

U. M.

THE UNIVERSITY OF MINNESOTA

GRADUATE SCHOOL

Report
of
Committee on Thesis

The undersigned, acting as a Committee of the Graduate School, have read the accompanying thesis submitted by John William Johnson for the degree of Master of Arts.

They approve it as a thesis meeting the requirements of the Graduate School of the University of Minnesota, and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts.

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GRADUATE SCHOOL

Report

of

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This is to certify that we the undersigned, as a committee of the Graduate School, have given John William Johnson final oral examination for the degree of Master of Arts . We recommend that the degree of Master of Arts be conferred upon the candidate.

Minneapolis, Minnesota

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A STUDY OF THE JUNIOR HIGH SCHOOL WITH SPECIAL
REFERENCE TO ITS MINIMUM ESSENTIALS

A Thesis submitted to the
Faculty of the Graduate School of the
University of Minnesota

by

J. William Johnson

in partial fulfillment of the requirements

for the degree of

Master of Arts

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PREFACE

The results of the present study are distinctly disappointing to the writer, but it is his firm conviction based upon a year's industrious pursuit for data, that any study of the junior high school at present is doomed to culminate in a similar disappointment. The junior high school at the present time is deserving study chiefly because of the extent to which it is being championed and recommended by educators of surpassing eminence throughout America and because of the eagerness with which it is being incorporated into school systems. It is not possible, however, to present convincing data justifying the junior high school. At the present time it has little to show except claims dogmatically asserted and with almost no foundation of tangible data. Nevertheless, the firm belief of many fertile and careful thinkers and the hopes and promises which the junior high school holds out are sufficient reasons for endeavoring to ascertain the minimum essentials of the junior high school, its present status and outcome. Possibly the greatest contribution of the present study is its revelation of the fact that the junior high school is still in a hypothetical state and that its claims are yet to be proven by scientific study and educational experimentation. These facts are further treated in the explanatory note following the bibliography in which I have attempted to set forth the characteristics of the literature dealing with the junior high school.

CHAPTER I.

DEFINITION, TYPES AND AIMS.

The Problem

During the past ten years there has been an attempt in educational circles to better the conditions of schooling for the adolescent boy and girl. Subject matter has been modified, provisions have been made for the individual differences that exist among pupils, methods of teaching have been revised, and a measure, at least, of educational guidance is now given. This movement has become so marked that it is now designated by the term junior high school, which term refers to the current reorganization movement of the seventh, eighth and ninth grades.

There is little agreement among educators as to what the junior high school is. Intangibility and indefiniteness concerning the junior high school exist, and any study of it in its present stage of development cannot present as definite results as one would wish. However this intangibility will not permit us to ignore the junior high school, for it is now consuming a large share of public money and of the time of men and women interested in the needs of our adolescent boys and girls. Moreover, each added year will bring a clearer vision and better definition of what

the junior high school is.

The purpose of this study is two-fold;(1) to determine the origin,nature and extent of that particular type of reorganization movement in the seventh,eighth and ninth grades,currently spoken of as the junior high school movement;(2) to determine what are the minimum essentials of the junior high school movement.

Sources
of the
present study

A questionnaire was sent to all schools in Minnesota listed by the North Central Association as having junior high schools. The questionnaire itself and a table obtained from its data are found in a later part of this study. The Fifteenth Year Book of the National Society for the Study of Education,Part III, is a source of much information. Practically all who have written on the subject of the junior high school refer to Briggs' presentation of the junior high school, found in the Report of the Commissioner of Education 1914,Vol.1 pp 135-157. Other authorities who have studied the junior high school and to whom the writer of the present study is indebted for imformative facts are: C.H.Judd,C.H.Johnston,C.O. Davis and P.W.Horn.

Definitions
and Types

There are many definitions of the junior high school,few of them,however,agree. This is not strange since the caption, junior high school, has been made to include many and widely different ideas of promotion, methods of preventing elimination, enriched courses, varied and differentiated courses and ~~of~~ devices for moving selected groups through

subject matter at different rates. With the new movement has come also an analysis of school population and a new psychology of individual differences. The definition given, in any particular case, of the junior high school depends upon which of the many matters included under the caption is stressed. The shortest and simplest definition of the junior high school is found in bulletin 59 of the Minnesota Department of Education. It is as follows: "A Junior-Senior High School system shall be a system of public schools consisting of (a) six elementary years or grades, (b) three Junior high school years or grades, and (c) three Senior High School years or grades". According to this definition any system so dividing its grades may be said to support a junior high school. However, there must be something more than such a division of the grades into departments. The following definition is selected because it states a standard by which junior high schools are now being measured and is comprehensive enough to include many of the new ideas concerning the education of adolescent boys and girls.

"The junior high school is either a separate school or a department of a school organized on the departmental basis, which receives pupils when they are expected to have completed the sixth year of the elementary school work and when they are about to enter the adolescent stage, which provides three years of work covering in general grades seven and eight of the present elementary school and the first year of the high school, and which offers differentiated courses of study for pupils according to their

needs, capacities and probable future educational careers."¹

We find that in actual practice this definition covers three forms of junior high school. First, a separate school in which segregation and congregation are employed. Such a form presents a centralized school to which pupils in grades seven and eight in the adjoining elementary districts may be transferred and first year high school pupils retained. This type of junior high school has the distinction of having its problems largely unaffected by elementary or high school influences. It is the ideal type.

A second type of junior high school is formed by associating it with the present high school. Such organization produces the six-six plan, an elementary school of six years and a combination of junior and senior high school of six years.

A third form of junior high school is obtained when the school is associated with the present elementary school. This type produces the six-three-three plan. It is organized departmentally. The disadvantage of such a type lies in the danger of developing into a nine grade system and in employing methods of instruction, organization and administration of the elementary school in the junior high school department. Since the purpose of the junior high school is to discover and provide instruction peculiarly adapted to its pupils, its courses and methods must be peculiar to itself and not fashioned and controlled either by the elementary or by the high school. All things must be subordinated to the

¹Organization and Administration of Intermediate Schools in Boston.p.7 Boston Public Schools. School Document No.13,1918.

interests and needs of adolescent boys and girls.

The definition above (see pages 3 & 4) assumes that pupils who have reached the age of twelve and thirteen ought to be in the junior high school whether they have completed the sixth grade or not. This is a distinct benefit to the elementary grades and an opportunity for the overaged pupils from the lower grades and places them where they can find interests to follow. Such procedure is approved by Snedden,² who would send all children between twelve and fifteen to the junior high school. Johnston also approves such action.³

According to the definition we have adopted, the junior high school must include three years of work, those of the seventh, eighth, and ninth grades. In practice, however, this type is not the most frequent. In the territory covered by the North Central Association Junior high schools exhibit the following grade organization:⁴

²Snedden, David Educational Administration and Supervision, Vol. II, p. 426

³Johnston, C.H. The junior high school Educational, Administration and Supervision, Vol. II, p. 413.

⁴Proceedings of the North Central Association, 1918.

TABLE I.

GRADE ORGANIZATION IN NORTH CENTRAL ASSOCIATION TERRITORY.

Grades included	Number of schools
7-8	133
7-8-9	89
8 only	11
6-7 -8	23
8-9	8

However, the accuracy of the data presented by the North Central Association is open to serious question. In reply to a questionnaire sent to schools reported in the North Central Association survey as having junior high schools, several replies have been received stating that they have no such organization. Secretary Davis upon receiving this criticism stated that he depended upon state high school inspectors for his information.⁵ Evidently a departmentalized seventh and eighth grade system meant a junior high school to many of the inspectors who reported having 133 junior high schools. If this be so, the true type, 7-8-9, is the dominant one.

According to our definition a junior high school must offer differentiated courses of study for all pupils. The school has in mind not only those who intend to continue their schooling beyond the ninth year but also those who for any cause must leave school at the close of the ninth year.

⁵Verbal statement, explanation given

Aims of the Junior High School Ayres states that ten per cent of the school children leave school at the age of thirteen, forty per cent at the age of fourteen, fifty per cent of the remainder at fifteen, and fifty per cent of the remainder at sixteen.⁶ To correct this condition by reducing elimination is the chief aim of the junior high school.

The junior high school promises to reduce elimination by providing for individual differences, by differentiating curricula, by better teaching, by easier transition to the senior high school, by subject promotion, and by departmental organization. The following is a statement of the reasons given by junior high school principals why they endorse the junior high school;⁷

TABLE II.

REASONS GIVEN FOR ENDORSEMENT OF JUNIOR HIGH SCHOOL.

Junior high school provides for:

Individual needs	143	principals
Differentiated curricula	58	"
Better teaching	76	"
Easier transition to S.H.S.	77	"
Promotion by subject	54	"
Departmental organization	67	"
Better preparation for life	108	"

There were 293 principals who answered the questionnaire.

