

REPEATING and RETARDATION in the SCHOOLS of MINNESOTA. L. M.

A STUDY IN EDUCATIONAL ECONOMICS

Considered from the Administrative Viewpoint.

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Definition of terms.

When a child fails, at the end of the school year, to win the right to be promoted into the next grade, but must spend another year in the same grade, he is said to repeat the work of that grade, or to be a "repeater". Unless he makes up, by extra effort, the work thus lost, and so regains his standing as a member of the class with which he originally was, he is said to be "retarded", and remains so as long as he continues in school.

Scientific administration.

The fact that large numbers of children were thus retarded, has, of late years, attracted considerable attention. Executives, in all lines, are applying scientific methods in administering affairs, in the effort to eliminate waste and prevent loss. Search for greater efficiency is the outstanding fact in business today. Schools are not behind in their endeavors.

Three possible methods.

Retardation may be studied from two points of view--one, psychological and one administrative. Under the former there might be an extensive series of tests to demonstrate authoritatively what would be the normal mental endowment, in knowledge of data and power to reason, at a given age. Unfortunately such are now wanting, and investigations are proceeding in such a manner that one cannot be looked for in years, if ever. Such tests have been worked out abroad but on a limited scale, and, moreover, are not necessarily applicable here.

Binet worked out, after years of preliminary effort, a scale of tests to determine when children might be considered mentally defective. Norms were established for each age from three to thirteen. This scale of tests has been used extensively in the New Jersey institution for the feeble-minded at Vineland and at the Illinois institution at Lincoln.

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"These institutions, however, are concerned to know whether these norms found for the successive ages of French children are really norms which hold good for the same ages of American children. Besides, Binet himself calls attention to this: the Binet norms have been worked out for the children of the working classes of Paris and vicinity. They may need some revision when applied to other social classes and to other regions, even in France." (Huey)

What then is their probable practical value to school administrators, here and now with the children actually before them for educating? In the light of the above quotation the question answers itself. The theory is interesting, however. For could such norms be satisfactorily determined they would furnish a psychological basis for ascertaining the amount of retardation now existing, and also for constructing scientifically a course of study which should be so wisely adapted to the normal child as to preclude the causing of more retardation among children in the public schools unless they were mentally defective, and proper subjects for institutional treatment.

Practically all the literature, even the psychological journals, deal with this question as one of practical school administration. From this point of view the question is not "has the child, for any reason, fallen below the psychologically established position for a child of his age" but rather "has he failed to meet the requirements laid down by the administration, in the course of study, for a child of his age"?

Two administrative views.

When we attempt to gather data upon this latter point, from the school systems, in order to compute the amount or retardation existing, whom shall we consider as being retarded? Whom shall

we regard as having failed to meet such requirements ? We are confronted by two methods.

The progress method.

One set of workers demands that we shall ascertain the age at which each individual pupil entered school, and then follow him through the grades to see if he ever failed to win promotion. If he never thus failed he is never to be regarded as retarded. According to this view a ten or even fifteen year old child in the first grade is not retarded provided he has not spent more than a year therein. In other words, the pupil's status, retarded or otherwise, is to be measured strictly by his rate of progress through the grades after he enters, regardless of his age at entrance or his age when investigated.

The whole theory can best be stated in the words of one of its most eloquent advocates:-

" 'Retardation'has simply to do with the pupil's progress in his studies as a pupil, after he is once regularly installed in school. It does not take into account his age..... . If his parents deem it wise to keep him out of school until the compulsory law would force him into school, then the question of retardation or acceleration would begin soon thereafter to operate. Retardation, except in a very remote way, is not one of years, months, and days; but one of educational velocity after one starts to school and it should be estimated on his rate of speed through his studies." "after a pupil is once ~~started~~^{entered} in school, no difference what his age may be, and he does his work in the allotted time of his class,.....that pupil is not retarded in his studies and should not be so counted".

(Supt. J.M. Greenwood, Kansas City, Mo. in School and Home Education for March, 1909; also in MSS.

The advocates of this method have not won a large following for several reasons. One difficulty with this method is that it is nearly impossible to operate it. By it the study of large groups of children, such as it is most desirable to study, is difficult because each one must be traced by some system of records, not by age, as now, but by the date of his entrance into the system. Few if any systems show this fact; because it has no value except for this one purpose which is not the major one in keeping schools records, and would even for this purpose have no value except in the few, comparatively, cases of those who entered later than the statutory age.

