks as a basis of sectioning. Discusses advantages and objections.

143. SEASHORE, C. E. et al. "Mentality tests; a symposium," Journal of Applied Psychology, 7:229-40, 278-86, 348-60; April, May, June, 1916.

A general theoretical discussion of mental tests, their significance and use.

144. SHIDELER, J. W. "A correlation of teachers' grades and the scores of intelligence tests," School Review, 29:733-34, December, 1921.

An account of giving the Terman Group Test to 170 high-school pupils at Fort Scott, Kansas. Discusses its correlation with marks in the various subjects and finally concludes that intelligence test results should be used to supplement the teacher's judgment.

145. SPAIN, C. L. "Grouping of children by abilities and consequent changes in school procedure. 1. Procedure in Detroit." Ninth Annual Schoolmen's Week Proceedings, Vol. 23, No. 1, p. 257-63.
An account of the Detroit plan.

146. SPECHT, LOUISE F. "A Terman class in Public School No. 64, Manhattan," *School and Society*, 9:393-98, March 29, 1919.

Pupils in grades IVB to VIB were selected on the basis of low chronological age, high school marks, I.Q.'s of 120 or better, etc., and allowed to take an enriched curriculum and make individual progress. From one to four grades were covered in six months.

147. STEBBINS, R. and PECHSTEIN, L. A. "Quotients, I, E and A," *Journal of Educational Psychology*, 13:385-98, October, 1922.

A discussion of how to use test results and what should be the basis of classifying pupils.

148. STETSON, P. C. "Homogeneous grouping in the first year of a five-year high school," *School Review*, 29:351-65, May, 1921.

In the Muskegon, Michigan High School the Chicago Test was found unsatisfactory as a basis of classifying pupils but when supplemented by teachers' opinions gave better results. Both teachers and pupils favored having three groups on the basis of ability.

149. TAYLOR, J. S. "Grading and promotion," *School and Society*, 17:405-09, April 14, 1923.

Tells of classification in one New York City district which was based upon I.Q.'s, A.Q.'s, teachers' estimates, etc.

150. TERMAN, L. M. "Intelligence tests as a basis for grading." *The Measurement of Intelligence*. Boston: Houghton Mifflin Company, 1916, p. 16-17.

A brief statement that promotions should be made chiefly on the basis of intellectual ability.

151. TERMAN, L. M. "The use of intelligence tests in the army," *Psychological Bulletin*, No. 15, p. 177-87, June, 1918.

A good general account of the army work.

152. TERMAN, L. M. *The Intelligence of School Children*. Boston: Houghton Mifflin Company, 1919, 317 p.

A discussion of many phases of intelligence testing including general principles, the amount of individual differences found, capacity according to mental age, prediction according to the I.Q., etc.

153. TERMAN, L. M. "The use of intelligence tests in the grading of school children," *Journal of Educational Research*, 1:20-32, January, 1920.

Mostly a theoretical discussion of individual differences, how many pupils should be accelerated and how many retarded, etc. Summarizes what has been found as to difference of test results and teachers' opinions as showing that tests are usually more nearly right.

154. TERMAN, L. M. "The psychological determinist; or democracy and the I.Q.," *Journal of Educational Research*, 6:57-62, June 1922.

An answer to Bagley's speech against the use of the I.Q. for classifying pupils.

155. TERMAN, L. M. et al. *Intelligence Tests and School Reorganization*. Yonkers, New York: World Book Company, 1922, 111 p.

A theoretical discussion of the problems accompanied by statements of what is being done in Oakland, Los Angeles and Miami, Arizona.

156. THORNDIKE, E. L. et al. "Intelligence and its measurement: A symposium," *Journal of Educational Psychology*, 12:123-47, 195-216, 271-75; March, April, May, 1921.

A rather theoretical discussion of the nature and measurement of intelligence and the next steps in research dealing with it.

157. TILDSEY, J. L. "Some possibilities arising from the use of intelligence tests," *Bulletin of High Points in the Work of the High Schools of New York City*, 3:4-10, June, 1921.

Tells of various uses of intelligence tests in New York.

158. TRABUE, M. R. "Some pitfalls in the administrative use of intelligence tests," *Journal of Educational Research*, 6:1-11, June, 1922.

A critical discussion pointing out certain dangers to be avoided.

159. TRABUE, M. R. and STOCKBRIDGE, F. P. "Psychological tests in education," Chapter VII, *Measure Your Mind*. New York: Doubleday Page and Company, 1920, p. 63-75.

Among other things contains a brief account of an experiment in Public School No. 64, New York City, wherein mental tests were one of the bases used to select pupils for rapid advancement. Also discusses the predictive value of mental tests in regard to college marks and shows that it is rather high.

160. TUPPER, C. R. "The grading of pupils in Miami, Arizona," *Educational Research Bulletin*, 2:163-65, May 30, 1923.

A description of the plan in use in Miami in which class groupings are made more or less on the basis of mental age. The teachers appear to favor the plan. It has reduced failure by more than two-thirds and increased acceleration considerably.

161. WALLIN, J. E. W. "A comparison of three methods for making the initial selection of presumptive mental defectives," *School and Society*, 13:31-45, January, 1921.

States that the Pressey Primer Scale is inferior to the judgment of trained individuals in selecting defective individuals.

162. WASHBURNE, C. W. "The individual system in Winnetka," *Elementary School Journal*, 21:52-68, September, 1920.

Describes the system in Winnetka in which progress and promotion are entirely individual, in which most of the work is done by using practise material and then taking complete diagnostic tests. States that every teacher favors the plan, that at least five percent were saved from repeating and \$5000 saved in one year.

163. WASHBURNE, C. W. "Educational measurements as a key to individual instruction and promotions," *Journal of Educational Research*, 5:195-206, March, 1922.

An account of the individual system used in Winnetka.

164. WHIPPLE, G. M. "The problem of selecting and training gifted children in the public schools," *Fifth Conference on Educational Measurements, Bulletin of the Extension Division*, Vol. 4, No. 4. Bloomington: Indiana University, 1918, p. 6-25.

An argument for the selection of gifted children by mental tests and the providing of special opportunities for them. States that the 10 percent with I.Q.'s above 115 can probably do two years' work in one. Also discusses the Urbana and other experiments.

165. WHIPPLE, G. M. "Educational determinism; a discussion of Professor Bagley's address at Chicago," *School and Society*, 15:599-602, June 3, 1922.

A strong reply to Bagley's address in which the validity and use of intelligence tests are strongly advocated.

166. WHITCOMB, M. EDITH. "Intelligence tests in the primary grades," *Journal of Educational Research*, 5:58-61, January, 1922.

An account of the work done with the Stanford Revision in Council Bluffs, Iowa. Gives various data and shows that the plan of placing pupils by test scores works well.

167. WHITMIRE, ETHEL D. "Intelligence tests vs. teacher's estimates," *Psychological Clinic*, 13:197-98, May 15, 1920.

Discusses a couple of cases in which teachers rated pupils by their personality and attitude.

168. WHITNEY, F. P. "Provision for accelerant and retarded children in junior high school," *School Review*, 27:695-705, December, 1919.