⁶Ayres, Leonard P. Laggards in our schools. p.28

⁷Proceedings of the North Central Association, 1918

To provide properly for individual differences among pupils the junior high school must discover and serve the needs and interests of all who can profit by its instruction. This does not mean a separate curriculum for each pupil, but one which offers minimum essentials which all must master and which in addition gives opportunity for exploration in some occupational fields. To provide for individual needs is the mission of the junior high school, and if the needs of the normal pupil of twelve require him to skip grades and to enter the junior high school, he should do so even if he has not completed the sixth grade. 108 school systems of the North Central Association provide for this. These schools base promotion on physical development and chronological age as well as on school achievements. With admission to the junior high school placed on such a basis it follows that the curriculum must be differentiated. There will be prevocational and academic groups and fast and slow moving classes in each of these groups. With the curricula properly differentiated better teaching must of necessity follow, and class promotion will be replaced by subject promotion. By such a procedure the pupil's interest is aroused and maintained and he does not of his own volition leave school. This is especially true, if the junior high school has given educational guidance.

We may, then state the aims of the junior high school to be:

1. To reduce to a minimum the elimination of pupils of the adolescent age by work best suited to their interests, needs and capacities.

2. To give the pupil educational guidance so that he may discover his dominant interests and capacities and limitations with reference to his future work or schooling.

3. To economize time for those who will continue their schooling and for those who will enter immediately into life's activities.

The junior high promises to realize these aims by:

1. Modifying the subject matter of instruction.
2. Making provisions for individual differences.
3. Revising methods of teaching.
4. Making provision for educational exploration and guidance.

If we examine the aims of the junior high school, we find that they have the following characteristics of all good educational aims:

1. They are founded on the intrinsic activities and needs of the one to be educated.

2. They are capable of translation into a method of cooperation with the activities of those undergoing instruction.

To realize such sound educational aims for its pupils is the purpose of the junior high school.

It would be presumptuous at this stage of junior high school development to affirm that the junior high school is doing all that it aims to do. The junior high school presents our chief educational problem; misunderstood, on the one hand by its opponents, and on the other hand, exaggerated as to its immediate values by its proponents. However, what makes the junior high school worth while is the fact that it presents a field for sane and wholesome experimentation along the lines indicated by its aims. Such

experimentation must answer the following questions: Is a six years' course adequate common training in the fundamentals of an elementary education? Are differentiated curricula profitable for pupils of the seventh and eighth grades? Should departmental methods be attempted in these grades? Will the boys of these grades be brought into contact with men teachers of power and ability? Will the new school successfully bridge the gap between the eighth and the ninth grades? Will the present mortality in the ninth grade be reduced to normal?

The demand for reorganization in the seventh and eighth grades first came from those interested in higher education. Such interests desired economy of time in preparation for professional work. The Committee of Ten recommended a downward extension of secondary studies into the grades.⁸ They favored a six year secondary school built on a six year elementary school. This recommendation was made in the year 1893. Since that time the center of interest has shifted from the needs of higher education to the interests, capacities and probable future educational careers of the pupils in these grades. In 1893 the courses of study of the seventh and eighth grades presented the same subjects as the courses for the sixth grade did. The essential difference consisted in a devotion to drilling on the fundamentals of an elementary education. In the year 1918 the curricula of the seventh and eighth grades

⁸Addresses and Proceedings, National Education Association, Report of the Committee of Ten, 1893 pp 14-15.

included such subjects as beginning algebra, Latin, manual training, domestic science, and a foreign language. The new movement has given the elementary school the opportunity to go in the secondary field for subject matter suited to the needs and interests of its pupils. We have now a new conception of the organization of the subject matter of public education in terms of a six year elementary school, an intermediate three year transition school partaking in content, method and administration of both the elementary and the secondary school, and a three year school of genuinely secondary work.

Beginnings of the junior high school are so vague that it is impossible to ascertain when the first school was established. It is equally difficult to trace the growth of the movement. The most satisfactory source for information on this subject is the Fifteenth Year Book of the National Society for the Study of Education, Part III, from which the following data are taken:

Number of J.H.S. established annually 1896-1916.

Year	'96	'98	'99	'00	'02	'04	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16
No. of schools	1	2	1	1	2	1	2	3	2	4	6	14	31	41	36	13
	Total														159	

Of the above 159 junior high schools, 144 were established since 1910. From such figures one may judge how recent the movement is. The apparent decrease in '15 and '16 is due to war conditions, not to an abandonment of the junior high school plan. In the year 1918 the distribution of junior high schools in the North Central Association territory was as follows:

TABLE III.

JUNIOR HIGH SCHOOL IN NORTH CENTRAL ASSOCIATION TERRITORY.

States	Number of Schools
Arizona, New Mexico, Wyoming, each	3
Missouri	4
South Dakota	7
Oklahoma	8
Colorado	9
Illinois	15
Iowa	16
North Dakota, Wisconsin, each	17
Nebraska	26
Kansas	28
Ohio	29
Minnesota	32
Indiana	33
Michigan	43

All data in this table taken from proceedings of the North Central Associations, 1918 (not paged)

In 1914 Briggs⁹ reported data from 133 junior high schools and estimated that at least 69 more had been reported through other sources. According to Bingaman¹⁰ there were 280 such schools in 1915

⁹ Briggs, T.H. The junior high school. Report United States Commission of Education 1914 Vol. I pp 135-157

¹⁰ Bingaman, C.C. A report on the junior high school of the United States Goldfield, Ia.

A conservative estimate for the present year places the number near the four hundred mark.

There are many forces at work which promise a continuance of the junior high school movement and of the establishing of Junior high schools in increasing numbers. The most important of these factors are : (1) a wide recognition of educational needs which the junior high school definitely endeavors to meet, (2) the endorsement of the junior high school by numerous authorities as being well adapted for meeting these needs. Johnston prepared and published in Educational Administration and Supervision, March 1915, the following list of endorsements:

U.S. Commissioner of Education

U.S. Bureau of Education.

Associations:

National Association of State Universities.

North Central Association of Colleges and Secondary
Schools

State Teachers' Association of :

Washington, Oregon, Idaho and Montana.

Committees:

Committee on Economy of Time of the N.E.A.

Committee on Reorganization of Secondary Education.

State Departments of Education:

California, Michigan, New York and North Dakota.

Universities:

Chicago and Michigan.

School Surveys:

Boise City, Idaho; Butte, Montana; New York City;
Portland, Oregon; Springfield, Illinois and the
State of Vermont.

CHAPTER II.

MINIMUM ESSENTIALS OF THE JUNIOR HIGH SCHOOL.

The Aspect of
Minimum Essentials
treated in this
Chapter.

This chapter considers the minimum essentials of organization and of the courses of study in the Junior High School. Under organization are considered the grades to be included in the junior high school, the basis of admission, the method of promotion, the social organizations (extra-classroom), the housing and teachers' professional requirements; under curriculum essentials are presented curricula actually in force; and methods advocated by notable educators for determining the content of any given course of study are presented and discussed. It is not the purpose of this study to set forth in detail the minimum essentials of each of the many subjects and activities which ought to be included in the junior high school courses of study nor to formulate a list of the mental outcomes from instruction in each subject. This study seeks the guiding principles followed by notable educators in formulating courses of study. Dean Charters in discussing the readjustment of school curricula writes: "We have many questions of the curriculum for which even a partially accurate result is better than the present intolerable situation and after all, it must be realized that scientific curriculum making is not more than five year old and in the pioneering stage all that can be hoped for is that investigators use all the technique available and proceed with conscientious diligence and do the best they can."¹¹

¹¹ Charters, N.W. What has thus far been accomplished and is now available for the readjustment of school curricula. Proceedings of High School Conference 1918, Bul. U. of Ill. Vol. 16:13 p.21

Grades
Included

The first subject we shall consider under organization of the junior high school concerns the grades included. A study of elimination statistics reveals an unduly large amount of elimination between the seventh and eighth and between the eighth and ninth grades.¹² Ten per cent of seventh graders are eliminated and the same per cent of ninth graders. Ayres asserts that so far as leaving school is concerned, there is less of a gap (i.e. elimination) between the final elementary grade and the first year of high school than there is between the last two years of the grammar course or the first two years of the high school course.¹³ It would certainly be worth while to consider carefully whether this undue elimination might not be greatly decreased by segregating grades seven, eight and nine and endeavoring by scientific experimentation to discover content, and methods of instruction peculiarly fitted to the needs of pupils in these grades.

