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ISSUED BY THE
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SCHOOL STORY No. 10.

Boys and girls in the mass
may not be interesting to some unfortunate people

But nearly every one
has the capacity for being interested
in some boy or girl.

**In education the only way to do justice to
the mass is to consider the individual.**

In its 1915 report, the Board of Education considered the ages of some 60,000 individual children in relation to the grades in which they found themselves. This very consideration of the children one by one, even from the one viewpoint, must have done great good and affords its own justification. A by-product of this study was a classification of all the children in the public schools by age and grade. This the Board presents to the public school supporters of Toronto on pages 32 and 35 of its report. This classification affords at once an indication of a progressive spirit and also a measuring stick by which the intelligent and interested layman may measure school progress from one important angle. A comparison of these tables from year to year will provide ocular and indisputable evidence of the gradual decrease in the number of children too old for their grades.

**WILL YOU SHOW YOUR APPRECIATION OF THIS INFORMATION,
SUPPLIED FOR THE FIRST TIME TO THE CITIZENS OF TORONTO,
BY READING THE FIRST 46 PAGES OF THE 1915 REPORT?**

PAGES 30 TO 46 ARE PARTICULARLY FULL OF MEAT.

The salvation of Canada in the period of reconstruction which must follow the war will depend mainly on how our publicly-supported schools of all types handle the human material committed to their charge. The day of the irresponsible, heaven-sent expert is past. The day of co-operation between informed citizens and trained and experienced specialists in charge of public departments is at hand. Your co-operation is needed in public education, at least to the extent of studying and forming judgments regarding its methods and needs. The following pages contain nothing very striking but we believe that a reading of them will bring good returns on your time investment.

The Bureau of Municipal Research has been advised that it is too much to expect that anyone will read a pamphlet as long as the present and not dealing with dollars and cents. *We do not believe it. So we are sending it to you.*

Unnecessarily slow progress through the grades one cause of the large numbers of children who are old for their grades.

The speed at which children can run varies with the individual child. It is not always the fault of the child that he cannot run as fast as others. Yet we have standards for measuring their speeds. By putting children into speed groups as the result of measurements great results in increasing speed, without hurting the children, have been attained.

So in school work some children make rapid progress, some normal progress, and some slow progress. A given child may not deserve credit for rapid progress or blame for slow progress. Some indeed should not try to increase their progress. Nevertheless, measurements of rates of progress enable educators to put children into groups where the individual differences are not so great as to dishearten children on the one hand, or overstimulate them on the other. It enables the child, within limits, to find his natural gait. No matter how slow the gait, if it be natural, no time is lost. Progress is continuous. By trying to go faster than a natural gait progress may absolutely stop.

If a man goes just a little faster than a moving train he will catch it. If he is opposite the train and moving as fast, he can jump on any time. But if he is going slower than the train he doesn't catch it at all. So a child put in a class which is going more rapidly than he, may get practically nothing of the work. He may even go over the same work several years and make no progress. Indeed he may progress backward, becoming careless, unambitious and dull. Any child who doesn't go as rapidly as the laws of his physical and mental nature demand is retarded even if he does eight years' work in seven years. He has suffered a permanent loss. Society has suffered a permanent loss. It is believed by many thinking men that in many school systems where the various classes are large and heterogenous and where the children are taught entirely as classes and not as individuals, or as groups of similar individuals, that practically every child is retarded using the possible and desirable attainment of each child as a standard. And this is the only absolutely true standard. For example, if a teacher has an ordinary group of 40 children varying greatly in ability, she may teach so as to suit the

rate to the slowest or to the fastest or to the average child. If to the slowest, all the rest of the class falls short of the highest success. Their minds tend to become flaccid. Habits of inattention and listlessness flourish. If the class gait be adjusted to the most rapid, the rest of the class is relegated to the "also rans," to their lasting hurt, through loss of self-respect, energy, and initiative. If the mythical average child sets the pace, the middle is played against both ends, and the middle wins. Of course, at the present stage of school organization treating each child absolutely as an individual would be impossible even if it were desirable. In life men work in groups. **In school they should learn to work in groups. If they are to work and not loaf in groups, the groups must be such as to be capable of moving as a unit or approximately so.** Courses of study, equipment and teaching force being as they should be, expert classification is the usual remedy for retardation.