In the Collinswood Junior High School of Cleveland pupils were placed by school marks and test results.

169. WILLETT, G. W. "A suggestion for meeting individual differences," *School Review*, 28:576-84, October, 1920.

States that cumulative records are better than either teachers' judgments or intelligence test results, but that a combination of all three is best.

170. WILLIAMS, A. J. "Age-grade distributions and intelligence quotients," *Journal of Educational Psychology*, 11:39-44, January, 1920.

An account of the Otis Test in Brewster and a discussion of its results as compared with the age-grade location of the pupils.

171. WILLIS, C. B. "The grading and promotion of pupils," *Journal of Educational Method*, 1:90-95, November, 1921.

An argument for the classification of pupils according to their ability.

172. WINTER, O. "Chicago intelligence test in Harrison Technical High School," *School Review*, 28:772-75, December, 1920.

It was found that the correlation between intelligence test scores and certain achievement tests and also school marks was rather low.

173. WOODY, CLIFFORD. "Tests and measures in the schoolroom and their value to the teachers," *School and Society*, 6:61-66, July 21, 1917.

Mentions others but especially tells of an experiment in Chatham, New Jersey. On the basis of scores on five achievement tests the best pupils were given extra promotion. All made good and led in the classes in which they were placed.

174. WOODY, CLIFFORD. "Measurement of the effectiveness of differentiation of high-school pupils on the basis of the Army intelligence tests," *Journal of Educational Research*, 7:397-409, May, 1923.

A study of the freshman class in a small Michigan high school. Shows that if the class had been divided into three groups according to scores upon Army Alpha the division would have agreed fairly well with achievement as measured by tests in English, Algebra and Latin.

175. WURTH, CARL. "Intelligence tests and promotions," *American School Board Journal*, 65:50-51, December, 1922.

An argument against segregating bright pupils for three reasons. They should spend their time getting work better rather than going more rapidly, their absence reduces the enthusiasm of the class and they acquire vanity and false pride from being classified as superior.

176. YATES, DOROTHY H. "Impressions from two years spent in testing gifted children." *Proceedings of the First Annual Conference on Educational Research and Guidance*, San Jose State Teachers' College. Sacramento, California: State Printing Office, 1923, p. 29-33.

A discussion of gifted children with some argument to the point that training for leadership does not need to be begun early and that bright pupils should not be forced too much.

177. YOAKUM, C. S. and YERKES, R. M. *Army Mental Tests*. New York: Henry Holt and Company, 1920, 303 p.

A general account of how the Army Tests were made and used with a discussion of results and applications.

178. ZIRKLE, H. W. "Character and results of special rooms as conducted in the Whittier School of Denver," *Elementary School Journal*, 21:189-97, November, 1920.

Pupils are placed in regular, accelerated and retarded rooms according to test results, age, school marks, health, etc.

179. ZIRKLE, H. W. "Taking care of the gifted child," *The Technique of Supervision by the Elementary School Principal*. The First Yearbook of the Department of Elementary School Principals. Washington: National Education Association, May, 1922, p. 81-86.

In a Denver school, superior pupils are selected by individual and group tests, school marks, effort and physical condition and are given the opportunity to gain time. Practically all of the pupils selected are able to gain time and still continue to make high school marks.

180. ZORNOW, T. A. and PECKSTEIN, L. A. "An experiment in the classification of first-grade children through the use of mental tests," *Elementary School Journal*, 23: 136-46, October, 1922.

In Rochester, New York, over 400 entering pupils were tested with the Stanford Revision and classified according to the test results. Later the Detroit First-Grade Group Test was used. It was found that but few pupils had to be shifted after being thus placed.

181. "Classification of pupils according to mentality," *The School Magazine*, 3:196-97, April, 1921.

In a Buffalo school A, B and C groups were formed in grades VI-VIII according to the average of Otis scores, teachers' marks and an average mark. The plan appears to have been successful.

182. "Classification of pupils in Miami, Arizona," *Elementary School Journal*, 22:727-29, June, 1922.

When pupils were classified on the basis of mental tests, the number of failures was reduced and much money saved.

183. "Double promotion," *Elementary School Journal*, 23:324-25, January, 1923. An editorial.

In Macomb, Mississippi, all pupils who are recommended by the teacher and have a doctor's certificate of good health, who are not below a certain age, whose previous record in school work and attendance is satisfactory and who make certain scores upon achievement tests are given double promotion if it does not involve skipping certain subjects.

184. Educational Research Bulletin, Ohio State University, Vol. 2, No. 8, p. 123-24, April 18, 1923.

An account of procedure in Painesville, Ohio. In grades VIIB to VIIIA pupils are grouped according to the amount of work they are capable of doing but in the lower grades they are grouped according to ability as shown by the Illinois Examination and school work. Also there is a special room with individual progress and promotion upon effort for upper-grade pupils whose school work is unsatisfactory and whose ability appears to be low.

185. "Grouping pupils on the basis of ability." The First of a Series of Surveys of the Dept. of Instruction, Cleveland Public Schools, Board of Education, Cleveland, Ohio. p. 18-21.

In the first and seventh grades pupils were classified chiefly according to results from the Pressey Primer and Illinois Scales, respectively.

186. "Intelligence tests as a basis for homogeneous grouping at Xenia, Ohio," American School Board Journal, 64:75-76, March, 1922.

Three groups were made up of seventh and eighth grade pupils on the basis of the Haggerty and Terman Tests. They were regrouped later as was necessary but in most cases stayed in the same group.

187. Journal of Educational Research, 7:265, March, 1923.

In Painesville, Ohio, seventh and eighth grade pupils are grouped according to the Illinois Examination results. The sub-normal of these grades are promoted on the basis of their effort.

188. Journal of Educational Research, 7:454, May, 1923.

A brief account of the reclassification of pupils in grades V - VIII on the basis of scores upon the National Group Intelligence Test, teachers' marks and the time devoted to home work. Such changes in the original classification as seemed necessary were made. The plan seems to have been successful.

189. Journal of Educational Research, 7:456-57, May, 1923.

In Miami, Arizona, results from the Otis and National Group Intelligence Tests are used to determine the I.Q.'s of the pupils for the purpose of grouping. Each teacher handles two sections of different ability, the average and the dull. Extra promotions are given to take care of the brighter pupils. The failure rate has been decreased very markedly while results of standardized tests show that achievement has not been lowered.

190. "Provision for exceptional pupils in Oakland," School and Society, 14:30-31, July 16, 1921.

Gives data as to the number of special classes and special promotions for exceptional pupils.

191. "Pupils classified by mental tests," School Life, 12:13, February 1, 1921.

An account of reclassification of pupils in the W. T. Harris school of New York City by group tests.

192. "Reclassified school making good progress," *School Life*, May 1, 1921. p. 12.

A brief account of the working of the plan in the W. T. Harris school of New York City in which pupils were grouped in sections by group test results. The plan appears to be working satisfactorily.

193. "Report of the school committee for the year 1917-1918." Providence, Rhode Island: School Committee, p. 49-70.