In case children transfer from one system to another as they do by thousands annually, it is still more difficult to trace the age at entrance for the exceptional ones. The "progress" theory neglects, too, the broader social relations of the schools. The schools are established by the state for a purpose. The stern purpose of making each and every one of its citizens who is mentally and physically capable, prepare in the highest degree possible, for his duties as a member of the state, both socially and economically. This purpose is as stern as a measure of internal protection, as war is for external protection against aggressions. If therefore, a child who is otherwise able, remains out of school beyond the time fixed by common experience and expressed in the statutes of the state, while he may make normal progress through the grades, after entrance, he nevertheless is retarded in the sense that he gets out of school and into active life, behind schedule time and actually behind those who entered on time. So, he has that much less of productive life. He is forever retarded. Again we repeat, that the progress theory wholly overlooks the manifest duty of parents and schools, co-operating, to prepare the child, as soon as possible,

consistent with reasonable efficiency, for performing its proper economic functions as a member of a progressing society. The age-in-grade method.

The other and the most widely accepted method of determining retardation is the age-in-grade method. By this, it is assumed that all children enter school, or should enter school, at a given age, that prescribed by law, spend a year in a grade and then pass on into the next. That expresses the very meaning of the term grade, i. e. a year of prescribed school work. This method is easy of application, regardless of the records kept or even if no records at all are kept. All the children in each grade are present and can answer, on inquiry, as to their own ages. Or parents, especially in case of the very young, can easily be consulted.

Retardation as defined by Ayres

"During the past few years the term "retarded" has been applied with increasing uniformity to describe the condition of school children who are too old for their grades. It describes but it does not attempt to explain. It is applied to all children of this class whatever may be the cause or causes which account for the fact that they are above the normal age for their grades. They may have entered school late, or they may have made slow progress: under both circumstances they are termed 'retarded'.

"Now many able educators and among them some of the keenest thinkers in the profession, have taken issue squarely with those who use the term in this way and have argued that the proper criterion for judging backwardness among school children is not age in grade but rather rate of progress.

"Here we have two criteria, one setting up an arbitrary standard which says that the boy who is eight years of age or older in the first grade, nine years old or older in the second grade, etc., is "retarded" and the other claiming that the child who takes more than one year to complete the work of one grade is retarded.

"The criterion which judges the extent of retardation in a school system by telling how many of the children are too old for their grades has won its way into nearly universal use because it gives the quickest, clearest, and most easily understood answers to these questions. To discover how many over-age children are in his school system a superintendent has only to draw up a table showing the distribution of children by grades and ages and to draw through it a line separating the over-age children from those of normal age.

"The objections that have been brought against this method are : first, that it exaggerates the extent of the evil; and second, that the facts shown are non-significant because the child who enters school late is not retarded at all but will make such rapid progress as to more than catch up with those who entered earlier.

"Considering now the first of these two objections, is it true that the age standard of measuring retardation exaggerates the seriousness of the existing conditions? In New York City 16,000 children graduated from the eighth grades last June. Of these children 42 per cent. had required more than eight years to complete the eight grades. In another study of the school histories of 19,000 children in New York it was found that 23 per cent. had made slower progress than that called for by the course of study. In an article published in the

EDUCATIONAL REVIEW for September, 1909, Dr. Leland P. Falkner published data from a number of cities showing that when we can apply both the age-in-grade and the progress criteria we find almost without exception that the age standard understates rather than overstates the extent of the evil.

"Turning now to the second objection we are confronted by the claim that the child who enters school late readily overcomes his initial handicap and by rapid progress soon catches up with the children who entered early and even passes them. Here again the question at issue can only be answered by an appeal to facts, not to opinion.

"Reference has been made to a study of the school records of the 16,000 children who graduated from the eighth grades in New York City last June. One part of that study consisted of a tabulation of the records of progress made by the children who entered at each age. In this study only the records of the children who started in the first grade and completed the eight grades were taken into consideration. The results are shown in the following table:

AGE AT ENTERING AND MONTHS REQUIRED TO COMPLETE EIGHT GRADES.

Age at entering.	No. of Children.	Median No. of Mo. to complete course.
5.....	1,521.....	.82
6.....	5,828.....	.81
7.....	2,936.....	.80
8.....	721.....	.79
9.....	142.....	.74
10.....	26.....	.69
11.....	9.....	.66
12.....	2.....	.63

"The lesson taught by the table is that children who enter school late make a little more rapid progress than do those who enter early, but that it is only a little more rapid. (The italics are ours). To state it another way, the lesson is that the child who enters late will not, as has been claimed, catch up

with the child who enters early. The figure which tells us how many over-age children there are in each lower grade is an important figure because it helps to tell us how many children are not going to be able to stay in school long enough to graduate.

