ANALYSIS OF AGE-GRADE AND OTHER INDICES OF
PUPIL PROGRESS IN THE PRIMARY GRADES

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ANALYSIS OF AGE-GRADE AND OTHER INDICES OF
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CHAPTER I

INTRODUCTION

There was a time when the school administrators thought of standards of promotion and of the expense of educating the retarded rather than of the ill effects of non-promotion upon the individual. Time has changed this philosophy, and now the psychological effects of retardation upon the retarded are being studied. Promotion policies are being amended or changed so that the child may have a feeling of security from the beginning to the end of his school career.

Since about 1850 the American system of elementary education has evolved into an institution in which the work of each year is called a grade, and pupils are segregated into classes according to their ages and attainment.\(^1\) When the schools were organized, the graded plan was thought to be the most efficient and the most economical way of educating large groups of children. The graded schools were planned so that a child would spend a year in each grade, and while there would gain sufficient knowledge of the tool subjects to be able to grasp the work of the next higher grade.

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\(^1\)Henry J. Otto, Elementary School Organization and Administration, p. 34.
The basic purpose of the organization was to teach subject matter. The interests, needs, and individual differences of the child were overlooked. Many children could not conform to this type of education and did not progress according to age-grade standards; consequently, there are many grades with maladjusted and over-age children.

Statement of Problem

The problem set forth in this study is to determine the causes of delay in school progress in the Bowie, Texas, elementary schools, and in which grade or grades the delay occurs.

Purpose of Study

The purpose of this study was three-fold. The first purpose was to establish measures or indices of age-grade and grade-progress distribution of the first, second, third, and fourth grades of the Bowie, Texas, elementary schools. The second purpose was to determine factors which have contributed to grade progress. Some of these factors are as follows: age at entrance, mental ability, school attendance, socio-economic status, and changing schools. The third purpose was to propose remedial procedure to eliminate retardation.

Limitations

This analysis was limited to a study of the census, accumulative, and anecdotal records of the children enrolled in
the first, second, third, and fourth grades of the Bowie, Texas, elementary schools for the 1948-1949 term of nine school months.

Definition of Terms

Most of the terms employed in this study retain their most commonly accepted meanings; however, a few require some explanation.

Grade.—Children who are segregated according to their ages and attainment and are directed by a teacher.

Normal progress.—Is applied to the pupils who have made one grade per year.

Slow progress.—Describes the pupils who are required to repeat a grade one or more times.

Promotion.—Is the passing of a pupil from the grade in which he is enrolled to the next higher grade.

Failure.—Means non-promotion.

Retardation.—Is the accumulation of non-promotions.

Chronological age.—Shows the number of years and months a child has lived.

Mental age.—Shows the level of mental development that the child has reached at a given time.

Intelligence quotient.—Is the ratio of mental age to the chronological age.

Over-age.—A term that refers to chronological age which is greater than the normal age for the grade.
Under-age.--The chronological age which is less than
the normal age for the grade.

Attendance.--Is the actual number of days a child at-
tended school.

Source of Material

A study was made of books, periodicals, and bulletins
which deal with the topic under discussion. Data were ob-
tained from teachers daily registers, and from accumulative,
anecdotal, and progress records of pupils.

Method of Procedure

This study was made possible with the help of the super-
intendent of schools, the principals, and eight teachers.
Early in the term plans were made to keep anecdotal records
of the retarded children, and to give tests to all children
in the first, second, third, and fourth grades. Some tests
were to be given at the beginning of the term, others at or
near the close of the term.

Readiness and personality tests were given to all first-
grade pupils at the beginning of the fifth month of school.
Achievement and intelligence tests were given during the
ninth month of the term. Personality, intelligence, and
achievement tests were given to all second, third, and
fourth-grade pupils during the ninth month of school. The
tests given in this experiment were the standard ones
generally accepted for use in measuring readiness, personality, achievement, and intelligence. The scores of each test were compiled, tabulated by grades, and compared with previous standard test scores. The scores made by the retarded pupils are used in this study.

Conferences were held with each child who had been retarded, and his reactions noted. Parents were asked to these conferences, and three of these parents came. Records were studied. Comparisons were made to determine the degree of improvement, if any, in the work of the pupils who had repeated grades.