Discusses many points in connection with the use of intelligence tests, especially their high correlation with quality of school work and their reliability for classifying pupils.

194. "Uniform classification by mental age," *School Life*, 8:88, December, 1921.

A statement that in Denver it is planned to reclassify all pupils into homogeneous groups according to their mental ages.

PART II.

195. ALDERMAN, L. R. "An effort to make the school fit the needs of the exceptional child," *Addresses and Proceedings of the National Education Association*, 52:830-35, 1914.

An account of provisions for exceptional children in Portland, Oregon, followed by general discussion. Provisions include a special school for defectives and special rooms for other exceptional children.

196. ALEY, R. J. "Care of exceptional children in the grades," *Addresses and Proceedings of the National Education Association*, 48:881-86, 1910.

A general discussion, its chief point being that superior pupils have been comparatively neglected.

197. APPELL, I. and WOLFSON, A. N. "Plan for organizing the entrants into the high school of commerce according to their attainments in scholarship, their capacities and their aims," *School Review*, 27:256-61, April, 1919.

In the New York High School of Commerce pupils were formerly grouped according to the foreign language they had studied but the result was not satisfactory. Later they were divided for English work according to their marks in English during the first three weeks, similarly for mathematics. Results were fairly satisfactory.

198. BAGLEY, W. C. "The 'Batavia system' of class-individual instruction," *Classroom Management*. New York: Macmillan Company, 1916, p. 214-24.

A description of the "Batavia system."

199. BARNARD, F. J. "Classification and promotion of pupils." Report of United States Commissioner of Education, Vol. 1, p. 303-56, 1898-99.

An account of a number of flexible plans of promotion including those in operation in St. Louis, Elizabeth, Seattle, Denver, and Cambridge.

200. BARNARD, F. J. "Let pupils be so classified as to allow unrestricted progress or unlimited time, according to ability," Addresses and Proceedings of the National Education Association, 38:163-70, 1899.

An account of the Seattle plan after it had been in operation eight years. Data are given for over 7000 pupils enrolled in four parallel tracks. The plan appears to have been successful.

201. BATES, W. C. "Annual Report of the School Committee and the Superintendent of Schools." Cambridge, Massachusetts, 1908, p. 45-51.

A description of the Cambridge double-track plan. Data are given for seventeen years' operation showing that on the whole the more rapidly pupils progressed through the grades the better marks they made in high school.

202. BECHT, J. G. "Bright pupils and dull pupils," Journal of Education, 79:395-6, April 9, 1914.

A discussion and diagnosis of the causes of retardation and of the fact that bright pupils deserve special help.

203. BELISLE, H. J. "An experiment in retardation," Journal of Education, 75:381, 87-9, April 4, 1912.

An account of the organization of fast, medium and slow classes in Lawrence, Massachusetts. The operation of the plan appears to have been satisfactory.

204. BERGEN, J. Y. "Grading inside of class lines," Educational Review, 16:81-85, June, 1898.

Description of the division of freshmen and other students of the English High School of Boston according to their average marks in various subjects.

205. BERRY, C. S. "Special classes in Michigan for mentally exceptional children." Report of Superintendent of Public Instruction, Michigan, Vol. 78, 1914-15, p. 57-68.

Gives the results obtained from a questionnaire answered by over 200 towns. Five different classes of exceptional children are considered. Fifty-eight percent of school administrators favor classes for bright children.

206. BLEWETT, BEN. "The system of grading pupils in St. Louis," Educational Review, 8:387-8, November, 1894.

An explanation of the St. Louis quarterly system.

207. BOYKIN, J. C. "Class intervals in city public schools." Report of the United States Commissioner of Education, Vol. 2, p. 981-1009, 1891.

A very good sketch of the history of graded schools from the sixteenth century to the time of writing. The St. Louis and other flexible systems are described.

208. BREHM, J. J. "Variation in the treatment of different groups." Ninth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 23, No. 1, p. 248-52.

In the junior high school of Harrisburg pupils are grouped according to their previous records. The school is "thoroughly committed to this plan."

209. BROWN, S. W. "Some experiments in elementary school organization," Addresses and Proceedings of the National Education Association, 51:458-63, 1913.

The chief point made is an argument for individual progress in each subject at the rate best suited to the pupil.

210. BUCHANAN, ELIZABETH. "Classification and promotion," Addresses and Proceedings of the National Education Association, 39:128-37, 1900.

An argument for short class intervals, of not more than twelve weeks, or even six.

211. BURK, C. F. "Promotion of bright and slow children," Educational Review, 19:296-302, March, 1900.

A description of the Santa Barbara system with A, B, and C sections in each grade. These sections differed in the intensity and extensity of work covered.

212. BURK, FREDERICK. "Every child a minor vs. the lockstep. A suit in equity." Monograph C. San Francisco State Normal School, Fresno, 1915.

A description of individual instruction in the training school for practice teachers. Each pupil goes at his own pace and promotion is made at any time.

213. BURNELL, ELIZABETH F. "Instruction in mathematics for gifted pupils," Pedagogical Seminary, 24:569-83, December, 1917.

Gives the results of a questionnaire on provisions for bright children. Also a bibliography.

214. BUSWELL, G. T. "The school treatment of mentally exceptional children." Elementary School Journal, 23:683-93, May, 1923.

A brief discussion of a number of plans of providing for mentally exceptional children. The argument favors modification of the curriculum and varying the methods of work rather than varying the rate of progress.

215. CARFREY, J. H. "Grading and promotions," Journal of Education, 75:379-80, April 4, 1912.

States that shorter intervals than semesters are best. In Franklin, Massachusetts, a modification of the shorter interval and the group plans are used.

216. CHALMERS, W. W. et al. "Promotions and gradings," Addresses and Proceedings of the National Education Association, 38:369-75, 1899.

A general discussion of semester vs. annual promotions, various flexible plans of organization, etc.

217. CHALMERS, W. S. "Semi-annual promotions." Annual Report of the Board of Education of the City of Toledo, Ohio, for the school year ending August 31, 1903. Toledo, Ohio: Board of Education, 1903, p. 30-41.

An argument showing the importance of semi-annual promotions as a device for getting away from the annual "lockstep." Contains long quotations from W. H. Harris.

218. CLERK, F. E. "The Arlington plan of grouping pupils according to ability in the Arlington High School, Arlington, Massachusetts. School Review, 25:26-48, January, 1917.

A description of the Arlington, Massachusetts plan which relocates pupils every two months on the basis of school marks. Nine advantages are stated and eleven objections answered on the basis of six years of experience with the plan.

219. COGSWELL, FRANCIS. "The Cambridge experiment," Addresses and Proceedings of the National Education Association, 33:333-38, 1894.

A description of the Cambridge, Massachusetts, plan which provides for a four-and a six-year track through grades four to nine inclusive.

220. COLEMAN, E. M. "Grading for efficient organization in the interests of pupils," Addresses and Proceedings of the National Education Association, 40:286-7, 1901.

Describes the plan in use at Ft. Dodge, Iowa, which was adapted from the St. Louis plan.