The first step in such an experiment would seem to be to segregate grades seven, eight and nine as in the junior high school i.e. the six-three-three plan. Such procedure has been approved by many leading educators, notable the following: Claxton, Coffman, Cubberly, Judd, Dyer, Finley and Bonser.¹⁴

¹² Ayres, Leonard P. Laggards in our schools, p.46

¹³ Ayres, Leonard P. Laggards in our schools. p.65

¹⁴ Report on the junior high school Minnesota Department of Education Bul.59 ,1916 pp.13-21

Another endorsement of the junior high school plan is to be found in the report of The Commission on Reorganization of Secondary Education. In this report the following definite recommendation is made : "Under ordinary circumstances the junior and senior periods should each be three years in length so as to realize their distinctive purposes"¹⁵ Interesting evidence of the growing favor of the junior high school is to be found in the just published report of the State Department of Education of Alabama. In this report State Superintendent Dowell writes, "We recommend the reorganization of the elementary and high school courses of study on the six-three-three plan i.e. a six year elementary school followed by a three year junior high school which in turn is followed by a three year senior high school."

In view of the fact that the junior high school attempts to meet in a new and emphatic way the needs, interests and capacities of children, the question arises as to whether

Admission

this threefold basis upon which it rests should also serve as the basis of admission. In the report of the Commission on the Reorganization of Secondary Education we find the following statement, "Consequently we recommend that secondary schools admit, and provide for, all pupils who are in any respect so mature that they would derive more benefit from the secondary school than from the elementary."¹⁶ The underlying principle contained in this

¹⁵ Report of Commission on Reorganization of Secondary Education U.S. Bureau of Education. Bul. 35, 1918 p. 19

¹⁶ Department of Education, Alabama, Report 1918 Part I p. 24

recommendation is that admission to the junior high school must be based upon the needs and capacities of those seeking admission rather than upon their scholastic attainments. Further support for this view is given by Snedden who writes, "all children between twelve and fifteen years (including children under twelve ready for the seventh grade and excluding children under fifteen ready for the regular high school) should be sent to the central junior high school."¹⁷ Johnston's view is stated as follows:

"The pupil population of the junior high school will include not only those now in the seventh, eighth and ninth grades, but all over fourteen who for any reason are out of school."¹⁸ Spaulding claims that "promotion must be determined not by what a pupil has learned, but by what he needs to know."¹⁹ The theory of the leading educators, just quoted, are at one in maintaining that the basis of admission to the junior high school should be the needs and capacities of boys and girls from twelve to fifteen years of age rather than their scholastic attainments.

Despite the views of the above prominent educators to the contrary, in actual practice admission to the junior high school is based upon completing the course of study of the sixth grade satisfactorily from the standpoint of scholastic attainments.²⁰

¹⁷ Snedden D. Education of children from 12 to 14 Educational Administration and Supervision 2 p.426

¹⁸ Johnston C.H. The junior high school Educational Administration and Supervision 2 p.418

¹⁹ Spaulding F.E. Portland, Ore. Survey p.165

²⁰ Douglass A.A. The junior high school Fifteenth Year-book of the National Society for the Study of Education Part III, 1916 p.134

Douglas reports that 68 of 94 junior high schools make such promotion a requirement for admission to the school.²⁰ Davis found that 185 schools out of 293 in North Central Association territory made a similar requirement for admission.²¹

Subject Promotion in the Junior High School.

Although the basis of admission still remains something of a subject for theoretical discussion and scientific experimentation, the system of promotion within the junior high school appears to be well established already in actual practice. Almost perfect agreement exists; subject promotion is the common practice. Frequency of promotion varies, but the basis and method is always the same, namely by subject.

Social Organizations

One of the aims of the junior high school is to give educational guidance by providing opportunities for discovering aptitudes and developing capacities among its pupils. Such opportunities are offered by extra-class room organizations. These organizations may be clubs of various sorts such as athletic, literary or recreational. Whatever the center of interest may be, these clubs develop cooperation and initiative and arouse recreational and avocational interests. These clubs

²⁰ Douglass A.A. The junior high school Fifteenth Year-book of the National Society for the Study of Education Part III, 1916 p.134

²¹ Proceedings North Central Association of Colleges and Secondary Schools 1916

may reasonably be expected to add a sense of "worth while" to the activities of the junior high school by giving pupils the opportunity of self direction. No scientific study has been made of the results of such organizations within the junior high school, but judged on the basis of actual practice results are important and educative; for these organizations are found in all junior high schools. In addition to the social life provided by clubs many junior high schools offer social opportunities in the organization of their classes. Each class may have its student officials for systematizing the work of the classroom so as to save the time of the teacher for more important work. Such officials may take the attendance, set a standard for neatness, and supervise the heating and ventilating of the classroom. The management, under direction, of lunchrooms, athletics, locker rooms and assemblies will train the pupils of the junior high school in social duties and citizenship. Such training is essential in the junior high school plan.

Housing.

There are three ways of housing the junior high school; with the elementary school, with the senior high school, or in a separate building. It depends upon the size of

the community and its financial condition which method of housing is adopted. A junior high school needs auditorium, gymnasium, library, industrial, domestic science and commercial departments. Such departments can be used in common with the senior high school, and thus a partial saving effected. However, where it can be done, separate housing of the junior high will provide for better teaching and guidance of its pupils.²²

Professional standards for junior high school teachers. The North Central Association of Colleges and Secondary schools recommends the same teacher training standards for junior high school teachers as for senior high school teachers i.e. an A.B. degree from a standard college with eleven semester hours in education.²³ This is the ideal. Johnston hopes for more men on the teaching staff of the junior high school.²⁴ Snedden asserts: "If the state is willing to pay the price a certain proportion of men teachers should be assigned to departmental positions not primarily because they are necessarily better teachers than women, but because it is desirable to introduce in boys' classes at least the influence of masculine personality."²⁵ The essential characteristic of a junior high school teacher is that he should be familiar with the spirit and purpose of the junior high school." This we find emphasized in the Boston²⁶ report on intermediate schools which states "The procuring of suitable teachers is an important administrative problem. Whether they should be selected from the high schools, or from the elementary schools, or whether special or additional preparation should be required of them is uncertain. It will be

²³Proceedings North Central Association of Colleges and Secondary Schools 1916

²⁴Johnston C.H. the junior high school. Educational Administration and Supervision 2 p.419

²⁵Snedden D. Education of children 12 to 15 Educational Administration and Supervision 2 p.427

²⁶Organization and Administration of Intermediate Schools in Boston p.34

generally agreed that teachers for these schools must be familiar with the spirit and purpose of the intermediate school and realize the opportunity which it offers for improvement of methods of teaching.

CURRICULUM.

Course of Study. The prevailing dissatisfaction with the traditional grammar schools centers around the course of study. This dissatisfaction is due to the inability of many pupils to pass tests at the close of a period of study in a given subject. Rugg in his study of ninth-grade mathematics says: "When a pupil fails one or more of the four primary units of the organization has gone wrong. First, it is possible that it is "the boy". Secondly, perhaps the methods of classifying and marking pupils have been so designed and administered as to cause an impasse in the operation of the machine. Thirdly, it may be due, as the laity claim, to poor teaching, and finally, if we are to take the consensus of judgment from the criticism of educational reformers, it must be partly due to the course of study²⁷ Ayres, Burk, Judd and Strayer have called attention to the need of reorganizing the course of study²⁸ Rugg asserts that pupils have been studying an over-

²⁷ Rugg H.O. Scientific Method in the Reconstruction of Ninth grade Mathematics p.11 U.of Chicago. Ed. Monographs Vol. II No. 1, 1918

²⁸ Ibid p.14

loaded curriculum; that attention has not been directed to the most difficult phases of the material studied. Consequently "courses of study have not been minutely designed in terms of step-by-step analysis of the ways in which children learn."²⁹ This same authority claims that much of the so-called "practical work" in the course of study is "practical" from the teacher's viewpoint rather than from that of the pupil.³⁰

In formulating a course of study for the junior high school in any given subject we should seek, as Rugg suggests, the important material, and emphasize the difficult phases of this material, if any exist. To be able to select this important material the makers of courses of study need "to lay down in completely itemized form a list of the mental outcomes from its instruction built in terms of specific processes of learning."

Educators are in general agreement as to the subjects which ought to be found in the curricula of the junior high school, but they disagree as to the specific content of each of these subjects, the methods by which they are to be taught, the time allotment of some of them, and the extent of options.

The following curriculum is typical of many junior high schools:³¹

²⁹Rugg H.O. Scientific Method in the Reconstruction of Ninth grade Mathematics p.15

³⁰Ibid p.16

³¹Douglass A.A. The junior high school, Part III, p.82 in Fifteenth Year Book of the National Society for the Study of Education.