Related Studies

There have been a number of investigations in the study of progress and elimination of school children which indicates that there is a growing interest among school administrators in this area.

Fred C. Ayer says:

The problem of the proper and orderly progress of elementary school children has become the central one of public school administrators.²

A much earlier study than this one by Ayer was made by an educator interested in establishing measures of progress

¹Metropolitan Readiness Test; California Test of Personality, Primary Grades; Metropolitan Achievement, Primary I, Form T; Kuhlmann-Anderson Intelligence Test.

of school children. Superintendent W. T. Harris of Saint Louis reported his findings before 1904.

In another early report,

Dr. William H. Maxwell, City Superintendent of Schools of New York, called attention to the fact that a large number of pupils (thirty-nine per cent in the elementary grades) were shown by his tables to be above the normal age for the grades they were in . . . . Concerning the condition thus disclosed there has been much discussion, and more than one school evil has been unhesitatingly labeled a consequence of "retardation."3

Several years later Leonard P. Ayres published a comprehensive investigation under the title Laggards in Our Schools. It is a study of age-grade indices and progress of pupils in school. One of his chief concerns is to discover "whether it is true that our school systems have on the whole been so planned that they fit the abilities of the average child."4

In a study made in the Iowa public elementary schools, Gustaf Freden found in conclusion:

The administrators and teachers of the Iowa public elementary schools should be more alert to the pupil progress situation in their respective schools.5

Odell suggests that the "traditional age-grade table as well as certain indices may be helpful to an administrator

3Hollis L. Caswell, Non-Promotion in Elementary Schools, p. 1.
4Leonard P. Ayres, Laggards in Our Schools, pp. 1-10.
5Gustaf Freden, "Age-Grade and Progress Indices for the Public Schools of Iowa," University of Iowa Studies in Education, IV, No. 2, 44.
in the study of existing conditions or occasionally even in comparing his system with another."  

Another study in pupil progress was made by Keyes. He attempted to ascertain the effect of age at entrance, school absence, per cent of pupils from non-English speaking homes, and the average deportment for six-year-old children upon the progress of the pupils. In regard to recent survey practices of pupil progress, the general opinion is that there are many undesirable features which school systems are struggling to correct, and the most extensive efforts at reorganization are being made in the primary grades.


CHAPTER II

REVIEW OF LITERATURE PERTAINING TO THE STUDY
OF PUPIL PROGRESS

Introduction

"In a DEMOCRACY the State is charged with the responsibility of providing opportunities for all children capable of receiving instruction."¹ From the founding of the first permanent English settlement in America, education has been regarded as the bulwark of a democratic government.² Hence, education is not only the most important business in the state, but it is also the largest business of the state. Every business must be properly administered in order that it pay dividends. Businesses must all have inventories; so it is with education.

Previous Studies of Pupil Progress

The early studies of pupil accounting were devoted largely to a consideration of the eliminated pupil rather than to the progress of the pupil remaining in school.

¹Winifred Hathaway, Education and Health of the Partially Seeing Child, p. 1.

Ayres contributed the first comprehensive analysis of the progress of children from grade to grade. He found the following facts in the 1908-1909 study:

a. The rate of non-promotion varied from ten per cent to thirty-four per cent.
b. The average rate of non-promotion for all grades was sixteen per cent.
c. The rate of non-promotion was significantly higher in the first grade than in the other grades.
d. The rate of non-promotion was significantly higher for boys than for girls.

In a more recent, but less extensive, study McPherson found that "the boys were not mitigated against, nor were the girls favored enough by the teacher to be significant."

Again an early survey of New York, made by Bachman, reveals the following:

a. The rate of non-promotion was approximately eleven per cent.
b. The rate of non-promotion was significantly higher in Grade I than in the other grades.
c. The rate of non-promotion was higher for boys than for girls.

Berry studied pupil progress in 225 towns and cities in Michigan in 1915-1916 and discovered the following:

a. The rate of non-promotion for the state as a whole was 9.14 per cent.
b. The first grade had a larger percentage of repeaters than other grades.

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3Leonard P. Ayres, Laggards in Our Schools.
4Ibid., pp. 73-88.
5Pat Clark McPherson, Achievement Test Results and Teacher's Ratings, p. 45.
6Frank P. Bachman, Problems in Elementary School Administration, p. 68.
c. In each grade a larger per cent of boys than girls was required to repeat the grade.  