221. COLLICOTT, J. G. "The bright pupil," Addresses and Proceedings of the National Education Association, 53:457-66, 1915.

Gives results from a questionnaire sent out to all cities of over 50,000. Discusses briefly about a dozen flexible plans for the selection of bright pupils. Followed by arguments for and against.

222. CORSON, D. B. "Classification of pupils," Educational Administration and Supervision, 6:86-93, February, 1920.

An argument for rapid, regular and slow sections of pupils.

223. CUBBERLEY, E. P. "Promotional plans." Public School Administration. Boston: Houghton Mifflin Company, 1916, p. 300-06.

Describes the Pueblo, Batavia, Cambridge, Mannheim, and a few other plans.

224. CUMMINS, R. A. "Bright' and 'slow' pupils in elementary and high school," *Journal of Educational Psychology*, 10:377-88, October, 1919.

An account of a study in a private school in New York City. It was found that there was a tendency for pupils who were bright and making fast progress to continue to do so and for others to continue to make slow progress.

225. DEMPSEY, C. H. "Flexible grading and promotions," *Journal of Education*, 75:373-5, April 4, 1912.

Describes the reorganization of the system at Malden, Massachusetts, which provided opportunity for bright pupils to skip three semesters of work. Lists the principles upon which reorganization was based.

226. DE VOSS, J. C. "School success of gifted children." *Proceedings of the First Annual Conference on Educational Research and Guidance*, San Jose State Teachers College. Sacramento, California: State Printing Office, 1923, p. 34-38.

An argument to the effect that gifted children are able to carry extra work and progress more rapidly. To some extent replies to Dr. Bagley's address on educational determinism.

227. DOUGHERTY, N. C. "Report of the round-table discussion on 'promotion in city schools,'" *Addresses and Proceedings of the National Education Association*, 31:802-3, 1892.

States that in Chicago promotions are made at all times, only slightly over half being at the end of the year. Argues that a flexible system helps pupils.

228. DOWNES, F. E. "Seven years with unusually gifted pupils," *Psychological Clinic*, 6:13-17, March 15, 1912.

Describes the bright sections organized in the Harrisburg, Pennsylvania, schools, also the special schools for bright pupils of the upper grades. States that attendance, scholarship, discipline and high-school records were all improved by the operation of the plans described.

229. DOWNES, F. E. "Other special schools." *Report of the Superintendent of Schools, Harrisburg Public Schools, 1912*, p. 23-26.

Describes the schools for exceptionally gifted children which allow them to cover work of the eighth and ninth years in one year. States advantages of this plan and that the pupils involved do well in high school.

230. DUTTON, S. T. and SNEDDEN, DAVID. "Grading and promotion." *The Administration of Public Education in the United States*, New York: Macmillan Company, 1912, p. 341-55.

A discussion of homogeneity within a grade, reclassification and flexible grading, minimum and maximum requirements, individual teaching, ungraded rooms, the Cambridge and Batavia plans, etc.

231. DYER, F. B. "Superintendent's report." *Seventy-ninth Annual Report of the Public Schools of Cincinnati, 1908*, p. 66, 67-69.

A brief account of certain special classes and vacation schools in Cincinnati.

232. DYER, F. B. "Rapid advancement classes." Annual Report of the Superintendent, Boston, Public Schools, 1913, p. 65-67.

An account of certain classes in which pupils may do three years of work in two. The plan worked well and was to be extended to other schools of the city.

233. FISHER, G. M. "Report to superintendent." Sixty-fourth Annual Report of Schools of Worcester, 1912, p. 74-75.

An account of the summer school provided for failing pupils to make up work and for bright pupils to gain time.

234. FREEMAN, F. N. "Provision in the elementary school for superior children," Elementary School Journal, 21:117-31, October, 1920.

Gives results of a questionnaire sent out to cities of over 25,000. A rather careful analysis of results is made showing what plans are in use and upon what they are based. Advantages and difficulties are discussed.

235. GARBER, J. P. "A rational system of classification and promotion of pupils in elementary schools," Education, 27:288-302, January, 1907.

Argues that promotional intervals should fit pupils but that bright and dull pupils should not be separated nor should intervals be very short. Also says that failure is not the chief cause of elimination.

236. GILLINGHAM, ANNA. "The bright child and the school," Journal of Educational Psychology, 10:237-52, May-June, 1919.

A description of a number of bright children and an argument that such children be given more recreation and play rather than extra work leading to accelerated progress.

237. GIST, A. S. "The acceleration of pupils," School and Society, 5:116-18, January 27, 1917.

An account of an experiment in grouping pupils according to teachers' estimates in a Seattle school. The experiment was considered a success.

238. GLASS, J. M. "The study-coach or opportunity class organization." Eighth Annual Schoolmen's Week Proceedings, University of Pennsylvania Bulletin, Vol. 21, No. 37, Philadelphia, June 18, 1921, p. 250-56.

Describes two types of study-coach organization to meet the individual needs of three classes of pupils. Gives a list of advantages of so doing.

239. GORDON, C. H. "Reorganization of the grammar school and a rational system of grading," Education, 21:16-26, September, 1900.

An argument for two parallel courses of the same length, one of which has a richer curriculum than the other, and for the basing of promotion chiefly upon effort.

240. GOSLING, T. W. "The classification of pupils," *Educational Review*, 39:394-399, April, 1910.
A discussion of the problem as it exists in high school.
241. GREENWOOD, J. M. "Shorter time in elementary school work," *Educational Review*, 24:375-90, November, 1902.
Gives data concerning the Kansas City elementary schools which do in seven years what most schools do in eight. Shows that the work is satisfactorily done.
242. GREGORY, CHRISTOPHER. "Holding pupils in school," *Atlantic Educational Journal*, 11:436-37, April, 1916.
Describes the semi-annual plan with special classes for retarded and rapid classes for superior pupils in Long Branch, New Jersey. States that it results in the seventh and eighth grades being as large as the fifth and sixth.
243. HARLEY, H. L. "The physical status of the special class for bright children in the University of Pennsylvania, summer session of 1912," *Psychological Clinic*, 7:20-23, March 15, 1913.
Shows that school work done in hot weather did not injure the health of bright pupils. All except one increased in weight while in summer school.
244. HARRIS, W. T. "Advantages and disadvantages of the graded system." *Fifteenth Annual Report of the St. Louis Public Schools, 1868-69*, p. 104-07.
This discussion implies dissatisfaction with the rigid grading system.
245. HARRIS, W. T. "Superintendent's report." *Eighteenth Annual Report of the St. Louis Public Schools, 1871-72*, p. 24-27, 81-87.
Mentions the quarterly promotions in use in St. Louis, and discusses the advantages of classification if not too rigid. States that a five-weeks interval is ideal and that a system must be readjusted to meet the needs of its pupils.
246. HARRIS, W. T. "Superintendent's report." *Nineteenth Annual Report of the St. Louis Public Schools, 1872-73*, p. 24-29.
An explanation of the flexible system used in St. Louis which provided for regular quarterly promotions but also had some groups organized with only five weeks intervals.
247. HARRIS, W. T. "Superintendent's report." *Twentieth Annual Report of the St. Louis Public Schools, 1873-74*, p. 121-48.
An argument in favor of the St. Louis and other flexible plans of organization. Contains quotations from several others in favor of such plans.
248. HARRIS, W. T. "Superintendent's report." *Twenty-first Annual Report of the St. Louis Public Schools, 1874-75*, p. 28-29, 86-93.
Contains quotations from other exponents of flexibility.