Seventh grade

English (6) periods a week, with reading, writing, grammar, spelling and penmanship taught separately or in rather poor coordination.

Social Science (5) presented as history and geography.

Mathematics (5) meaning arithmetic.

Physiology and hygiene (3) or

Physical training (2)

Drawing (2)

Music (2)

Manual training (2) or

Domestic Science (2)

Eighth grade.

English (5)

History (5) or

Civics (5)

Arithmetic (5)

Physiology or hygiene (3) or

Physical training (2)

Drawing (2)

Latin or modern languages (5)

Manual training or domestic science (2)

Ninth Grade

English the only required subject. Real differentiation exists.

The pupil may choose among Latin, history, algebra, general science, music and drawing, manual and industrial arts, domestic science and certain commercial subjects.

In actual practice the main portion of the curriculum of the first and second years of the junior high school is English, social science and mathematics. Differentiation of curriculum in these years is not yet under way. In the ninth grade real differentiation is the rule; English is the only required subject. The following tables will show the curricula conditions in seventy-five seventh and eighth grades and thirty-one ninth grades.³²

CURRICULUM CONDITIONS IN 75 SEVENTH AND EIGHTH GRADES,
AND 31 NINTH GRADES.

Grade	75	8	9
English			
Required	75	75	31
Elective			
Not given			
Social Science			
Required	75	71	9
Elective		3	19
Not given		1	3
Mathematics			
Required	75	69	14
Elective		6	17
Not given			
Foreign languages			
Required	5	5	0
Elective	30	43	31
Not given	40	27	0

³² Douglass A.A. The junior high school in the Fifteenth Year Book of the National Society for the Study of Education Part III p.79

Grade	7	8	9
Hygiene			
Required	42	42	7
Elective	6	4	11
Not given	37	39	13
Art			
Required	48	39	8
Elective	13	17	15
Not given	15	29	8
Industrial Art			
Required	34	28	4
Elective	24	37	23
Not given	17	10	17
Science			
Required	14	18	7
Elective	6	15	23
Not given	55	42	1
Commercial			
Required		1	
Elective		24	17
Not given		50	14

To illustrate the wide range of studies offered by the junior high school we present the curriculum from Los Angeles, a city which ranks first in the development of the junior high schools.

LOS ANGELES CURRICULUM

GENERAL COURSE

Required Subjects.

Seventh year	Eighth year	Ninth year
English.....5	English.....5	English..... 5
Arithmetic.....5	History and Civics.5	Physical Training.. 2
Geography B7.....5	Physical Training..2	Music or
History, A7.....5	Oral English, B8....3	Oral English2
Physical Training...1	Music, A8.....3	
Music.....2	Physiology and Hygiene2	
Drawing.....2	Manual training	
	Girls-Cooking...2	
Penmanship.....2	Sewing....2	
	Boys-Woodwork...4	
Manual Training:		
Girls-Cooking...2		
Sewing....2		
Boys-Woodwork...4		

LOS ANGELES CURRICULUM
GENERAL COURSE

Elective Subjects.

Seventh year	Eighth year	Ninth year
Select one	Select two	Select three of the following
French.....5	French.....5	French, German, Spanish or Latin.....5
German.....5	German.....5	Bookkeeping.....5
Spanish.....5	Spanish.....5	Stenography.....5
Latin.....5	Latin.....5	Algebra.....5
Bookkeeping.....5	Bookkeeping.....5	Com. Arithmetic.....5
Stenography.....5	Stenography.....5	Ancient History.....5
	Algebra.....5	General Science.....5
	Drawing, Free-hand or Mechanical.....5	Select one of the following.....
		Manual training:
		Girls-Cooking...5
		Sewing...5
		Boys-Woodwork...5
		Drawing-Free-hand or Mechanical.....5

LOS ANGELES CURRICULUM

COMMERCIAL COURSE.

Required Subjects.

Seventh year.	Eighth year	Ninth year
English.....5	English.....5	English.....5
Arithmetic.....5	History and Civics.5	Com.Arithmetic.....5
Bookkeeping.....5	Bookkeeping.....5	Bookkeeping.....5
Stenography.....5	Stenography.....5	Stenography.....5
Penmanship.....2	Penmanship.....2	Physical training...2
Geography,B7.....5	Physiology and Hygiene.....2	
History,A7.....5	Physical training...2	
Physical training...1		

Elective Subjects.

Pupils may select one of the following:	Select one of the following:	Select two of the following:
French.....5	French.....5	French.....5
German.....5	German.....5	German.....5
Spanish.....5	Spanish.....5	Spanish.....5
Music and manual training.....6	Algebra.....5	General Science.....5
	Oral English,B8 and Algebra.....5	
	manual training...66	
	Music,A8 and manual Penmanship.....5	
	training.....6	
		Music and manual training or Oral English and manual training.....6

LOS ANGELES CURRICULUM

Vocational Course

Required Subjects.

Seventh year	Eighth year	Ninth year
English.....5	English.....5	English.....5
Arithmetic.....5	Manual training:	Manual training:
Geography, B7.....5	Girls-Cooking...5	Girls-Cooking...10
	Sewing.....5	Sewing....10
History, A7.....5	Boys-Woodwork...10	Boys-Woodwork...10
	Drawing.....5	Drawing.....5
Physical training...1	Girls-Free-hand	Girls-Free-hand
	Boys-Mechanical	Boys-Mechanical
Music.....2	Physical training..2	Physical training...2
Drawing.....2	U.S.History.....5	General Science.....5
Manual training:		
Girls-Cooking....2		
Sewing.....2		
Boys-Woodwork....4		

Elective Subjects

Select one:	Select one:	Select one:
French.....5	French.....5	Ancient History.....5
German.....5	German.....5	French.....5
Spanish.....5	Spanish.....5	German.....5
Latin.....5	Bookkeeping.....5	Spanish.....5
Bookkeeping.....5	Algebra.....5	Bookkeeping.....5
Stenography.....5		Algebra.....5

These tables present curricula actually in force. To what extent are they in accord with the theories of leading educators? The Commission on the Reorganization of Secondary Education writes: "This commission, therefore, regards the following as the main objectives of education: 1. Health. 2. Command of fundamental processes. 3. Worthy home-membership. 4. Vocation. 5. Citizenship. 6. Worthy use of leisure time. 7. Ethical character." With such objectives in view the junior high school courses provide the following groups of studies: 1. Constants. 2. Curriculum variables. 3. Free electives.³³

Under constants appear

1. Physical training.
2. Personal and community hygiene.
3. English, including spelling and penmanship.
4. Mathematics in its applications.
5. Social studies to prepare for citizenship.

Under curriculum variables appear subjects peculiar to a curriculum or to a group of curriculums. Some of these are,

1. Sewing and cooking.
2. Printing.
3. Bookkeeping.
4. Typewriting.
5. Manual Arts.

³³ Cardinal Principles of secondary education, U.S. Bureau of Education Bul. 1918 No. 35 pp. 10-11

Under free electives are included

1. Music.
2. Languages.
3. Sciences.

The Commission on the Reorganization of Secondary Education writes concerning these three groups, "The constants should contribute definitely to unification, the curriculum variables to specialization, and the free electives to either or both of these functions."³⁴

The junior high school population includes three groups:

1. Those who intend to continue schooling beyond the junior high school period.
2. Those who will enter business at the close of the junior high school.
3. Those who aim to enter the industries at the end of the junior high school course.

As a consequence curriculum variables will appear in three courses: the academic for the first group; the commercial for the second group; and the industrial for the third group. A survey of junior high school curricula shows general agreement in offering three groups of courses of study, academic, commercial and industrial. However, when the subject of industrial education is approached there is little agreement. It is true that the traditional grammar school course neglects industrial education, and it is equally true that many junior high schools are overemphasizing this form of education almost to the extent of considering the junior high school an industrial school. Industrial subjects are offered, but not

³⁴ Cardinal Principles of Secondary education U.S. Bureau of Education Bul. 1918, No. 35 p. 23

for the good of the industry directly, but rather that the pupil may discover his own aptitudes, and develop his own capacities. "In the junior high school period emphasis should be placed upon the attempt to help the pupil explore his own aptitudes and to make at least provisional choice of the kinds of work to which he will devote himself. In the senior high school period emphasis should be given to training in the field thus chosen. This distinction lies at the basis of the organization of junior and senior high schools.³⁵ The following surveys put the emphasis on industrial work in junior high schools for tastes, aptitudes and choices: Richmond, Va.³⁶ Minneapolis³⁷ and Denver³⁸ The Cleveland survey emphasises the social aspects of industrial conditions.³⁹ This survey claims it is not a question of what job a man wants, but what job can a man get.³⁹ All these surveys overemphasize industrial education. Industrial subjects are not taught because they represent industrial interests, but because they represent life opportunities and necessities. Tastes of industrial work should be given in order that interest in this field of labor may be aroused and so that even those who will choose the professions may have some idea of the problems of the industrial worker

³⁵Report of Commission on reorganization of secondary education U.S. Bureau of Education 1918 Bul. 35 p.18.