"To summarize:retardation is a term used in educational economics to signify a condition and a result, not an explanation or a result. A retarded child is a child who is too old for the grade he is in. Why he is too old the term does not attempt to explain. Retardation is found to a greater or less extent in all school systems. Because of it half of the children who enter our city schools fail to graduate. Retardation as calculated by the age-in-grade standard has not been overstated. From Addresses and Proceedings of the National Educational Association for 1910,p.149 et. seq.

Our system of public schools, as at present organized into grades, is based upon certain fundamental theories which are, in the main, the result of long experience in the effort properly to train the young for the duties of mature life, and the plans carried out in Minnesota do not vary markedly from the plans usual to all parts of the country.

Briefly the plan for the elementary schools, that is the work considered necessary to prepare a child for entrance into the high school, is that children shall enter the schools at the age of six years, do a certain portion of the entire work in one year which is termed the first grade, then be promoted into the next grade called the second, and so on through eight years or grades of work. Entrance at the age of six is not compulsory but that is the legal entering age fixed by statute, and by well marked custom has become the usual entering age of children.

It is, of course, a familiar fact, that each year some children are not promoted in the public schools. That is, they are compelled to go over a certain portion of the established course of study for a second time, thereby becoming retarded in their progress through the grades.

Now the real basis of promotion is the course of study which the administrative authorities of the schools have established and which is, in short, nothing more or less than the amount of work prescribed to be done in each of the eight years of the elementary school. It prescribes the quantity of work to be done. The authorities likewise establish a quality standard for the work, or what is commonly termed the passing mark. Promotion and non-promotion or retardation are always relative to these two standards. The course of study itself is the result of complex influences emanating from the past, from the present, from the home, and in short from too many extra-schoolroom sources. Rarely, if ever, is it the product of careful experimentation, being worked out under the same surroundings and conditions under which it is to be applied.

For example: a superintendent from a cultured, old-settled community may go into a new lumber, prairie, or mining town, to take charge of the schools. The arranging of a course of study being left mainly, if not wholly, in his hands he at once applies his former course of study, without revision of any sort, to these widely different children, and then wonders at the poor results. How many superintendents could stand up and say they had prepared the course of study for the very children who were attempting to follow its requirements. We need more tailor-made courses of study and fewer ready-made ones.

We shall not attempt, either, within the scope of this

thesis, to discuss the subjects usually found in a course of study, either as to their values or why they are there, although both have a vital bearing, I am sure, upon this question, in its final analysis. It may be dogmatically asserted, however, that it should consist of such an amount of work that the average child for whom it was prepared could easily master it in the designated time, and all but a few could at least meet the minimum requirement in the same time.

If the average child can just comfortably carry the work required by the course of study for a given year than about an equal number ought to be able to accomplish more and become advanced. This is the mere expression of a hope, for in actual practice they do not, as our figures will show, to any great extent, while far more than the fair proportion fail to accomplish the required amount of work and drop behind, "repeaters" and thereafter retarded so long as they remain in school.

In whole systems of schools scarcely a child is in advance of the proper grade for his age. On the other hand, very many fail to keep up with their grades, drop back into the next lower one, and finally drop out of school, often early in the course, discouraged, to swell the great army of untrained workers who struggle from end to end of life for the means to maintain decent existence. From the school standpoint that is the very thing education hopes to prevent or at least mitigate.

It is with these sub-average children that we are concerned at this moment, and with the conditions that have to do with determining their unfortunate status. There are, of course, many factors that must be taken into consideration in any attempt to study the elusive problems of repeating and retardation, its cause, significance, and possible remedies.

As a preliminary matter, it is well to study some of the features of school organization and practice in Minnesota. Diversity or uniformity in these matters will affect our study and interpretation of retardation statistics. In order to make certain that the practices governing the entrance and promotion of children were fairly uniform some questions were addressed to the superintendents who furnished the data on which much of this thesis is based, and their answers are summarized below.

Regarding entrance: nine schools admit at five years of age; ten schools at five and one-half years or if six by Christmas or the end of the first semester. All others admit at six. Or to state it more simply: thirty one admit at six and twenty one at less than six years of age. The average entering age, then, of each child, if he entered at his earliest opportunity, would be considerably less than six years. We have, however, reckoned the entering age at six, giving the schools, as systems, the benefit of the doubt. And it might further be said that in all computations of percentages of children who are advanced, normal, or retarded the small fractions of percentages have been arbitrarily assigned to the column headed 'normal', again giving the doubt to the schools.