Those interested in ending the evils of retardation are not actuated by a desire to shove children through the course so that they can get to work as soon as possible, regardless of the demands of healthy and happy childhood. They are not hard-hearted, dry-as-dust machines. They do not think of children as occupants of pigeon-holes. Such characterizations might better be bestowed on champions of the factory system of education whereby children are taken in by thousands, unstandardized, at one end of the machine, and ground out by hundreds, standardized, at the other end of the machine, numbers of children dropping through the chinks in the creaking joints all along the line in various stages of discouragement and social inefficiency.

Those interested in studying, measuring and fighting retardation, meaning by that term unnecessarily slow progress of children in school work, are actuated by the very humanitarian motive of securing to children their inalienable birthright of an opportunity of living up to their highest possibilities. By calling attention of teachers, supervisors, and inspectors to individual differences, **measurements HELP to secure this birthright** to the children. By collating these measurements and adopting a standard of promotion based on the most prevailing type, or the type which, under suitable conditions, can be made prevailing, a measuring stick is set up by which educational leaders and interested citizens—many of whom have had training and education sufficient at least to appreciate results—can measure the progress made from year to year in the

saving of child effort, child energy and child power. The retardation so measured is not absolute retardation, based on the law of progress of the individual child, but only comparative retardation, based on the law of progress of the most typical child. As a pointer to encourage or warn us, however, such a relative standard is of immense value. Some will always remain slow, some bright children will always have to be restrained rather than urged; but the relative decrease in the numbers of slow progress children and the relative increase of normal and rapid progress children has been the universal experience of all communities which have attempted to think of the problem as a definite community problem. Teachers alone cannot solve it. Supervising officers alone cannot solve it. The community of Toronto can solve it through the co-operation of school, home, governing boards, the children and the working adult world.

If our analysis of certain figures appearing in the 1915 Report of the Board of Education is correct, during the school year 1915-16 the Toronto Public Schools made an extremely successful fight, at least in some sections, against the waste that comes from retardation.

In the absence of certain explanatory information, we can make no positive statement, but a comparison of the membership by grades in June, 1916, before promotions, and September, 1916, after promotions, shows that relatively the aggregate membership of the first five grades has decreased, and that of the last three grades has increased.

Out of every thousand children in school the membership by grades was as follows:

| | IN JUNE before promotion | IN SEPTEMBER after promotion |
|-----------------|-----------------------------|---------------------------------|
| Junior I..... | 214 | 214 |
| Senior I..... | 146 | 139 |
| Junior II..... | 140 | 132 |
| Senior II..... | 121 | 123 |
| Junior III..... | 143 | 131 |
| Senior III..... | 106 | 107 |
| Junior IV..... | 76 | 87 |
| Senior IV..... | 54 | 67 |
| | 1000 | 1000 |

Or on the basis of 100 children in the Junior 1st, the membership was:

| | IN JUNE | IN SEPTEMBER |
|------------------|---------|--------------|
| Junior I. | 100 | 100 |
| Senior I. | 68 | 65 |
| Junior II. | 65 | 62 |
| Senior II. | 57 | 58 |
| Junior III. | 67 | 61 |
| Senior III. | 50 | 50 |
| Junior IV. | 35 | 41 |
| Senior IV. | 25 | 31 |

These figures do not mean, of course, that the difference between the membership in the first and last grades is explained by children leaving school. Many factors operate. It does mean, however, that whereas, in June, the last grade contained one-fourth as many pupils as the first, in September it contained almost one-third as many. This is in spite of the fact that in a city where child population is growing, the tendency is for the first grades to outnumber the last, irrespective of dropping out. Again, there were undoubtedly promotions throughout the year so that a comparison between the memberships in September, 1915, and September, 1916, would have shown still greater progress in stimulating promotion in the lower grades, thus decreasing their relative membership, and in sending on children to and within the upper grades, thus discouraging dropping out and increasing the relative membership of the upper grades.

It is true that in the first case the numbers are taken after most of the dropping out through the year has taken place, and that in the second place the numbers are taken before dropping out has set in. This may explain a considerable portion of the difference, but several passages in the official report allow little room for doubt that a notable achievement has been made by the Board of Education. No one can estimate what the ultimate saving in human efficiency will be if the present movement is carried out to the limit of its possibilities.

How many children are over-age, of normal age, or under age for their grades, in the public schools in Toronto?