³⁶Vocational Education Survey, Richmond, Va. Bul. of the United States Bureau of Labor No. 162 August 1917 p.68

³⁷Vocational Education Survey of Minneapolis, 1916 pp.51-52

³⁸Denver Survey Vocational Education Part III p.12

³⁹Lutz, R.R. Wage Earning and Education p.59

and a sincere recognition of the importance of such a worker.

Standard for checking content of Industrial Education.

There are junior high school curricula showing a high degree of industrial subjects. The amount of such work need not be of concern but the standards for checking the problems and the content of industrial education are of great concern to the educator. The following ^{are} standards suggested by such leaders as Dewey,⁴⁰ Thorndyke⁴⁰ and Bonser.⁴⁰

1. The offerings must be socially significant and of sufficient content.
2. They must typify processes in the field from which they are taken and give an opportunity for gaining an appreciative insight into its related occupational field.
3. Must be adapted to the experiences, interests and capabilities of the pupils.
4. Must have value clearly discernable by the pupils.
5. Must put a premium on the exercise of originality and initiative.
6. Profit to the pupil must be consciously commensurate with the time and the effort spent.

The essentials of industrial education in the junior high school is that it be prevocational i.e. a course to awaken interest in industrial pursuits and to disclose the natural bent of the pupil.

⁴⁰These standards have been formulated from studies made of the writings of these educators. They are not set forth in the above definite form in any one author.

Contemporary
Educators on
Differentiation of
Curricula.

The question of the extent to which the curriculum of the junior high school should be differentiated has brought forth many opposing opinions. According to Johnston differentiation of the curriculum is the most essential characteristic of the junior high school. This same authority clarifies the meaning of the term. He maintains that differentiated curricula should include many of the same course and be differentiated for boys and girls, for fast and slow moving groups and for prevocational and academic groups. The same subject with different content may be adjusted to different group interests. According to Johnston every act of individual help or variation in assignment is differentiation.⁴¹

Briggs desires differentiation on the basis of mental ability, interests, sex etc. The pupil, parent and teacher together should decide upon the differentiated work after exploration reveals facts about the child and the vocations.⁴²

Snedden recommends differentiation on both psychological and social grounds. He recommends partial group differentiation as early as the age of twelve.⁴³

⁴¹ Johnston C.H. What is a curriculum differentiation?
Education Administration and Supervision 2:p.49

⁴² Briggs, T.H. Possibilities of the junior high school Education 37
p. 279

⁴³ Snedden, D. Reorganization of Education of Children 13 to 14
Education Administration and Supervision 2: p.425

Bagley opposes the junior high school as an expression of marked differentiation. He desires "social solidarity", and therefore, he asserts the school thru the junior high school period must emphasize the common elements tending to produce that end.⁴⁴

Judd bases the need for differentiation on the demands of individual differences.⁴⁵

The committee of the North Central Association advises that no first course in the junior high school be differentiated.⁴⁶

The trend of educational opinion has changed greatly since 1893 when the committee of Ten recommended that every subject should be taught to every pupil in the same way and to the same extent regardless of his probable career. Now all authorities are agreed that individual differences must be recognized in the junior high school age and courses of study provided to suit these differences.

Content of
the course of
Study.

An examination of the junior high school curricula shows that the subject matter classifies itself into five groups:

1. Mathematics.
2. Social Studies
3. General Science
4. Languages, English and foreign
5. Arts, fine and practical.

⁴⁴Bagley, W.C. The six-six plan. School and Home Education 34:

pp. 3-5, 79, 80

⁴⁵Judd, C.H. The junior high school, School Review 24 p. 249-260

⁴⁶Report of Committee on Definition of a Unit, Proceedings North Central Association 1916.

What shall be put into the courses of these five groups is a question engaging the attention and best efforts of many educators. Rugg writes, "We have adopted the principle of putting into our course only those types of information, those fundamental skills those types of reasoning situations, which ought to be common to the adult lives of a relatively large proportion of the boys and girls who pass thru them. Thus American curricula are fundamentally general and not specialized!"⁴⁷ Rugg further claims that the construction of a course of study in any given subject must satisfy two criteria, the social criterion and the psychological criterion. The first of these criteria requires that only such materials be put into a given course as are "common to the occupations of a reasonably large proportion of the adults, who as children pass thru the grades in question, and secondly that they are not so specialized as to be relatively unintelligible to children."⁴⁸ The second criterion requires an adherence to the principle "of organizing each element of any given course of study completely in terms of the facts of learning which have been established for the kinds of subject-matter in question."⁴⁸

With these criteria in view we must approach the questions of content in each particular subject. The content of a course in junior high school mathematics must socialize the subject and

⁴⁷Rugg, H.O. Scientific Method in the Reconstruction of Ninth-grade Mathematics p.126

⁴⁸Rugg, H.O. Ibid , p.127

develop in the student the habit of using his mathematics in studying the topics of ordinary conversation and general reading. The pupil should be taught mathematics for the purpose of answering some necessary question arising out of some social issue of general interest, rather than some social issue being used to furnish a motive for learning mathematics. The problems presented in a junior high school course must be such as to develop the habit of applying mathematics to personal and local situations. This course must encourage pupils to use mathematics in the ordinary affairs of life by having them bring in problems ^{not} merely to involve computation, but must be unavoidable problems that had to be solved to answer some necessary social issue. Personal experience and data gathered at home should furnish such problems.

The junior high school course in mathematics should acquaint the pupil with business terms and forms met in conversation and general reading. There is no thought of preparing the pupil for a commercial pursuit, but to give him the knowledge needed by intelligent persons in order to interpret every day references.

Geometry in the junior high school course should acquaint the pupil with terms often met in general reading and also to furnish him the knowledge through a few simple constructions by which he may be able to analyze and appreciate the simple geometric designs.

Algebra should acquaint the pupil with equations and formulae as a means of representing a mathematical relation more briefly than thru words.

Rugg writes of the junior high school mathematics movement:

"The present tendencies show clearly that high school men are working toward a two-year or a two-and-one-half year course which will cover the essential principles and applications of arithmetic, algebra and geometry. The detailed scheme of text-books used in the junior high school reveals, however, that the fundamental psychological weakness in mathematics text-books centers around the poor grading of problems.⁴⁹ This authority comments upon the improvement of the content of the subject matter of junior high school mathematics, upon the elimination of the non-essentials and upon the tendency to adapt mathematics more closely to social needs. From the stand point of the psychological criterion he charges that there has been little or no advance up to the present time.

The course in English should include courses in literature, grammar, composition and spelling. The social needs of the pupil will determine what to include in each course. Dean Charters presents a course of study in language and grammar based upon grammatical errors common among pupils. The errors were obtained from a large number of schools, then the errors were grouped in classes. A course of study was then formulated based upon these errors. An outline of this course is found on page 105 of the Sixteenth year book of National Society for the study of education Part I. The outcome of a course in English language and grammar,

⁴⁹Rugg, H.O. Scientific Method in the Reconstruction of Ninth-grade Mathematics p.132 U. of Chicago. Ed. Monographs. Vol. II. No. 1, 1918

according to Charters, should be the improvement of oral and written language. The material for the course is obtained, as in mathematics, from the pupils' own experience, and such material must be judged both by the sociological criterion and by the psychological criterion. The outcome of the reading course should be the ability on the part of the pupil to get the thought of what he is reading. Here again the material will be found in newspapers, magazines and books. Silent reading will be emphasized in its two phases, speed and comprehension. The junior high school course in reading should establish well-developed tastes and habits of reading. How important this habit has become for the American pupil we may judge from Judd's statement that "Perhaps the most impressive way of bringing out the importance of successful training in reading is to point out the fact that the American educational system is essentially a reading system. The schools of this country depend upon text-books to an extent equalled nowhere else in the world. In European schools the instruction is oral, the teacher delivering the information to the class. By contrast our schools are almost entirely dependent on reading."⁵⁰

Bagley calls attention to three ways of determining the minimum essentials in history and geography.⁵¹

⁵⁰Judd, H. J. Reading Its Nature and Development p. 186.

⁵¹Bagley, W. C. Determination of Minimum Essentials in Elementary Geography and History, Fourteenth Year-book National Society for Study of Education Part I, p. 131

1. The newspaper-magazine method of determining minima. The proposal is to read current newspapers and magazines, record the geographical and historical references and determine from the frequency of these references the relative value of the various types of information.