The claim is frequently made that many children enter school at an age greater than the minimum allowed by law. In the schools reporting there were 2,691 children in the first grade. How many were repeaters, unfortunately I do not know, but only 441 were above six years of age when they entered. From another investigation I ascertained that the average percentage of repeaters was 7.4. Assuming that to hold true for the first grade, then the number of repeaters among the ~~the~~ 2,691 first grade children we are studying, would be 199,

leaving 3,492 as the estimated number who entered for the first time into the first grade. The 441 over-age children at entrance would be 17.6% of this number while the 207 who entered before they were six would be 8.3% leaving as the net percentage who were over-age at entrance as 9.3. To further overcome this figure we must remember that many children who are nearly six are entered as being six by anxious parents, and they remain on the records as being slightly older all the time, than they really are.

Next, considering the standard required for passing from one grade to another we find surprising uniformity in the face of the fact that in Minnesota each school system is at liberty to fix its own requirements in these respects. In the grades below the high school, six schools promote on a basis of 70%, forty four on 75%, one on 80% and one on 85%. In general then, about 80% of these school systems require 75% as the passing mark.

The final marks are made up in all cases of both class work and examinations, and in the following proportions:

Class
Exams. Work.

In 35 schools	the two count	as follows.....	$1/3$	$2/3$
In 6	"	"	" $\frac{1}{4}$ $\frac{3}{4}$
In 3	"	"	" $\frac{1}{2}$ $\frac{1}{2}$

The next practice that might affect the amount of retardation is the question of how frequently promotions are made. The facts are very uniform: fifty two promote yearly, in June, two promote half-yearly, and one "when ready", whatever that means.

This rigid system of class marks, examinations, and annual promotions, while seemingly an essential part of the necessary system, so long as we are obliged to handle children in large masses, say forty to a teacher, would appear, offhand, to be the most serious obstacle to the easy progress of a pupil through the grades. And while at the present moment we are concerning ourselves with those who are retarded, there is another aspect of the question--that of the child of especial promise. Can he progress faster than a grade a year? I asked how many schools were in the habit of selecting for promotion whenever they were ready, such children. Forty five schools say that they do, often if not generally qualifying the statement with such words as 'seldom', 'rarely', etc. Eight schools say no. So much for the willingness of the schools to promote children individually, because it might be the means whereby retarded children would regain their lost place with their grade. The number of such promotions actually made is insignificant. Twenty one schools, the only ones making definite answers, did so promote only 166 children last year. Comparing this number with the number that failed of promotion at all, and you see there is little hope in this practice.

At this point I want to call attention to two practices common among superintendents which tend to conceal much of the real existing retardation. Neither one of them, so far as I can recall, have ever been mentioned in the literature of the subject. The first is the practice of arbitrarily promoting a child at the end of the second year in the grade, whether his work merits it or not. The repeating or retardation concealed by this practice is the very worst sort, namely, second-time repeating. Promoting this on sympathy forces the child through the grades whether he merits it or not. Akin to this is another

practice which has the same effect. It is the custom of promoting children "on trial", even if they do not quite meet the requirements of the class where for one reason or another they are permitted to remain. And need it be added that when once a child has been allowed to go on with the class he is rarely reduced to the grade below, no matter how poor his work? The causes which operated to place him above the grade he merited operate to keep him there.

The data in hand show 1612 children promoted on trial the year; and there are no figures to show how many were arbitrarily promoted at the end of the second year in the grade. But there can be no doubt that these two practices reduce materially the number of repeating and retarded children.

With this consideration of the problem itself, of the organization of the schools, and the circumstances tending to obscure the real amount of retardation, we next turn our attention to the data upon the question. To obtain this a questionnaire was sent to all the state high schools in Minnesota. The returns secured were good in quantity and quality and from schools sufficiently scattered to give fair representation to the conditions prevailing in all sections of the state, geographically, socially, and educationally. The largest four cities were purposely omitted to preserve unimpaired the essentially rural conditions governing the other returns.

The figures presented are those from fifty five high school systems, with 17,279 children in the grades below the high school. We shall deal only with grade children because in the high schools promotions are usually made by subjects and class or grade lines are to that extent broken down and therefore retardation in the usual sense of the term does not exist, or cannot be accurately computed.

The complete results of the investigation are given in Table A. Attention is called to the fact that the data was gathered in the fall and deals only with the children actually enrolled and in attendance. This makes the showing favorable to the schools, for some children who failed to win promotion in the spring, no doubt dropped out during the summer.

Retardation is computed upon the basis of entering at six and spending a single year in a grade and no more.

Table A.

Shows grade by grade, and by sex, the amount of retardation.