249. HARRIS, W. T. "Classification in graded schools." Report of the United States Commissioner of Education, Vol 1, p. 601-36, 1891-92.

This is merely a collection of what is contained in the various reports of the St. Louis Public Schools on the same subject.

250. HARRIS, W. T. "Class intervals in graded schools," Addresses and Proceedings of the National Education Association, 39:332-40, 1900.

A statement of the need of flexible organization and of separating weak and strong pupils. It is also argued that promotion should be individual and not by classes.

251. HARRIS, W. T. et al. "The early withdrawal of pupils from school: its causes and its remedies," Addresses and Proceedings of the National Education Association, 12:260-73, 1872.

Several causes of elimination are stated of which defective grading is the most potent. Discussion both for and against short intervals of organization follows.

252. HARTWELL, C. S. "Economy in education," Educational Review, 30:159-77, September, 1905.

States that the grammar school is not satisfactory and that promotion by subjects is one of the changes needed.

253. HARTWELL, C. S. "The grading and promotion of pupils," Educational Review, 40:375-86, November, 1910. Addresses and Proceedings of the National Education Association, 48:294-306, 1910.

An argument for flexible organization and promotion by subjects. The results of a questionnaire are given showing more favorable sentiment on these points than existed several years previously. It is also stated that bright and dull pupils should be given individual attention.

254. HATCH, W. E. et al. "Provisions for exceptional children in the public schools," Addresses and Proceedings of the National Education Association, 45:360-63, 1907.

Rather brief discussion of several of the plans.

255. HEILMAN, J. D. "The need for special classes in the public schools," Psychological Clinic, 1:104-14, June 15, 1907.

This deals entirely with classes for inferior pupils.

256. HENRY, T. S. "Classroom problems in the education of gifted children." Nineteenth Yearbook of the National Society for the Study of Education, Part II, 1920. 125 p.

A complete account of an experiment in selecting gifted children at Urbana, Ill., and a brief description of a number of flexible promotion schemes. There is also a bibliography on the psychology and pedagogy of gifted children.

257. HOBLIT, M. L. "The high-school unit: quantity, quality, and credit," *School Review*, 23:303-06, May, 1915.

A suggestion that high-school graduation be determined by a combined system of units and points, the latter to depend upon the marks made. The scheme is so arranged that a superior student can complete the work in three years, an average student in four years and a poor student in more than four.

258. HOBLIT, M. L. "Is credit for quality sound?—A rejoinder," *School Review*, 23:712-14, December, 1915.

States that his suggested plan did not involve the graduation of a pupil who had covered less than fifteen units of work. Also argues in its defense.

259. HOLMES, W. H. "Plans of classification in the public schools," *Pedagogical Seminary*, 18:475-522, December, 1911.

Describes a dozen or more of the different plans used in this country, also several used in England. The discussion is followed by a bibliography.

260. HOLMES, W. H. "The St. Louis Plan," *Journal of Education*, 75:380, April 4, 1912.

A brief description of the plan mentioned.

261. HOLMES, W. H. "School organization and the individual child." Worcester: Davis Press, 1912, Partly in *Journal of Education*, 75:376-9, April 4, 1912.

A long discussion of a number of different plans of classification and promotion. Also a theoretical discussion of the subject. Some space is given to mental tests.

262. HUTTON, T. B. "Classification and gradation," *School Review*, 16:543-50, October, 1908.

Describes the two-group system in use at LeMars, Iowa. States that it prevents retardation and saves money.

263. JACKMAN, W. S. "The school grade a fiction," *Educational Review*, 15:456-73, May, 1898.

A strong plea and argument against having eight rigidly defined elementary grades.

264. JOHNSON, F. W. "Credit for courses in the University High School," *School Review*, 23:715-18, December, 1915

Gives the plan of credit for quality followed in the University of Chicago High School. The credit ranges from .85 for a grade of 60 percent to 1.25 for a grade of 95 percent. States that the University of Chicago admits some students on this basis.

265. JONES, E. E. "A concrete example of the value of individual teaching," *Psychological Clinic*, 2:195-203, December 15, 1908.

Gives the history of one successful case and states a few general principles.

266. JONES, E. E. "Suggestions from cases of unusually rapid or irregular progress in public schools," Addresses and Proceedings of the National Education Association, 50:640-45, 1912.

A study of several hundred pupils who had skipped grades which shows that most of them should have skipped and that a few should not.

267. JONES, H. S. et al. "II—Report of the committee on city school systems. Pupils-classification, examination and promotion." Addresses and Proceedings of the National Education Association, 26:276-84, 1886.

In this discussion are mentioned various types of classification and the need for considering individual pupils.

268. JONES, OLIVE M. Teaching Children to Study. The Group System Applied. New York: Macmillan Company, 1909.

Gives a brief account of a number of plans and a very full one of the Mannheim special class system.

269. JONES, W. F. "An experimental-critical study of the problem of grading and promotion," Psychological Clinic, 5:63-96, 99-120, May 15, and June 15, 1911.

A discussion of a number of double-track systems and of the reasons for failure. States that the pupils' and teachers' reasons for the latter are as often false as true.

270. KENDALL, C. N. "What modifications in organization are necessary to secure suitable recognition for pupils of varying ability, particularly for the ablest?" Addresses and Proceedings of the National Education Association, 46:147-55, 1908.

Discusses the Cambridge and other plans. Is in favor of making some modifications.

271. KENNEDY, JOHN. "The Batavia plan after fourteen years of trial," Elementary School Teacher, 12:449-59, June, 1912.

After fourteen years experience with the Batavia plan the author is still an enthusiastic believer in its advantages.

272. KENNEDY, JOHN et al. The Batavia System of Individual Instruction. Syracuse: C. W. Bardeen, 1914. 299 p.

A complete description of the Batavia system, with two teachers in each room, one the regular teacher and the other to aid individuals. States that elimination and expense were reduced, teachers freed from worry and the general school spirit bettered.

273. KENNEDY, J. W. "The all-year school," Addresses and Proceedings of the National Education Association, 55:795-801, 1917.

Tells of summer term and "promotion classes" in Newark. Both time and money were saved.

274. KILPATRICK, V. E. "Emancipating the individual pupil," *Education*, 30:375-85, February, 1910.

A general discussion of individuality followed by an enumeration of ten plans of school organization.

275. KIRK, J. R. "Should the school furnish better training for the non-average child?" *Addresses and Proceedings of the National Education Association*, 45:221-27, 1907.

A plea for flexible organization.

276. LEIGHTON, E. V. "At last—a chance for the gifted child," *Popular Educator*, 30:115, October, 1912.

Brief mention of several cities making provision for or giving recognition to gifted children.