2. The judgments of specialists as a means of determining minima. By this method the judgements of special students of the subjects under discussion are collected.

3. A comparison of school texts as a method of determining present-day minima.

In a similar manner the minimum essentials in community civics and elementary economics may be determined. These social studies, geography, history, civics and economics aim to "make pupils more intelligent with respect to the more crucial activities, conditions and problems of present-day life."⁵² In these studies, as in others, the sociological criterion and the psychological criterion must determine the content of courses in social studies.

The definition of the junior high school adopted in this study and stated in Chapter I asserts that the junior high school offers differentiated courses of study for pupils according to their needs, capacities and probable future educational careers." The content of each course of study must be determined in accordance with these needs, capacities and future careers.

⁵²Horn, Ernest Sixteenth Year-book National Society for the Study of Education Part I p.156.

Johnston's Resume
of Junior High
School
Features.

In determining what the minimum essentials of the junior high school should be it may be well to keep in mind the following resume of junior high school features as presented by Johnston, one of the most notable proponents of the junior high school movement, who writes: "As we (We i.e. the magazine Education^{-al} Administration and Supervision) have for future publication several more striking contributions to junior high school literature, it may be well to prepare ourselves for them by reviewing those of junior high school features so far emphasized in this journal. The many articles which we have already published and which as a body constitute probably the most comprehensive literature of this developing and highly significant movement in public education have emphasized so considerable a number of distinguishing features that a summary of them may prove helpful. "Junior High Schools have some or all of the following features: Special buildings, libraries, assembly halls, study halls, auditoriums, gymnasiums, laboratories, print-shops, music rooms etc.; liberal entrance requirements based on physiological and psychological ages and upon sociological considerations; vocational and character guidance and advice; supervised study; longer school day; partial and well-designed curriculum differentiation on two bases (psychological and vocational); pupil groups divided with reference to their different curriculum requirements; clearly and continuously correlated courses; the center of a Three-Cycle Plan with its breathing readjustment and finishing places; pre-industrial and pre-vocational training; promotion by courses; partial

and progressive departmental teaching, more individualized work; "general courses" in science and mathematics; modern languages taught by the natural method and begun in the seventh grade; seventh grade start (i.e. starting new courses) corresponding more nearly to pubescent developments in pupils; lengthening of the school day, school week and school year; differentiated (from elementary school) social center function; special text-books; special administration; college or normal graduates for teachers; new "units" new class periods; and a liberal range of electives. The establishment of these junior high schools also means the inevitable reorganization of the elementary schools, senior high schools and college courses, resulting in Junior Colleges in the larger cities.⁵³

A study of the junior high school reveals the need of a standard to measure the junior high school. Such a standard will assist in presenting the essentials in junior high school organization. There will be variations from any proposed standard, when any one school is surveyed, but the essentials common to a large number will be found embodied in the standard proposed. In conclusion we submit the following

⁵³ Johnston C.H. Editorial Education Administration and Supervision Vol. III 4 pp. 241-242

standard derived from a study of the essentials of the junior high school as it exists to-day. I have arbitrarily applied certain standards generally accepted among junior high schools and given these standards a tentative weighting so as to secure results capable of quantitative measurement.

THE PROPOSED STANDARD.

1000 POINTS DISTRIBUTED AS FOLLOWS:

Housing and Grading, 100 points as follows

Separate building, grades 7-9, 100

With elementary school, grades 7-9, 75

With high school, grades 7-9, 75

Equipment, 200 points as follows:

An average of one classroom for each group of thirty pupils, 80

Gymnasium, $16 \frac{2}{3}$

Auditorium, $16 \frac{2}{3}$

Library, $16 \frac{2}{3}$

Manual Arts department 50

~~Domestic~~ Domestic science department, 50

Teaching force, 200 points as follows:

40 % or more men teachers in academic branches, 50

25 % or more of teachers especially trained for departmental work, 75

Special teacher for educational guidance, 75

Curriculum matters, 500 points as follows:

Essential subjects, 100

English, six or more periods per week, 25

Civics, separate course, 20

Prevocational work in practical arts, 20

Physical training and hygiene, 15

Mathematics, 20

Provisions for different rates of advancement, 100

Promotion by subject, 25

Provision for individual advancement, 25

Differentiated curricula, 50

Factors influencing method, 100

Supervised study, 50

Project plan in prevocational work, 50

Social organizations, 100

Athletic, 33 1/3

Literary, 33 1/3

Other social organizations, 33 1/3

Miscellaneous features, 100 points as follows:

Length of term 25, 36 weeks or more scores 100%

Salary, 25, minimum of \$1000. scores 100%

Admission open to all who can profit by junior high school.

instruction, whether they have finished the sixth grade

or not, 50

CHAPTER III.

OUTCOMES OF THE JUNIOR HIGH SCHOOL.

Defects in the 8-4 plan. The traditionally uniform academic course with some little time given to manual training and domestic science is yet the prevailing course in the seventh and eighth grades of many cities. Such a course may be comparatively well adapted to those who are to have a long period of schooling, but not for those whose interests or necessities force them to leave school before completing even the eighth grade. That children leave the schools in large numbers before completing the eighth grade is a fact well established by Ayres in his study of the progress of school children thru the schools. Why this elimination? Chiefly because the 8-4 plan has very little to offer pupils whose native tendencies lead them away to concrete problems and interests rather than to abstractions. The following table shows how great is this elimination beginning with the fifth grade.⁵⁴

⁵⁴ Commissioner of Education Report 1917 Vol. II p.8
Department of the Interior.

Shows the progress of elementary-grade enrollment for eight years

Years	Grades	Number	Per cent.
1906-7.....	1	4,066,091	23.50
1907-8.....	2	2,509,593	14.79
1908-9	3	2,455,714	13.91
1909-10.....	4	2,436,429	13.28
1910-11.....	5	2,089,171	11.28
1911-12.....	6	9,718,967	9.25
1912-13.....	7	1,454,643	7.63
1913-14.....	8	1,244,098	6.36
1914-15.....1st.H.S.		629,432

It is generally estimated that about one-half of the first-grade enrollment is made up of beginners, the other half being comprised of repeaters or retarded pupils. Assuming that 2,000,000 of the first-grade enrollment in 1907 were repeaters, the beginners that year numbered about 2,066,091, of whom 629,432, or about 30 per cent reached the first year of the high school in 1914-15.

This table shows that the sixth, seventh and eighth grades combined have only 23.24% of the school enrollment, or an average of 7.74% per grade. This means that out of a school enrollment of 19,990,316 in the year 1915 only 4,645,749 were in the three upper grades. Clearly retardation and elimination are at work. The final word in this story of elimination is that out of every 1000 entering the first grade only 117 complete the senior high school

course⁵⁶ Such are conditions under the 8-4 plan. Under the 8-4 plan the provisions made for retarded and superior pupils have been mechanical rather than educational. For example the Portland plan divides the course of study into 54 parts; there are 18 terms of five months each; slow pupils take three parts per term and fast pupils take four parts. The same course of study is pursued by all alike. In the Portland survey Dr. Spaulding condemns this mechanical device. Educational Administration and Supervision Vol. III No. 3, p. 147 publishes the results of a questionnaire sent to 766 city superintendents. 549 answers were received. 288 claimed to have made provisions for the gifted child. The methods used were:

1. Semi-annual promotions	314
2. Promote at any time	251
3. Double and elastic promotions	200

402 claimed to be reforming the promotion system. Such provisions deal only with the mechanical side and do not consider the interests, capacities and probable future educational careers of pupils. The 8-4 plan knows no other way of caring for the retarded except giving them more time, and no other treatment of the superior children except hurrying them thru the grades. Under the 8-4 plan a pupil must pass in all the subjects of his grade. If he should fail in one, he must repeat all. In the seventh and eighth grades such procedure is disheartening to the pupil. Not what a child

⁵⁶ Report of the U.S. Commissioner of Education, 1917 Vol. II, p. 8

knows, but what he needs to know and what he is capable of learning should determine his promotion. The 8-4 plan, however, fails to consider the needs of the individual pupil.

Under the traditional plan the courses^s are inflexible; one line of study for all. No differentiated curricula appear in the seventh and eighth grades of the traditional school. This inflexibility of courses, this lack of differentiation of the curriculum comes at a time when the compulsory education law ceases to hold pupils in school. If the boys and girls are to stay in school, their needs and interests must be considered and courses arranged with this fact in view.