Gra- es.	Number Total.	Number		Percent					
		Boys.	Girls.	Retarded		Normal		Advanced	
				Boys.	Girls	B.	G	B.	G.
1	2691	1436	1255	38.7	33.6	63.8	59.0	7.5	7.4
2	2065	1096	969	54.0	41.1	37.8	47.2	8.2	11.7
3	2164	1134	1030	61.1	57.7	33.1	40.9	5.8	7.4
4	2268	1134	1134	65.9	56.1	28.3	35.5	5.9	8.4
5	2129	1109	1020	68.8	63.2	25.2	29.8	6.0	7.0
6	1944	977	967	73.3	67.7	21.0	25.0	5.3	8.0
7	1862	929	933	70.4	65.9	24.3	27.1	5.3	7.0
8	2007	886	1121	74.0	67.0	30.5	26.4	5.8	6.6
Total 17,279				Average..58.9.....		34.2.....		7.1....	

In examining this table you will note four things, mostly facts that are contrary to popular belief. First, the boys equal or exceed the girls in number in every grade up to the seventh where they fall only four behind. It is in or at the close of the seventh grade that the boy meets his decisive defeat. X

Secondly, the workings of the process of elimination can best be seen in the last three grades. Thirdly, and most important, the retardation begins heavily in the first grade and steadily increases grade by grade through the eighth, with the exception

of the slight downward drop of the curve in the seventh grade due probably to the rapid elimination at that critical point. Fourthly, the retardation of the boys is greater than that of the girls right from the start and remains so, grade by grade, varying from an excess of 5.1% in the first grade to 7% in the eighth grade.

The average percentage of retardation officially reported to exist in these schools, under their own standard of requirements, is 58.7%. When the course of study makes such requirements that only 41.3 % of the pupils can and do meet them, we have a curious state of affairs, where to be abnormal is the usual or normal state of matters.

The Ayres' standard of retardation.

In the investigations carried on by Leonard P. Ayres Ph.D. and published by the Russell Sage Foundation, children in the first grade are considered normal if they are under eight years of age. In the second grade ages under nine are normal, and so on through the grades. The reasons for thus allowing an extra year for each grade are not given. The text dismisses it by merely saying that these are the ages allotted to those grades by "common consent". But it certainly is not in accord with the practice as reported to me by the superintendents in Minnesota. Its effect is to conceal one year's retardation for each and every child during his progress through the grades, provided he entered at six years of age, and last year, as we have shown, only 441 children in these schools were over six years of age at the time of entrance.

See how Mr. Ayres' plan would work out. A child entering the first grade at six should be in the second grade at seven, the third grade at eight, and so on. Now suppose he fails to be promoted at the end of the first year and remains in the

first grade two years, repeating the work and surely retarded, yet his age when he enters the second grade would be only eight, and that by the Ayres method would be considered normal. It is clear then that by this method it is possible for every child in an entire school system to be retarded one year and yet for the system when tested by the Ayres method to appear absolutely free from retarded pupils. That is unsound.

The Joint Committee on Retardation and Statistics appointed by the Minnesota Superintendents' Association and the Minnesota Psychological Conference, of which the writer was a member, unanimously states its position thus:

"The Minnesota schools are organized on the assumption that all children enter the first grade at six years of age, and that children normal in body and mind will advance one grade each year. This is the theory supporting not only our state schools, but their entire administration, and the theory fixes a certain normal school age for all children in each successive grade. From the administrative point of view, the child of six is in his proper place in the first grade, the child of seven in the second grade, and so on until under the Minnesota plan of school organization, a child should begin his eighth grade work at fourteen and finish at fifteen. The child who does not enter the first grade till he is seven is already behind schedule and loses, as a result, a year or two of economically productive life, which, after all, is what the state would avoid in the theoretical organization of the schools.

"This retardation the committee designates as administrative retardation.

"It must be manifest, of course, that a report which shows the number of pupils too old for their respective grades will not indicate the number of mentally defective children in the schools. The number of over age pupils in any system of schools will always be larger than the number of feeble-minded.

For the sake of comparison the data in table A has been computed by the Ayres standard and is given in Table B. There the average percentage of retardation is 30.9. That is bad enough. This is really only, however, 52.6 % of the amount actually known to exist in these schools. The balance is concealed by the allowance of the extra year to the grades, for possible late entrants, who are too few to justify such an allowance.

Gra- des	Number.		Percentages.						
	Total.	Boys.	Girls.	Retarded. B.	Retarded. G.	Normal. B. G.	Advanced. B.	Advanced. G.	
1	2691	1436	1255	14.6	9.1	77.9	83.5	7.5	7.4
2	3065	1096	969	22.5	17.3	69.3	71.0	8.2	11.7
3	2164	1134	1030	30.8	20.8	63.6	71.8	5.2	7.4
4	2268	1134	1134	38.2	27.7	55.9	63.9	5.9	8.4
5	2129	1109	1020	44.2	34.8	49.8	58.2	6.0	7.0
6	1944	977	967	47.4	38.5	47.3	53.5	5.3	8.0
7	1862	929	953	44.2	36.3	50.5	56.4	5.3	7.0
8	2007	886	1121	45.3	39.5	49.2	53.9	5.8	6.6
Total....	17,279			30.9		62.0		7.1	

The characteristics of the table are, of course, exactly the same as for Table A. The only differences are in the percentages.