Cooper reports the progress status of 832 first-grade pupils in Delaware rural schools and determined the educational progress of these pupils eight years later. The shocking facts are as follows:

a. One out of every two 1915 entrants spent their first two years in school in Grade I, while one out of every eight spent the first three years in Grade I.

b. One 1915 entrant out of every twenty made rapid progress; one out of every four made normal progress; and seven out of every ten made slow progress.

c. The 1915 entrants in Grade I at less than six years of age made slower progress than any other entering age-group. Seven out of every ten spent the first two years in Grade I, and only two out of every ten were able to complete eight grades of school work in an eight-year period.

d. Grade I was responsible for forty-eight per cent of the non-progress found in the rural schools of Delaware.

Otto reported on promotion policies and pupil progress in the elementary schools of northern Illinois. The data were obtained from twenty annual promotion and fifteen semi-annual promotion schools. This study included 53,780 pupils enrolled in the first eight grades during the term. As in

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8Herman Cooper, "An Accounting of Progress and Attendance of Rural School Children in Delaware," Contributions to Education, No. 422, Teachers College, Columbia University, 1930, p. 46.

other similar studies, the first grade had the highest percentage of non-promotion. About twice as many first-grade children were retained as were retained in other grades. Non-promotion was shown to be confined chiefly to the primary grades, since there were comparatively few repetitions above the fourth grade.

Otto found that non-promotion takes its largest toll in the primary grades and that it is not uncommon for twenty or thirty per cent of first-grade children to be asked to repeat the grade at least once.¹⁰

Ayer concluded in his survey of the primary grades in 1932 the significant discovery that "the six-year-old pupils have made as rapid progress in the first two grades as the seven-year-old pupils."¹¹

This was the first and probably the earliest data that could be obtained after the enactment of the state law permitting entrance at the age of six years into the Texas public schools.

Causes of Age-Grade Distribution

Generalizations on a national basis of age-grade and grade-progress status would be unwise. Circumstances and

¹⁰ Ibid., p. 213.
practice differ too greatly from one part of the country to another to gather scattered regional data into statistical summarizations.12

It is safe, however, to name three factors that cause age-grade distribution: (1) the factor of population; (2) the factor of retardation; and (3) the factor of elimination.

There are two elements that are considered in the factor of population—that of death and that of increase or decrease of birth rate. Other factors may and undoubtedly do affect the size of grades in certain cases and localities, but are local and irregular in their influence on population. Population is not stationary, for the birth rate exceeds the death rate.

According to the Bureau of the Census report on vital statistics for 1940, the mortality of white boys one to four years of age was sixteen per cent higher than that of the white girls of the same age and race. Among white boys five to fourteen years of age, the death rates are 1.2 boys, and 0.8 girls per 1,000, respectively. In this age group the mortality rate of white boys is about fifty per cent higher than that of girls of the same race and age.13 A measure of

12 Henry J. Otto, Elementary School Organization and Administration, p. 213.

permanence of school population has been obtained by calculating the per cent of pupils in the highest grade of both elementary and high school who have spent their school careers in the same system. 14

The second factor in distribution is that of retardation. Like the factor of population, the incidence of retardation varies greatly in different regions, states, cities, and even in schools within the same district.

In Caswell's study, data involving the records of 2,250,000 school children in seven states during the years 1927 to 1932 show that the amount of non-promotion in elementary schools varies from four and nine-tenths per cent in Utah to sixteen and seven-tenths per cent in Virginia. The median non-promotion was found in Maryland with thirteen and seven-tenths per cent. 15 This study embraced only seven states. The high, low, and median might have been quite different had all states been included in the study.