The traditional course of study for the seventh and eighth grades shows no prevocational work. By prevocational we mean a course to awaken interest in industrial pursuits and to disclose the natural bent of the pupil. The traditional course, however, considered neither industrial pursuits nor the natural bent of pupils. Such a course of study had a definite outline of work for each semester. A pupil advanced with a class, if proficient, if not, he remained to be overtaken by lower class pupils. The class was everything, and the individual existed for the good name and fame of the class. The survey of the Portland, Ore. schools show how surely mechanical and lifeless such courses of study become. Lessons become pages in a book and educational progress is measured for all alike by the number of pages studied of a selected text book.

The traditional grammar schools are in buildings usually without gymnasium, auditorium or lunchroom equipment. The lack of such equipment occasions a lack of social organizations. There can be no interest or direction of athletics without an instructor and a

gymnasium, and without an auditorium the class rather than the school becomes the social center.

The junior high school movement assumes that there is dissatisfaction with work generally done in the seventh and eighth grades. Briggs states, "Such dissatisfaction there is in abundance. The distribution of eight years to the elementary and four years to the high school is pretty generally accepted as an accident, finding no justification in comparative education, psychology or the logical demands of local conditions. Besides this, the curriculum of the elementary school has become hopelessly congested both by the introduction of subjects new to any curricula, and by the adoption usually under stress of subjects formally taught in the secondary schools."⁵⁷

The Commission on the Reorganization of Secondary Education states that "The eight years heretofore given to elementary education have not, as a rule, been effectively utilized. The last two of these in particular have not been well adapted to the needs of the adolescent. Many pupils lose interest and either drop out of school altogether or form habits of dawdling, to the serious injury of subsequent work. We believe that much of the difficulty will be removed by a new type of secondary education beginning at about 12 or 13."⁵⁸

⁵⁷ Report of the U.S. Commissioner of Education Vol. I 1914 p.136

⁵⁸ Report of the Commission on reorganization of secondary education U.S. Bu. of Education Bul. 35, 1918 p.18

Remedies offered by the Junior high school. A junior high school as defined in Chapter I "offers differentiated course of study for pupils according to their needs, capacities and probable educational careers."

This means that the junior high school recognizes differences among individuals and provides courses accordingly. This recognition is comprehensive; it is extended to those interested in the professions, or the industries or business. As a consequence we find the junior high school offering electives, and providing flexible courses of study. How many electives may be offered and how flexible the course may become depends largely upon the aggregate number of children assembled. If a large number of seventh, eighth and ninth grade children are collected in one building, the grouping can be most satisfactory for differentiated subject matter and instruction. In such a school with provisions for individual differences, subject promotion and prevocational work the individual, rather than the class, becomes the unit for whom courses are planned and instruction given; and if in such a school the appropriate opportunities are presented for social organizations pupils will be well prepared for a normally active life in their chosen sphere of activity.

So the junior high school has come into existence to provide courses of study according to the needs, capacities and future educational careers of its pupils. It has been called into existence by the great dissatisfaction with the traditional work of the seventh and eighth grades, and by the earnest desire of many interested in adolescent boys and girls to keep them in school, at least, during the period of adolescence.

The physical
plant
and
equipment

What has the junior high school, thus called into existence, accomplished for the education of adolescent boys and girls? Are there definite outcomes which can be listed? To the investigator of the junior high school some outcomes are immediately evident. Such is the finding and grouping of the educational needs of children from 12 to 15. For solving the problems arising out of these needs the junior high school movement has now a material plant, a principal of its own, special teachers and entrance requirements of its own. In such a school environment the problems of adolescence will be met, and, to a degree, at least, successfully solved.

Centers of
interest
provided.

The activities possible in this new environment are varied and many of them new to the grades included in the junior high school. The assembly period made possible by providing auditoriums, the library provided with reading material and a study room, manual training and domestic science departments form centers about which interests may cluster and thru these interests the pupils may direct their own energies into channels profitable to themselves and to society as a whole.

The four
claims.

He must be dull indeed who cannot see the superiority of the junior high school plant over the grammar school equipment. However,

when we consider the claims made for the junior high school do we find the outcomes justifying the claims? Briggs enumerates four major claims . "First, that it provides better for individual differences; second, that it makes easier the transition to the high school; third, that it decreases the number of pupils eliminated from the school system; and fourth, that it furnishes an opportunity for various reforms in instruction."⁵⁹

A visit to a well equipped junior high school will convince the visitor that the school is organized to care for the individual and by guidance and try-out methods to place him where he will receive the education best suited for him. The claim, however, that the junior high school does this rests, at present, on the expressed opinion of superintendents and junior high school principals. Davis reports 143 principals out of 293 favoring the junior high school because it provides for individual differences.⁶⁰

17 Minnesota principals out of 25 report in favor of the junior high school for a similar reason.⁶¹ In this matter there is no other authority except the opinion of principals.

The second claim that it makes easier the transition to the high school is also based upon opinion, altho not so favorable as in the former case. Davis reports 77 principals claiming that the junior high school does make transition easier to the high school.⁶²

⁵⁹ Briggs, T.H. The junior high school Report of U.S. Commissioner Education Vol. I 1914 p.139

⁶⁰ Davis C.O. Proceedings North Central Association, 1918 (not paged)

⁶¹ Questionnaire

⁶² Davis C.O. Proceedings North Central Association 1918 (not paged)

Six Minnesota principals make a similar claim for the junior high school.⁶³ In this matter we are again dependent upon theory and opinion.

The third claim that the junior high school decreases elimination is based on theory and opinion. The school is designed to retain pupils in school. Its courses of study and methods of instruction appeal to the interests of its pupils. Is this appeal stronger than the call of business and industry? That it is stronger has been asserted for a decade. Statistical evidence to establish this claim has been collected, but the evidence is not convincing. Many superintendents and principals have assumed that the increasing grammar grade and high school enrollments are due to the junior high school movement. In the report of his investigation of the junior high school in 1914 Briggs states that 107 principals of junior high school declare that the junior high school organization retains pupils better than the grammar grades organization; two that it does not; and three say that they do not know.⁶⁴ A Los Angeles report for 1913-14 shows the average enrollment of grades seven to nine from 1897 to 1903 was 13.7% of the total school enrollment, in the period 1904 to 1911 the enrollment in these grades was 17.3% of the total; in the period 1912 to 1914 the enrollment was 20.1% of the total.⁶⁵ The junior

⁶³ Questionnaire.

⁶⁴ Briggs, T.H. The junior high school Report of U.S. Commissioner of Education 1914 Vol. I pp141-2

⁶⁵ Elementary School Journal 15:361-377

high school of Los Angeles was established in 1911. A study of the above percentages will show that the increase in enrollment was as great in the period 1904 to 1911 as it was in the period 1912 to 1914. Such figures do not establish the claim for retention made by the junior high school proponents. The data from Grand Rapids cited by Briggs indicates a 10% higher grade enrollment from eighth grade junior high school pupils than from the intermediate schools of Los Angeles. This increased retention may be due to nearness of location of the junior high school to the school population rather than to the greater power of retention on the part of the junior high school. The data seem significant, but no scientific investigation has been made which would warrant the conclusion that the junior high school does retain pupils of the seventh, eighth and ninth grades better than the grammar school organization does.

The fourth claim is that the junior high school furnishes an opportunity for various reforms in instruction. In discussing this claim Briggs writes "In a new organization a course of study based on the new principles of psychology, sociology and economics, various provisions for individual differences and especially an improved method of teaching can more easily be introduced. The governing principles of this improved method have been set forth in a number of the new books—in none better perhaps than in John Dewey's "How We Think" and in his "Interest and Effort in Education". These principles are concretely applied in the "project method". With a definite program for reform a principal is

likely to find marked help in a junior high school."⁶⁶

Minnesota

Opinions

To ascertain what the junior high school principals of Minnesota judged of the outcomes of the junior high school movement a questionnaire was sent to each school listed by Davis in the Proceedings of the North Central Association, 1918 as supporting a junior high school. Davis lists twenty-nine schools. Of the twenty-nine questionnaires sent twenty-five were returned. Of these twenty-five eight stated that they had no junior high school organization.

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Briggs, T.H. Report of the U.S. Commissioner of Education Vol. I
1914, p. 144

Distinctive Features of the Junior High School Organization
as Submitted by the Principals of Fifteen Minnesota
Junior High Schools.