277. LEWIS, H. P. "Semi-annual promotion." *Report of the Public Schools of the City of Worcester. Worcester, Massachusetts: School Committee, 1904*, p. 34-41.

An argument in favor of semi-annual promotions. Contains quotations from several sources.

278. LITWIN, M. F. "English 'star' classes at the Boys' High School." *Bulletin of High Points in the Work of the High Schools of New York City*, 5:4-7, March, 1923.

On the basis of school marks special sections were formed in the sixth, seventh and eighth semesters of high school. These sections were given differentiated and enriched work in English. A number of advantages were derived from the plan.

279. LYNCH, ELLA F. "The bright child," *Psychological Clinic*, 4:141-44, October 15, 1910.

A plea that the bright child be given individual instruction and the opportunity for individual progress.

280. McDONALD, R. A. F. "Provision for the exceptionally gifted." *Adjustment of School Organization to Various Population Groups. Teachers College Contributions to Education, No. 75. New York: Teachers College Bureau of Publications*, p. 90-101.

A theoretical discussion followed by a brief description of about a dozen plans.

281. MAENNEL, B. "The auxiliary schools of Germany." (Translated by Dresslar, F. B.). *United States Bureau of Education Bulletin, No. 3, 1907*, p. 43-47, 121-23.

An account of the Mannheim three-fold plan.

282. MANGOLD, G. B. "The mental classification of children. The education of exceptional children." *Problems of Child Welfare. New York: Macmillan Company, 1914*, p. 205-27.

This is almost entirely a discussion of backward children.

283. MEYER, M. F. "Is credit for quality sound?—A criticism," *School Review*, 23:708-11, December, 1915.

An argument in favor of credit for quality which is in use in a portion of the University of Missouri. Especially answers Professor Ruediger's adverse criticism.

284. MILLER, C. A. A. J. "The study of exceptional children," *Addresses and Proceedings of the National Education Association*, 46:957-63, 1908.

A theoretical discussion listing ten kinds of exceptional children.

285. MITCHELL, DAVID. "Schools and classes for exceptional children." *Educational Survey*. Cleveland, Ohio: Cleveland Foundation, 1916. 122 p.

Discusses provisions for ten classes of exceptional children in Cleveland. Bright children are not included in those provided for.

286. MULREY, CORA L. "The rapid advancement class," *Educational Administration and Supervision*, 3:416-19, September, 1917

A brief account of the Cambridge plan by which three years of work may be done in two.

287. MYERS, G. C. "Broadening the course of study for the bright child," *Educational Administration and Supervision*, 3:33-37, January, 1917.

Suggests minimum and maximum courses and answers a number of objections to them.

288. NEVERMAN, P. F. "New Richmond plan of grade promotion," *American School Board Journal*, 54:38, January, 1917.

Describes the New Richmond, Wisconsin, plan which provided two tracks through the lower grades. Also a number of principles upon which the plan is based are given.

289. PARLIN, F. E. "Gradation and promotion." *Annual Report of the School Committee and the Superintendent of Schools, Cambridge, Massachusetts*, 1910, p. 19-21.

A brief explanation of the Cambridge plan.

290. PARKINSON, W. D. "Promotions, accelerated and retarded," *Education*, 19:152-57, November, 1898.

An argument that there is some advantage in the inertia of the graded system and that only a comparatively few pupils should be accelerated and retarded.

291. PARKINSON, W. D. "Individuality and social adjustment as means and ends in education," *Education*, 29:16-24, 104-12, September, October, 1908.

A discussion of individual and class instruction and progress. Argues for a fairly flexible organization adapted to the individual.

292. PATTERSON, M. ROSE. "A preparatory center in Baltimore," *Atlantic Educational Journal*, 12:234-38, January, 1917.

A description of the Baltimore plan in which the best upper grade pupils of the city are brought together at the end of the sixth grade and may either do three years of work in two or two in one and one-half.

293. PATTERSON, M. ROSE. "The Homewood demonstration school at Johns Hopkins University," *School and Society*, 16:577-84, November 18, 1922.

An account of an experiment in which a number of pupils did five months work in two. Especially the under-age pupils succeeded in doing the extra work.

294. PAYNE, W. H. "Elastic grading." Report of the United States Commissioner of Education, Vol. 2, p. 1376-77, 1899-1900.

Argues that the best basis of classification is the average of the year's work and that on such a basis few pupils should need reclassification.

295. PHILLIPS, D. E. "The child vs. promotional machinery," *Addresses and Proceedings of the National Education Association*, 50:349-55, 1912.

A discussion of changes in school organization that affect promotion.

296. PICKARD, J. L. "Superintendent's report." *Twenty-first Annual Report, Department of Public Instruction, Chicago, 1874-75*, p. 45-57.

Defends the "graded system" but admits that its evils need correction. Believes that the chief correction should be the promotion of pupils whenever they are ready.

297. PRINCE, J. T. "The grading and promoting of pupils," *Educational Review*, 15:231-45, March, 1898.

A general discussion with a brief description of several flexible plans.

298. PRINCE, J. T. "Some New England plans and conclusions drawn from a study of grading and promotion," *Addresses and Proceedings of the National Education Association*, 37:423-34, 1898.

Gives results obtained from a questionnaire, also a description of the Cambridge, Middleboro, Woburn, Keene, St. Louis, Dayton, Le Mars and Centralia plans.

299. PRINCE, J. T. "Classification and promotion of pupils." *School Administration*. Syracuse: C. W. Bardeen, 1906, p. 125-33.

A discussion of several different flexible plans of organization including frequent promotions, the "double-tillage" plan, the organization of groups according to ability and individual promotion.

300. PYLE, W. H. "A psychological study of bright and dull pupils," *Journal of Educational Psychology*, 6:151-56, March, 1915.

Shows that mental differences between pupils may be measured.

301. PYRTLE, E. RUTH. "Super-normal children—a study," *Journal of Educational Method*, 1:273-75, March, 1922.

Describes the plan used in the junior high school of Lincoln, Nebraska. On the basis of their school records the brightest pupils are selected and allowed to do three years of work in two. Many advantages are listed.

302. RATHMANN, C. G. "The Mannheim system of school organization," *Educational Review*, 53:55-60, January, 1917.

A description of this plan with an account of its effect upon elimination which was much reduced by its operation.

303. RICHMAN, JULIA. "A successful experiment in promoting pupils," *Educational Review*, 18:23-29, June, 1899.

In a New York school the pupils of grades I-VI were divided into bright, medium and poor sections, each going at its own rate. The effect was to increase the number of promotions.

304. RIGLER, FRANK. "Principles of classification." *Thirty-seventh Annual Report of the Public Schools of Portland, Oregon, 1909-10*, p. 113-19.

Description of the Portland plan in which the course of study is divided into fifty-four parts arranged in six cycles of one and one-half years each. At the end of each cycle pupils are reclassified according to their ability, there being two rates at which they may progress.

305. ROBERTS, J. E. "A working scheme of promotional efficiency," *Elementary School Journal*, 17:719-26, June, 1917.

Tells of the plan used in Fond du Lac, Wisconsin, where pupils are promoted at any time by subjects and not by grades.