This depends on the standard chosen. An ideal standard, but one entirely possible of realization, is set up by implication in the 1913 Report of the Board of Education, page 40 (see page 10 of this pamphlet). This has the advantage of offering a high mark at which to aim. Another standard sometimes chosen is based on average ages. Like most averages, when dealing with human beings, age averages are fallacious as a standard and have been abandoned by educationists, other than as an indication of the general trend. Such a standard at most would indicate only actual not desirable or obtainable conditions. As conditions improved average ages would go down, so that the amount of decrease in over-age children would not be indicated by comparison with the standard. In fact, average age standards might indicate worse conditions while actually improved conditions obtained. Again, there may be no actual children who are of just the average age. All may be over it or under it. If one man is 5 feet high, another 5 feet 9 inches, and another 6 feet, their average height would be 5 feet 7 inches, and yet none of the three would be of that height. The average would apply to nobody.

A third standard is that of the prevailing type. This is arrived at by finding out what age group is most numerous in any grade. It may vary from year to year, but its variation is apt to be slow. At any rate, by accepting the present facts as a fixed standard, progress in cutting down over-age can be measured unflinchingly. Such a standard represents results actually attained under present conditions by a group of actual children—and that the largest group. Further, it represents a group which can reasonably be expected to increase with careful attention to individuals. This standard we apply, in Chart I., to the age-grade table taken from page 35 of the Chief Inspector's report. Obviously the ideal standard cannot be used here accurately, as the length of time which should be necessary to complete the work of the various grades varies from one-half a school year to a whole school year, so that the time for beginning a grade might come in the middle of a year.

Assuming that a child is eight years of age until he is nine and so on, the following are the three possible standards for measuring over-age when children begin school in September:

| GRADES | Normal ages for BEGINNING each grade according to | | |
|---------------|--|---|--|
| | Standard of average age according to 1915 Report (page 35) | Ideal standard indicated by 1913 Report (page 40) | Standard of prevailing types as shown by 1915 Report |
| Junior 1..... | 7 (7 $\frac{1}{3}$) | 7 (7 $\frac{1}{2}$) | 6—7 |
| Senior 1..... | 8 (8 $\frac{1}{2}$) | 8 (8 $\frac{1}{2}$) | 7—8 |
| Junior 2..... | 9 (9 $\frac{7}{12}$) | 9 (9) | 8—9 |
| Senior 2..... | 10 (10 $\frac{1}{3}$) | 9 (9 $\frac{1}{2}$) | 9—10 |
| Junior 3..... | 11 (11 $\frac{1}{3}$) | 10 (10) | 10—11 |
| Senior 3..... | 12 (12 $\frac{1}{6}$) | 11 (11) | 11—12 |
| Junior 4..... | 12 (12 $\frac{3}{4}$) | 12 (12) | 12—13 |
| Senior 4..... | 13 (13 $\frac{7}{12}$) | 13 (13) | 13—14 |

For the purpose of this analysis, the numbers within the heavy rectangles, in Chart I. opposite, represent children of normal age, the numbers to the left of these represent children who are younger than the standard for their grades, and the numbers to the right represent the children who are old for their grades. As will be readily seen, the heavy rectangles enclose, for each grade, the two most numerous age groups so that a range of two years is allowed for children of normal age. This is an extremely generous allowance, but is the usual practice, until a definite standard is officially adopted. The younger age group within the heavy rectangles is so numerous that it cannot be regarded as under-age and probably represents the possible standard of accomplishment for the greatest number of children. The experience of other communities and the judgment of many Toronto educators tend to confirm this.

CHART I.

DISTRIBUTION OF CHILDREN IN TORONTO PUBLIC SCHOOLS ACCORDING TO AGES AND GRADES OF SEPTEMBER 1916

(Using the standard of prevailing types)