In the thirty-seven cities studied by Caswell, non-promotion varies from two and three-tenths per cent in Long Beach, California, to sixteen and seven-tenths per cent in Nashville, Tennessee, with the median falling about eight


15 Caswell, op. cit., pp. 6-25.
per cent. In the table showing the results of non-promotion in cities, there is a slight suggestion of a regional difference. Eight out of ten cities showing the lowest rates of non-promotion involved are located west of the Mississippi River, and seven of the ten cities showing the highest percentage of non-promotion are in the eastern part of the country.16

The incidence of non-promotion varies among schools in the same city. Out of fifteen cities reported, one of New York City's 561 elementary schools failed thirty-two per cent more pupils than did another school. In Alhambra, California, with nine schools, there was a range of only four and eight-tenths per cent between the school with the smallest and the school with the largest percentage of non-promotion. Non-promotion percentages also vary from grade to grade. The schools reporting by half grades showed fifteen per cent non-promotion for grade 1B, ten per cent for 1A and 2B, and a range of from four to seven per cent for the remaining grades.17

Another factor in grade distribution is that of elimination. The elements causing elimination are many, but two factors usually determine whether a pupil will remain in school. These, as given by Reeder, are as follows:

16 Ibid., p. 25. 17 Ibid., p. 28.
1. The extent of interest, or the lack of interest in school on the part of the pupil
2. The economic status of the pupil and his family

Reeder expresses the opinion that the "holding power" of the schools has increased rapidly since 1870, at which time only two thirds of the children between the ages of five and seventeen inclusive, were enrolled in school, and at present nine tenths of the children of these ages are enrolled.

A 1947 study by Fine, Our Children Are Cheated, gives some startling facts about elimination in the schools. The seriousness of the matter of elimination is shown by the report that sixty per cent of our population over twenty-five years of age has only an eighth-grade education or less. This should cause deep concern among all intelligent American people, for the American ideal is that every person is entitled, even obligated, to secure all the education which his potentialities enable him to secure.

Factors Causing Retardation

Many alleged causes of or reasons for non-promotion of pupils have been given by administrators and teachers. It is generally agreed that promotion in the primary grades is

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18 Reeder, op. cit., p. 523.
19 Ibid., p. 339.
20 Benjamin Fine, Our Children Are Cheated, pp. 123-125.
dependent upon the ability of the pupil to achieve in reading. In the intermediate grades a broader field of achievement, including arithmetic, English, reading, and the social studies, is looked upon as essential to promotion. In a great number of discussions of non-promotions, reasons for failure to achieve academically are listed in what various authors consider the order of their importance. There is lack of agreement among writers as to what items should be listed as causes of failure, as well as to the relative importance of these items. Some of the items appearing on most lists are low mentality, irregular attendance, lack of maturity, poor health, retarded physical development, defective vision, hearing and speech defects, socio-economic conditions in the home, psychological maladjustment, poor teaching techniques, subject matter not suited to the child, changing schools, overcrowded classrooms, too young when entering the first grade, lack of ability to speak the English language, and insufficient sleep, food, and rest. In fact, the list of causes of failure is inexhaustible. In this connection Chambers says that "lack of interest causes most failures, and this indifference can be traced to poor teaching techniques." 21

The causes of non-promotion are many. The reasons assigned by pupils and teachers have been studied

21 Max Chambers, "What Causes Failure?" School Executive, LXV (January, 1946), 56-57.
statistically. Search for the real causes has been made experimentally and by case-study methods. Lists of factors affecting the rate of progress have been produced.\textsuperscript{22}

They list as causes of non-promotion:

A. Predominantly personal
   1. Physical factors
      a. Poor health or illness of pupil
      b. Physical defects—eyes, ears, etc.
   2. Mental factors
      a. Lack of mental ability
      b. Slow in learning
   3. Scholastic factors
      a. Inadequate preparation
      b. Lack in reading ability
      c. Weakness in arithmetic
      d. Foreign language handicaps
      e. Ineffective study habits
   4. Attitudes as factors
      a. Fear reaction—dislike for teacher
      b. Lacking in interest and appreciation
      c. Lack of concentration and application
      d. Lack of ambition and effort
   5. Social factors
      a. Socially maladjusted or immature
      b. Behavior difficulties a handicap

B. Essentially environmental
   1. School conditions unsatisfactory
      a. School inefficiently organized
      b. Classes too large
      c. Lack of skill in teaching
      d. Work too difficult
      e. Lack of proper curriculum adjustments
   2. Home Conditions unsatisfactory
      a. Lack of necessary home comforts
      b. Parental indifference or neglect
      c. Change of school too frequently
      d. Irregular in attendance
      e. Excessive outside activities\textsuperscript{23}

Recommended Remedies for Retardation

The problem of pupil promotion has long baffled teachers and administrators. Many different practices have been tried,\textsuperscript{22,23}

\textsuperscript{22}Charles M. Reinoehl and Fred C. Ayer, Classroom Administration and Pupil Adjustment, p. 143.
\textsuperscript{23}Ibid., pp. 143-147.
but successes in some places have been matched by failures elsewhere in the use of virtually every known procedure.