306. ROSIER, JOSEPH. "The graded school—its strength and its weakness," *Review of Education*, 7:175-77, December, 1901.

States that the lack of individual instruction is not a weakness inherent but one that can be remedied by teachers.

307. ROSIER, JOSEPH. "A satisfactory basis for the promotion of pupils," *School and Society*, 1:701-05, May 15, 1915. *Addresses and Proceedings of the National Education Association*, 53:477-84, 1915.

A theoretical discussion of flexible grading and promotion, arguing for special schools, ungraded rooms, maximum and minimum curricula, etc.

308. REUDIGER, W. C. "Is credit for quality sound?" *School Review*, 23:450-54, September, 1915.

An argument against giving credit for quality. States that quality and quantity are disparate, that we recognize quality by the honor attached, that credit for quality would over-emphasize marks, and that it would vary the educational content covered by different students but indicated by the same diploma.

309. SAKAKI, YASUSABURO. "Some studies on so-called 'ab-normally-intelligent' pupils," *Psychological Clinic*, 6:18-25, March 15, 1912.

Classifies "ab-normally intelligent" pupils into seven classes and shows the need for individual instruction.

310. SEARCH, P. W. "Individual teaching: the Pueblo plan," *Educational Review*, 7:154-70, February, 1894.

A description of the Pueblo plan in which all work, promotion and graduation is strictly individual. Lists a number of advantages.

311. SEARCH, P. W. "The Pueblo plan of individual teaching," *Educational Review*, 8:84-85, June, 1894.

A brief explanation of the Pueblo plan supplementary to the reference above.

312. SEARCH, P. W. et al. "Individualism in mass education," *Addresses and Proceedings of the National Education Association*, 34:398-411, 1895.

A rather general criticism of the graded system followed by discussion of both sides.

313. SHAER, I. "Special classes for bright children in an English elementary school," *Journal of Educational Psychology*, 4:209-22, April, 1913.

Describes a plan used in a Manchester school in which there are four special rooms by means of which pupils may gain one or more years' time.

314. SHEARER, W. J. "The Elizabeth plan of grading," *Addresses and Proceedings of the National Education Association*, 37:441-48, 1898.

In Elizabeth, New Jersey, promotions were made at any time upon the basis of the teacher's estimate and pupils grouped according to ability, each group going as fast as it was able. Many favorable results were obtained from this plan.

315. SHEARER, W. J. *The Grading of Schools*. New York: H. P. Smith, 1899. 220 p.

Suggests that grading should be in groups according to ability and acquirements.

316. SHEARER, W. J. "Grading for efficient organization in the interests of pupils," *Addresses and Proceedings of the National Education Association*, 40:285-86, 1901.

A general discussion in which the essentials of good grading are listed as follows: acceleration, classification, proper provision for reclassification and proper apportionment of work.

317. SHEARER, W. J. "School children in lockstep," *World's Work*, 14:9252-55, August, 1907.

A strong argument against the lockstep with a discussion of conditions in New York, Philadelphia, etc.

318. SIDERS, W. R. "In class instruction, how can the individual be reached?" Addresses and Proceedings of the National Education Association, 47:175-82, 1909.

Discusses several other plans and describes that in use in Pocatello, Idaho. A combined class, group and individual instruction system is used there.

319. SMITH, H. L. "Plans for saving time in grades VII-XII inclusive." Bulletin of the Extension Division, Indiana University, Vol. 4, No. 4 (Fifth Conference on Educational Measurements), 1918, p. 74-91.

Presents the results of a questionnaire study of the plans in use in over 400 cities.

320. SNEDDEN, DAVID. "Exceptional children." Monroe's Cyclopaedia of Education, New York: Macmillan Company, 1911, Vol. 2, p. 540-41.

Says that flexible promotion more or less takes care of exceptional children.

321. SNEDDEN, DAVID. "Grading and promotion." Monroe's Cyclopaedia of Education, New York: Macmillan Company, 1912, Vol. 3, p. 126-28.

Mentions several flexible plans and discusses the subject in general.

322. SPAIN, C. L. "The platoon school in Detroit." Detroit Educational Bulletin No. 2, November, 1920. Journal of Educational Research, 3:76-77. January, 1921.

Describes the platoon organization in use in some Detroit schools.

323. SPAULDING, F. E. "The unassigned teacher in the schools," School Review, 15:201-16, March, 1907.

In Newton, Massachusetts, unassigned teachers are assigned to work with individuals and small groups. They help the better pupils to gain time and the poorer ones to keep up with the class.

324. SPAULDING, F. E. "The Newton educational policy." Report of Superintendent. Annual Report of the School Committee in Newton, Vol. 74, p. 15-22, 26, 1913.

States that Newton aims to provide educational opportunities adapted to all individual pupils. Parts of the general plan are to have assistant teachers to help individuals and to make promotions at any time.

325. STERN, WM. "The supernormal child," Journal of Educational Psychology, 2:143-48, 181-90, March and April, 1911.

An argument to the effect that special types of instruction must be provided for the super-normal and sub-normal pupils.

326. STEVENSON, R. W. "Superintendent's report." Columbus Public Schools, 1872-73, p. 45.

States that Columbus, Ohio, allows promotions at any time.

327. TERMAN, L. M. "The mental hygiene of exceptional children," *Pedagogical Seminary*, 22:529-37, December, 1915.

States that unusually bright children are not given enough work to do and dull children too much.

328. TERMAN, L. M. "Discussion of gifted children section." *Proceedings of the First Annual Conference on Educational Research and Guidance*, San Jose State Teachers College. Sacramento, California: State Printing Office, 1923, p. 41-43.

A summary of several addresses dealing with gifted children, with some argument in favor of rapid progress rather than enriching the curriculum in the ordinary way.

329. TRUMMER, MARY C. "Instruction adapted to groups of differing ability," *School Review*, 30:409-11, June, 1922.

Describes the "accomodation" and "express" classes, the "opportunity," "adjustment" and "make-up" groups used in a Los Angeles high school. Pupils are selected on the basis of their elementary school marks.

330. ULRICH, FLORA. "A year's work in a 'superior' class," *Psychological Clinic*, 5:245-50, January 15, 1912.

In a Cincinnati school a group of superior children did two years of work in one year but this gain was the least of the benefits derived from the plan. Mental activity and development were greatly increased.

331. VAN SICKLE, J. H. "Plan of the North-Side schools of Denver," *Addresses and Proceedings of the National Education Association*, 37:434-41, 1898.

A description of the Denver plan and a general discussion in favor of flexibility, minimum essentials, etc. In the Denver plan there were no fixed promotion dates until the third grade was reached. Above that the promotions were made every semester.

332. VAN SICKLE, J. H. "Provision for exceptional children in the public schools," *Psychological Clinic*, 2:102-11, June 15, 1908.

A discussion of provisions for all sorts of exceptional children except the superior.

333. VAN SICKLE, J. H. et al. "Preliminary report of the committee on provision for exceptional children in the public schools," *Addresses and Proceedings of the National Education Association*, 46:348-85, 47:343-67, 1908, 1909.