	No.	Minn.	Ayres.
1 The 55 cities of Table A.....	17,279	58.7	30.9
2 Forty-one graded schools.....	5,340	64.6	33.9
3 Four special cities in Minnesota.....	3,753	66.5	33.7
4 Fargo, North Dakota.....	2,087	55.6	24.9

The schools in item two above are those known technically as "graded schools". They are mostly small, ranging from four to six teachers as a rule; but they are inspected for state aid and are the schools from which the high schools of the state rise. The four special cities are not included in the fifty five given above, but are among the largest and best cities, by common reputation, in the state.

Repeaters.

Possibly one of the best ways to approach the question of retardation is to ascertain the number of repeaters in the system because about them there can be no question as to age at entrance or the proper age for each grade. Elimination will work confusion here as before; nothing can prevent that. But all the time we must bear in mind that the "repeaters" are only one year's contribution to the full army of retarded children.

In order to ascertain, at first hand, the amount of re-

peating in the schools of Minnesota, I sent out a printed questionnaire to all the superintendents in the state. Ninety-six, slightly less than one-half, replied promptly and with well-arranged data. The returns cover a total of 40,710 children in the grades of these schools. The number found to be repeating the work of their grade, and the per cent. of the total number of repeaters to be found in each grade is as follows:—

Grades	I	II	III	IV	V	VI	VII	VIII
Number	664	309	296	374	396	330	318	443
Per cent.	18.6	9.8	9.4	11.9	12.6	10.5	10.1	14.1

Also, 168 others were repeating the work for the second time

This is 7.4% of the total grade enrollment in the 96 school systems studied, but even this does not adequately measure the ground lost by pupils in these schools owing to the practices, to which I have previously called attention, of promoting "on trial" and also arbitrarily at the end of the second year, children who, measured by the same scale as the others, are really entitled to be repeaters.

We have some reliable figures from St. Paul upon this point for they have been studying the matter there with the practical view of modifying their administration and creating new types of schools to remove the evil so far as possible.

Superintendent Heester, of St. Paul, addressing the general session of the Minnesota Educational Association in 1909 said "One thousand, nine hundred thirty two children, almost two thousand, are just now going over a term's work for the second time". The grade enrollment was, at that time, in round numbers, 33,000. Therefore, 8.4% were repeating. This year the number of repeaters in St. Paul is 1,726 in the grades

Having studied the laggards in our Minnesota schools from two standpoints, it is interesting to note how strikingly the

results agree. We found the percentage of retardation to be 58.9 and that of the repeaters to be 7.4. Now, bearing in mind that the number of repeaters in merely one year's quota of the retarded ones, and multiplying the 7.4 by eight, the number of years in the grade course, we have 59.3 as the calculated number of laggards. The ascertained number is only .3 of one per cent. less than this. X

Causes.

The essential thing in a study of an unsatisfactory educational condition is to find out its causes in order to proceed rationally to discover and apply a remedy. There are two sources from which we might expect to derive information as to the causes of retardation. One is the teachers. The other is the children themselves. The former is the one most generally used and is the one we are to use. But the vital source is the retarded children themselves. In the last analysis, the true solution of the whole vast problem will come, if it ever does come, as the result of a widespread study of the causes from the viewpoint of the affected individuals. That will be a long, delicate and arduous task but the fruits will be rich. We must see the faults of the school system as the child whom it has failed to serve effectively sees it, and through his eyes. Then, seeing why he fails and getting his point of view we will be ready to adjust schools to his requirements. But at present we are not in a position to reach the solution of the question from that angle. So we resort to the easier though less effective one of finding out what the teachers believe to be the true causes of retardation.

The causes as given by the superintendents of these schools do not pretend to be based upon any special or scientific sifting of the question. They are the offhand statements of the

17% admitted by
date admission
59-175
42

heads of these schools, but even then they are very valuable, for these men are professional educators living in daily contact with this problem in its concrete manifestations, and it is their duty to study it all the time in the administration of their schools. For that reason high value should be attached to their opinions.