| GRADE | 4 Yrs. | 5 Yrs. | 6 Yrs. | 7 Yrs. | 8 Yrs. | 9 Yrs. | 10 Yrs. | 11 Yrs. | 12 Yrs. | 13 Yrs. | 14 Yrs. | 15 Yrs. | 16 Yrs. | 17 Yrs. | 18 Yrs. | 19 Yrs. | 20 Yrs. | TOTAL |
|----------|--------|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|---------|---------|---------|---------|---------|---------|--------|
| Junior 1 | 2 | 302 | 4,064 | 4,503 | 1,642 | 365 | 80 | 20 | 13 | 4 | 2 | 1 | — | — | — | — | — | 10,998 |
| Senior 1 | — | 1 | 129 | 1,969 | 3,012 | 1,402 | 428 | 132 | 49 | 11 | 3 | — | — | — | — | — | — | 7,136 |
| Junior 2 | — | — | 3 | 301 | 1,975 | 2,343 | 1,328 | 509 | 241 | 80 | 17 | — | — | — | 1 | — | — | 6,798 |
| Senior 2 | — | — | — | 44 | 658 | 1,855 | 1,865 | 1,156 | 534 | 193 | 40 | 1 | — | — | — | — | — | 6,346 |
| Junior 3 | — | — | — | 3 | 90 | 796 | 1,822 | 1,844 | 1,368 | 683 | 123 | 19 | 6 | — | — | — | — | 6,754 |
| Senior 3 | — | — | — | — | 2 | 123 | 680 | 1,518 | 1,678 | 1,149 | 265 | 50 | 9 | — | — | — | — | 5,474 |
| Junior 4 | — | — | — | — | — | 13 | 190 | 837 | 1,418 | 1,352 | 509 | 141 | 16 | 2 | — | — | — | 4,478 |
| Senior 4 | — | — | — | — | — | — | 17 | 208 | 713 | 1,253 | 882 | 327 | 52 | 6 | 1 | — | 1 | 3,460 |
| TOTALS | 2 | 303 | 4,196 | 6,820 | 7,379 | 6,897 | 6,410 | 6,224 | 6,014 | 4,725 | 1,841 | 539 | 83 | 8 | 2 | 0 | 1 | 51,444 |

CHART II.

Chart I. is summarized below :

| GRADE | No. of children young for their grade | No. of children normal age for their grade | No. of children old for their grade | TOTAL |
|---------------|---------------------------------------|--|-------------------------------------|---------------|
| Junior 1..... | 304 | 8,567 | 2,127 | 10,998 |
| Senior 1..... | 130 | 4,981 | 2,025 | 7,136 |
| Junior 2..... | 304 | 4,318 | 2,176 | 6,798 |
| Senior 2..... | 702 | 3,720 | 1,924 | 6,346 |
| Junior 3..... | 889 | 3,666 | 2,199 | 6,754 |
| Senior 3..... | 805 | 3,196 | 1,473 | 5,474 |
| Junior 4..... | 1,040 | 2,770 | 668 | 4,478 |
| Senior 4..... | 938 | 2,135 | 387 | 3,460 |
| TOTALS | 5,112 | 33,353 | 12,979 | 51,444 |

Below is a table showing the percentage of over-age children in the various grades according to three standards. The third standard is probably the most correct at present, and is certainly most typical of general conditions. The second is theoretically a more perfect and a more exacting standard, but the starred numbers in the second column are undoubtedly inaccurate, the first being too small and the second too large. This irregularity will be removed when the work of the public school course is arranged so as to make all grades practically equal from the standpoint of the time required to complete them satisfactorily.

| GRADES | Percentage of children over the age standard for their grades | | |
|---------------|---|---|----------------------------|
| | By the average age standard. | By the ideal standard indicated by the 1913 Report. | By the "typical" standard. |
| Junior 1..... | 19.3% | 19.3% | 19.3% |
| Senior 1..... | 28.4 | 28.4 | 28.4 |
| Junior 2..... | 32.0 | 32.0* | 32.0 |
| Senior 2..... | 30.3 | 59.7* | 30.3 |
| Junior 3..... | 32.5 | 59.8 | 32.5 |
| Senior 3..... | 26.9 | 57.6 | 26.9 |
| Junior 4..... | 45.1 | 45.1 | 14.9 |
| Senior 4..... | 36.7 | 36.7 | 11.2 |

Note that by all standards the percentage of over-age children increases up to and including the Junior Third, and by the second and third standards decreases from then on. These phenomena are practically universal, though in varying degrees. The reduction in over-age in the upper grades is undoubtedly largely due to the dropping out of over-age children in these grades through discouragement, lack of interest or economic necessity. The average age standard is unreliable here as in other cases.

This paper has dealt with the number of children in the Toronto public schools who are above normal ages for their grades. One of the causes of over-age is late entrance of children into school work. This the schools cannot help. The other chief cause of over-age is slow progress through the grades, called technically "retardation." Some of this can be helped. Some cannot. The next paper will review what the 1915 Report of the Board of Education tells us specifically about retardation.