A discussion of physically, intellectually, and morally exceptional children and of various provisions being made for them in Worcester, Indianapolis, Baltimore, St. Louis, Berlin, and elsewhere.

334. VAN SICKLE, J. H. "Provision for gifted children in public schools," *Addresses and Proceedings of the National Education Association*, 48:155-60, 1910.

Mentions various reports and studies that had been made and tells of the Baltimore plan of giving high-school pupils extra work if they are bright enough.

335. VAN SICKLE, J. H. "Provision for gifted children in public schools," *Elementary School Teacher*, 10:357-66, April, 1910.

States that both inferior and superior children should receive special attention and that there should be groups organized on the basis of ability.

336. VAN SICKLE, J. H., WITMER, L. and AYRES, L. P. "Provision for exceptional children in public schools." *United States Bureau of Education Bulletin*, 1911, No. 14. 92 p.

A rather complete discussion dealing with methods of finding, classifying, promoting, teaching, and in general providing for exceptional children. Also deals with the number found retarded, eliminated, etc.

337. WALLIN, J. E. W. "The mental health of the school child." *Public School Provisions for Mentally Unusual Children*. New Haven: Yale University Press, 1914, p. 383-428.

Gives questionnaire results from over 300 cities and sketches the history of special and ungraded classes.

338. WANGER, RUTH. "The special class." *News Letter*, 19:4-5, May, 1923.

An account of provisions for dull pupils of high-school age. A special course including English, civics, commercial work, sewing, etc. was arranged for those who could not do ordinary academic work. The results have on the whole been favorable.

339. WASHBURNE, C. W. "Breaking the lockstep in our school," *School and Society*, 8:391-402, October 5, 1918.

An argument for individual progress.

340. WHIPPLE, G. M. "Supernormal children." *Monroe's Cyclopedia of Education*. New York: Macmillan Company, 1913, Vol. 5, p. 464-68.

A discussion of a number of plans for taking care of bright children.

341. WHITE, E. E. et al. "Several problems in graded-school management," *Addresses and Proceedings of the National Education Association*, 14:254-63, 1874.

A discussion of annual promotion and the need of adapting the schools to individual pupils.

342. WITMER, LIGHTNER. "The training of very bright pupils," *Psychological Clinic*, 13:88-96, December 15, 1919.

A discussion of the meaning of brightness, the number of bright and inferior pupils found, etc.

343. WOODROW, HERBERT. *Brightness and Dullness in Children.* Philadelphia: J. B. Lippincott and Company, 1919. 322 p.

There are various discussions of retardation and advancement, elimination, special classes, bright and dull pupils and experiments with bright pupils.

344. WOODS, ELIZABETH L. "Provision for the gifted child," *Educational Administration and Supervision*, 3:139-49, March, 1917.

A summary of provisions in a large number of cities showing that flexible promotion is very common, special classes or groups fairly so, and that practically all superintendents favor making some such provision.

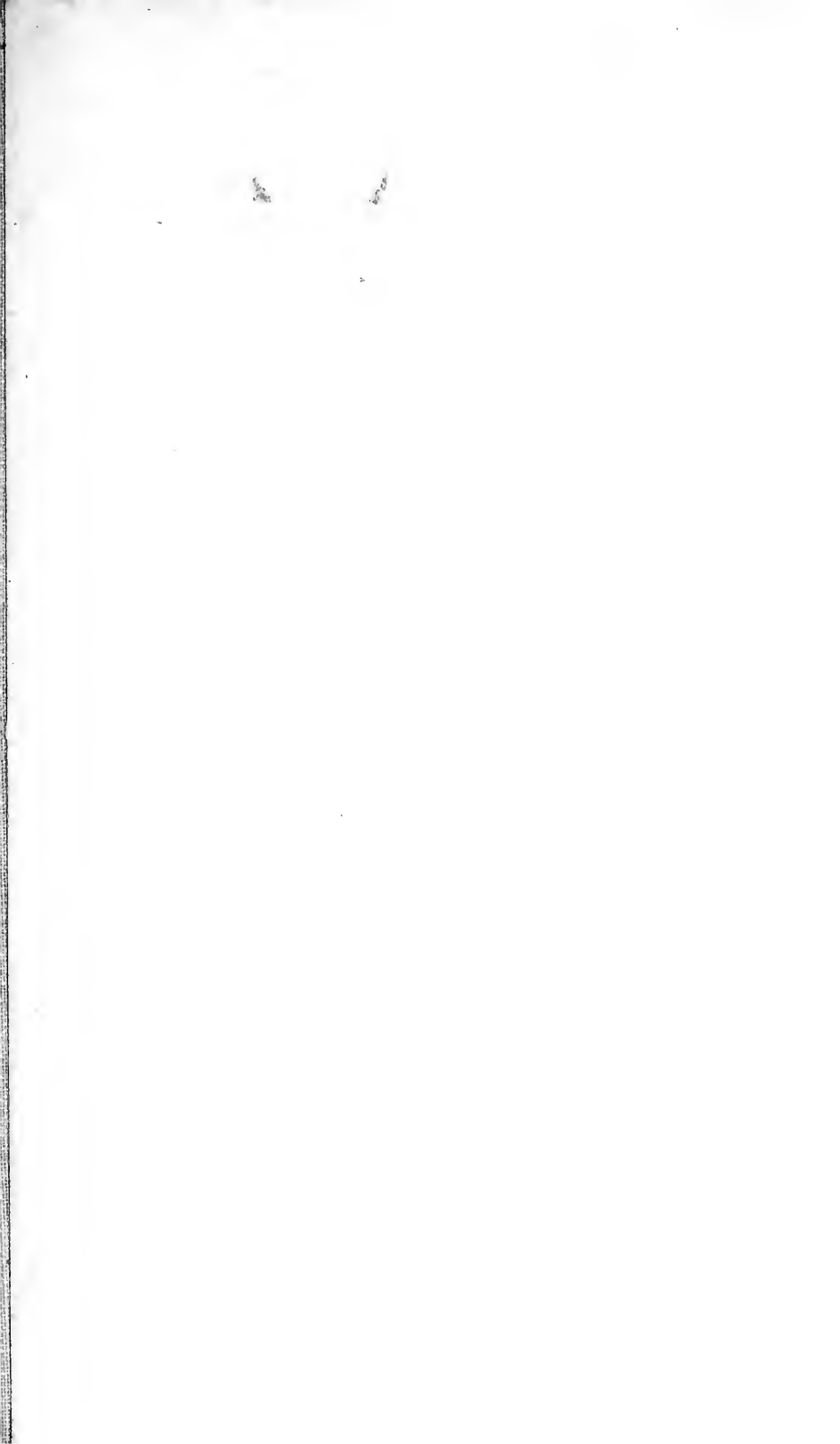
345. YOUNG, ELLA FLAGG. "Grading and classification of pupils," *Addresses and Proceedings of the National Educational Association*, 32:83-86, 1893.

A rather general discussion.

346. "The Cambridge plan," *Journal of Education*, 75:375-76, April 4, 1912.

A brief description of this plan.





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