Several causes are usually given by each superintendent, to the causes are given below in the order of the highest number of times that they are mentioned by those reporting. The combined results, then, are as follows:—

Irregular attendance.....	26
Mental incapacity.....	24
Home conditions	23
Foreigners.....	10
Dislike for school work.....	9
Illness.....	9
From country schools.....	6
Poor teaching.....	5
Social pleasures.....	5
Lack of ambition.....	5
Laziness.....	4
Physical defects.....	4
Parochial schools.....	4
Lack of Application.....	4
Outside work.....	4
Malnutrition.....	3
No home occupations.....	3
Beer and tobacco.....	3
Poor school facilities.....	2
Shifting population.....	2
Rapid development.....	2

Immaturity.....	2
No home study.....	1
Skipping grades.....	1
Ill treatment.....	1
Bad habits.....	1

This will repay careful study. It has in it some things that are contrary to much of the arm-chair philosophy on the subject. The fact of foreign birth or the speaking of a foreign language in the home seems not to be a serious factor. The dicta of Dr. L.H. Gulick who says "retardation is not due to physical defects" and "over-age children have the fewest defects", are corroborated here. How much of this calls for medical treatment and how much for pedagogic treatment it is impossible to say. The economic condition of the home seems, likewise, to figure very little. It apparently resolves itself to a large extent into a moral question and one of home integrity at that.

It would seem that the principal causes of retardation are largely beyond the control of the school. Possibly schoolmen hesitate to place the blame upon the schools over which they hold control. But the fault with schoolmen is that they are usually too free to blame the schools and charge them with faults. The writer expressed himself in an article published in The Journal of the Minnesota State Medical Association upon this point as follows: "And if, perchance, you attend a teachers' association, or read the printed proceedings thereof, you will be impressed, I am sure, by the frank and fearless way in which the shortcomings, as well as the successes, of the schools are discussed, as to both matter and methods. What for? Simply to learn how to make them better, and thus render a larger social service".

The child, too, is scarcely responsible for 'mental incapacity' or 'home conditions' though he may be to a degree for irregular attendance. The extent of the time lost by non-attendance may be indicated by the statement that schoolmen consider 150 days out of the 180 days that schools are in session, a good average attendance for each child. That much loss is calculated for in arranging the course of study and planning promotion.

The money-cost of repeating.

Vast sums are lost to the country yearly because of repeating. We recognize that not every child who repeats represents a money loss for in a small system especially, he may be merely added to the number coming from the grade below and the only extra cost he will, in that case, represent will be the supplies used. But in the larger systems where new rooms are being opened constantly, half-day sessions held, new buildings erected, and where the plant is never quite adequate to care for the children, then and there the repeater because he spends one more year than he ought, in the schools adds one eighth of the total cost of educating him every time he repeats a grade. The exact cost can never be arrived at with mathematical exactness, but some calculations cannot fail to cast light on the enormous possibilities of the evil.

In fifty five large cities, studied by Ayres, with an average enrollment of 34,687 for each city, he found 15.4 of all the pupils to be repeating their work. He figures the cost of the repeaters to be \$13,705,464, to those cities. That is an average of \$43.92 per child. In St. Paul the estimated cost of repeaters for one year is \$67,000.

Our findings for Minnesota show a much smaller number of repeaters than do the large cities studied by Ayres, and that is

*Why 2 + 4
great value
retained only
7% more?*

to be expected because these are rural towns where the matter of education is less interfered with by the many distractions incident to city life.

Minnesota spends nearly \$15,000,000 annually on her schools. On the basis of 7.4% repeating this would mean a loss approximating \$1,110,000 yearly.

The latest report of the National Commissioner of Education shows a national expenditure of \$371,344,410 for the common schools. With a 7.4% loss the amount would be \$37,479,485

The next item is reduced from the 1907 report of the Minneapolis schools. There were, that year, 44,683 children in the schools. Of them 8,465 were repeaters. They cost the city the sum of \$258,647. That was 18.9% of the total expenditures. The social and economic loss.

And to this gigantic money-cost there are two things to be added. One is the moral and ethical loss suffered by the individuals who repeat; that is past human computation. We owe it to the children to ourselves, to society to prevent, if it be possible, such waste. We find, according to the location of the schools, from 7.4% to 15.4% of our boys and girls repeating the work of one year's preparation. That is, wasting one year of life. Boys furnish 13% more repeaters than do girls, according to the following table, taken from Laggards in Our Schools.