Item	Rank							Number of Judges	Relative Rank
	1	2	3	4	5	6	7		
Individual Needs	7	2	2	2	1		1	15	1
Differentiated Curricula			7	2	2	3		14	5
Better Teaching	2	2	3	4	1		2	14	2
Easier transi- tion to S.H.S.	3	1	2	1	2	5		14	7
Promotion by subject	4	2	2	1	3	2	1	15	3
Department Organization	1	1		2	5	3	2	14	6
Better prepara- tion for life.	3	5		1	1	3	2	15	4

A better understanding of the adolescent. Specifically the two prominent outcomes of the junior high school movement are: first, a better understanding of the needs of the adolescent; second, better teaching in the seventh, eighth and ninth grades. That a course of study should be formulated according to the needs of those pursuing such a course is not a new idea among educators. What these needs are have been determined largely by the aim adhered to on the part of the program maker. How, for example, shall the spelling needs of pupils be determined. Dean Charters names the various objectives which have determined the content of the spelling courses.⁶⁷ First, Knowles and Eldridge assumed the objective of spelling as the ability to read. Second; Jones would teach spelling so that children might have ability to write school exercises. Third, Ayres, Cook and O'Shea assumed the objective as adult ability to write. Fourth, Woodfolk would teach only the words which children fail to spell; assuming the objective of spelling as correction of errors. Thus as in spelling the content of a course of study determined by the needs of pupils will vary with the objectives in view. To ascertain what these objectives should be for the adolescent is the mission of the junior high school. The junior high school has become the laboratory where the needs

⁶⁷ Charters, W.W. What Has Thus Far Been Accomplished and Is Now Available for the Readjustment of School Curricula. Proceedings of High School Conference Bul. U. of Ill. Vol. 16:12 p. 37

and capacities of the adolescent are analyzed and classified, where the laws governing his training are observed and where, consequently, a better understanding of the needs of pupils are obtained thru methods of scientific investigation. This is the most important outcome of the junior high school movement. Step by step these needs will be determined, not by any one master mind, but by many earnest workers contributing, as scientists do, to the general fund of facts and laws concerning adolescent boys and girls.

Better teaching in the seventh, eighth and ninth grades.

A better understanding of the needs of adolescent boys and girls has called forth better teaching. This better teaching is due to the fact that teachers and pupils in the junior high school work with definite aims

in view. These aims have brought the pupils into better adjustment with the economic, political and industrial demands of the present day, and have arranged the content of courses of study according to the laws governing the learning processes. To realize these new aims the junior high school revises methods of teaching and adapts them to the aims in view.

Johnston claims that the junior high school stands to-day as our chief educational problem.⁶⁸ "In the first place because it, like fire, tho indispensable in the right place and in the right

⁶⁸ Johnston, C.H. The junior high school National Education Association Vol. IV p.150

hands is still dangerous; because it is misunderstood; because its proponents exaggerate its immediate value; because, like all fundamental reforms, it really cannot be understood by anyone at the present stage of its evolution."

BIBLIOGRAPHY

ABELSON, JOSEPH. A Bibliography of the Junior High School. Education, 37 Oct. 1916. Boston.

A Study of the Junior High School Project. Education, 37 Sept. 1916. Boston.

ALLISON, R.H. The Junior High. Ohio Educational Monthly. Feb. 1918
Columbus.

BAGLEY, W.C. Determination of minimum essentials in Elementary
Geography and History.

In Fourteenth Year Book. National Society for the Study
of Education. Part III. Chicago.

Professor Judd's Criticism of the Eight Year Elementary
Curriculum.

School and Home Education, 34. Feb. 1915. Bloomington, Ill.

BINGAMAN, C.C. Report on Junior High Schools of the U.S.
Goldfield, Ia. 1915.

BRIGGS, THOMAS H. The Junior High School—Its Advantages and Disadvantages. Old Penn. May 8, 1915. Philadelphia.

The Junior High School. U.S. Bureau of Education
Report of Commissioner, 1914. Vol. I. Washington. Gov. Printing
Office, 1914 pp. 135-57

CHAPMAN, IRA T. Obstacles to be Encountered in the Establishment
of the Junior High School. Journal of Education, May 18, 1916
Boston.

COX, PHILIP W.L. The Junior High School; Its Purposes and How They
May be Realized. American Education. Feb. 1916. Albany N.Y.

DAVIS, C.O. Junior High School in the North Central Association Territory. School Review. May 1918. Chicago.

DOUGLASS, A.A. The Junior High School. Fifteenth Year Book of the National Society for the Study of Education. Part III, 1916 Chicago.

FRANCIS, JOHN H. A reorganization of our School System. National Education Association Proceedings, 1912.

GILDAY, WALTER H. The Traditional Break Between the Grades and the High School. Journal of Education, 86 .Dec. 27, '17. Boston.

GREEN, C.A. The Junion High School-Points Opposed to it. Kansas Journal of Education. Apr. 6, Apr. 13, 1918. Hutchinson, Kan.

GRIFFIN, ORWIN BRADFORD. The Junior High School. Journal of Education. Oct. 26, 1916. Boston.

HARTWELL, CHARLES S. The Junior High School for Increased Economy and Efficiency. American Teacher. Mar. 1916. New York.

HILLEGAS, MILO B. The Organization of Junior High Schools in Small Communities. Teachers College Record. Sept. 1918, New York.

HORN, ERNEST. Possible Defects in the Present Content of American History as Taught in the Schools.

Sixteenth Year Book of the National Society for the Study of Education. Part I. Chicago.

HORN, P.W. The Junior High School. Texas Board of Education Reports 1915-16, 1916-17. Houston.

HUGHES, J.F. The Essential Features of the Chanute Junior-Senior High School Plan and its Tangible Results. Educational Administration and Supervision. Nov. 1915. Lancaster, Pa. Baltimore, Md.

- JOHNSTON, C.H. The Junior High School. Educational Administration and Supervision 2:413. Lancaster, Pa. Baltimore, Md.
- JONES, ARTHUR J. The Junior High School-Its Place in the Reorganization of Education. School Review, Feb. '18. Chicago.
- JUDD, H.J. Reading Its Nature and Development. U. of Chicago. Educational Monographs. Vol. II. No. 4. 1918.
- JUNIOR HIGH SCHOOL NUMBER. Educational Administration and Supervision. Sept. 1918, Lancaster, Pa. Baltimore, Md.
- LEWIS, E.E. Standards of Measuring Junior High Schools. Bul. 35 Univ. Ia. 1918. Iowa City.
- LUTE, R.R. Wage Earning and Education. Cleveland Survey. New York
- MACLAREN, SUSANNA M. The Justification of the Junior High School. American Schoolmaster. June 15, 1918. Ypsilanti, Mich.
- NORTH CENTRAL ASSOCIATION of Colleges and Secondary Schools. Its Proceedings. 1918.
- NUTT, HUBERT W. The Re-Organization of the Period of Elementary and Secondary Education. Teachers Journal. Sept. and Oct., 1915 York, Pa.
- QUESTIONNAIRE on the Junior High School. In North Central Association of Colleges and Secondary Schools. Proceedings 1918. p. 174-193.
- REPORT OF COMMISSION on Reorganization of Secondary Education. U.S. Bureau of Education. Bul. 35, 1918. Washington.
- REPORT OF THE U.S. COMMISSIONER of Education. Vol. II. Washington.
- REPORT OF DEPARTMENT OF EDUCATION. Alabama, 1918 Part I. Montgomery.

RUGG, H. O. Scientific Method in the Reconstruction of Ninth Grade Mathematics. University of Chicago. Educational Monographs Vol. II. No. 1, 1918

SIMMONS, T. Paxton. The anomaly of the Junior High School. School and Science Review. January 1918. Austin, Texas.

STETSON, PAUL C. A Statistical Study of the Junior High School from the Point of View of Enrolment. School Review, Apr. 1918 Chicago.

SURVEY of Public Schools. Portland, Ore. 1913.

SURVEY, Vocational Education. Denver, Colo. 1916.

SURVEY, Vocational Education, Minneapolis, 1916.

SURVEY, Vocational Education, Richmond, Va. U.S. Bureau of Labor. No. 182. Aug. 1917.

SYMPOSIUM. Junior High School. Journal of Education. Oct. 14, 1915. Boston.

The literature concerning the junior high school deals chiefly with the history, the aims and material equipment of the junior high school. It is exceedingly disappointing to find that no scientific investigation has been made of the outcomes of the junior high school movement. Many of the writers on the junior high school seem to assume that sound educational theory and the opinions of superintendents and principals of the junior high school are the essentials which will make the junior high school movement an educational success. A notable exception among the writers is Rugg, whose scientific study of ninth grade mathematics indicates what is necessary to do in order to determine the content of each course of study. Dean Charters in his discussion of what has been

done and is now available for the readjustment of school curricula clearly indicates the scientific methods to be followed in determining any course of study.

As a whole the literature on the junior high school now available has but little to show that the junior high school, as it now exists, is successfully meeting the demands for better educational opportunities for the children of adolescent age. The assertion is generally made that the junior high school is organized to meet these demands. Has it been proven by scientific experimentation that it does meet these demands? On this point the literature on the junior high school has little to contribute.