Number of Repeaters Among Boys and Girls in Fourteen Cities			
City	Year	Boys	Girls
1. Aurora.....	1907.....	156.....	155
2. Baltimore.....	1907.....	9,023.....	8,432
3. Boston.....	1906.....	5,991.....	5,030
4. Camden.....	1907.....	2,132.....	2,131
5. Columbus.....	1907.....	2,020.....	1,513
6. Decatur.....	1908.....	440.....	354

7. Erie.....	1901.....	1,065.....	961
8. Fort Wayne.....	1907.....	500.....	443
9. Kansas City, Mo.....	1908.....	4,247.....	3,814
10 Kingston, N.Y.....	1908.....	407.....	303
11 Los Angeles.....	1904.....	3,103.....	2,425
12 New Haven.....	1908.....	1,772.....	1,600
13 Trenton,.....	1904.....	1,083.....	1,005
14 Williamsport.....	1908.....	373.....	321

Total.....32,312.....28,487.

Total membership in elementary schools
141,240.....140,839

Per cent of repeaters.....32.8.....20.2

Now one of three things must happen. The repeaters must make up that lost year by extra work, which very few can or do do, or they must spend one extra year in completing the course, or they must drop out without fully completing the course, and in the latter two cases, handicapped to that extent, go to life's economic efforts. But whether poorly prepared or not, the year is lost. According to the report of the National Commission of Education for 1907 there were 17,061,963 pupils, urban and rural, in the school of the country. On the Minnesota basis of repeaters, 7.4% of that number is 1,262,585 pupils. On the Ayres basis of 15.4% the number would be 2,627,542 pupils. That is significant. Every year we lose in human energy the equivalent of from 1,262,585 to 2,627,542 years of work. Allowing thirty years to be the average working life of a man, then this loss equals the absolute perishing from the face of the earth of from 42,086 to 87,584 men annually. That is a serious drain upon the resources of the nation. It is more than a mere school problem. It becomes a national, economic problem of great magnitude.

Estimating roughly, Minnesota thus loses annually, in the time lost by her repeaters, an amount of time equal to the active working life of about 842 men on the 7.4% basis.

The figures showing cost in money and in time will vary according to the method of approaching the problem, but even these general and varying computations are sufficient to convince one that there is a crying necessity for such a study of the problem as may lead to changes that will amount to a remedy.

What are the schools doing to correct the evil. Practically nothing as yet. These evils are the product, or a by-product of the present system. Evidently there must be changes in the course of study and in the organization of the system. Some new solution must be worked out.

Some constructive remedies.

It is relatively easy to find out the extent of this evil; also to approximate its causes, but it is not so easy to suggest constructive remedies. And admittedly there must be a reasonable amount of experimentation in reaching a rational solution of the problem. But a few suggestions, looking toward a solution, may not be out of place.

First, There should be fewer children to a teacher, thus permitting more attention to the individual child.

Second, There should be more frequent promotions, making the course more flexible, so that there would be less time lost and less discouragement, in case of failure.

Third, There should be more ungraded rooms for children who are irregular in their work in the several subjects. It would be a benefit to the regular ones to have the irregular removed from the grade thus.

Fourth, There should be extra teachers, not in charge of rooms, to go from room to room to assist pupils with their difficulties, while the regular teacher is busy with recitations.

Fifth, There should be adequate medical and dental inspection, with work by municipal-paid physicians and nurses to follow it up.

Sixth, There should be better playgrounds and gymnasiums, with properly supervised activities.

Seventh, There should be better teachers, more imbued with the professional spirit, with keener sympathies and better preparation, who will awaken new life and interest in the pupils.

Eighth, There should be more men teachers for the boys. Not more boy teachers, but men with school and life experience; preferably married men with boys of their own. Men who know boys.

Ninth, A better truancy law on right principles, excusing from school attendance only when the course is completed and not when a certain AGE is reached. The enforcement of this law should be compulsory, under penalty.

Tenth, There should be a better adaptation of the course of study to the needs and capacities and tastes of the children. Work so difficult, so uninteresting, with passing standards so high as to promote failure and discouragement are really, at bottom, low and vicious standards. Further, such readjustment of the course of study ought to be taking place constantly, year by year, such revision constituting one of the superintendents most important duties.

Eleventh, More time should be given to the assignment of the lesson, showing more in detail what is important, and what is less so, and indicating what will be expected in the next lesson.

There should be more TEACHING and less HEARING OF RECITATIONS.

Twelfth, Pupils should be taught; not subjects. That is, teachers should change their point of view in the recitation, in which the child and not the subject is the center of effort. Thirteenth, The study period should follow the recitation period and not precede it. The time to prepare a fresh lesson is just after the inspiration of the class recitation and discussion, and not just before the class is called out. We all feel like doing a thing immediately after seeing how some one else does it.

By calling the attention of the parents and teachers to the elements of this problem, by applying some, not all, of the above remedies in the schools of which I have charge, we were enabled in one year to reduce the number of retarded children fourteen percent. ~