It is generally agreed that every child should progress from grade to grade in a regular way with no repetition of grades. However, the problem cannot be solved "by the simple expedient of deciding to do away with non-promotion." If all slow-learning children were passed on with their grade without making adequate provisions for their needs, many would become hopelessly lost and their school experiences would be anything but happy and satisfying.

The problems of pupil adjustment can be solved only by carefully planned programs. Probably one of the chief reasons why the practice of non-promotion has persisted is that many schools lack a definitely stated and consistently practical promotion policy.

In order for the elementary school to meet its obligations, both administrators and teachers need to have "a clear and well-defined concept of the elementary school as an institution for the training of children and of the objectives of elementary education." With such concepts, administrators

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and teachers can then work out cooperatively a promotion policy that will fit the needs of their particular school. Writers seem to agree that if teachers help in formulating a promotion policy, they will understand it better and will be more apt to make it work successfully in their own classrooms.

Caswell, in a study of non-promotion in the elementary schools, found that few schools used equalization of educational opportunity as the unqualified basis for progress policies. In spite of this fact, it was found that non-promotion has decreased in recent years. Caswell is of the opinion that an effort should be made to formulate progress policies and use them as guides. He also states that these policies should be applied, observed, tested, and revised where needed in an effort to help pupils progress through the school and receive the maximum benefit therefrom.

In speaking of present trends in pupil progress through school, Otto has this to say:

It is evident that research which has been accumulated and experience of many school systems prompts the need for reorganization of thinking and practices regarding the administration of pupil progress. Dissatisfaction with present conditions and the desire for improvement is almost universal, but the answers as to

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26 Caswell, op. cit., p. 85. 27 Ibid., p. 93.
what are the best changes to inaugurate are not always clear . . . . National uniformity in promotion practices is not desirable. 28

Otto suggests that in reorganizing the school to make continuous pupil progress, that it might be advisable to do away with promotion machinery altogether and organize the school in terms of continuous classification. 29 Most school systems that are achieving practically one hundred per cent regular pupil progress are doing so by operating in accordance with the idea of eliminating promotional devices. The result is equivalent to making chronological age the basis for promotion. In this respect each grade group would become homogeneous were it not for the fact that many children enter school before and after the age of six.

Many writers agree that no grouping could be satisfactory without the principle of flexibility. This flexible grouping would enable the teacher to shift children from group to group at any time during the year. The objective of the grouping would be to have each child placed at all times in the group that would be to his and the group's best advantage. Flexible grouping offers opportunities for

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28 Henry J. Otto, Elementary School Organization and Administration, p. 236.

29 Ibid., p. 236.
reclassifying children frequently into more effective working groups and for keeping work well adjusted to individual needs. Hardy thinks: "Each pupil should be given serious consideration to see if his instructional status may not be improved either by regrouping or by a modified program."\footnote{Martha C. Hardy, "The Out-of-School Activities of Well-Adjusted and Poorly-Adjusted School Pupils," \textit{Journal of Educational Psychology}, XXVI (September, 1935), 255.}

A survey of present practices seems to indicate that the most extensive efforts at reorganization to prevent non-promotion are being made in the primary grades. This is probably as it should be, since about eighty-five per cent of non-promotions occur in the first three grades.\footnote{Henry J. Otto, \textit{Elementary School Organization and Administration}, p. 213.} The largest per cent of these failures, as already shown by numerous studies, is in the first grade with fewer in the second and third grades. The lack of reading ability is the chief cause of about ninety-five per cent of these non-promotions in the first grade.\footnote{C. A. Pugsley, "Reducing and Handling Student Failures," \textit{American School Board Journal}, LXXXVI (March, 1933), 18-20.}
then nine months later these children are judged for pro-
motion to the second grade on reading achievement standards
set by the school. There are numerous reasons why all six-
year-old children cannot possibly reach even a minimum stan-
dard of achievement in reading their first year in school.
Children entering the school for the first time are differ-
ent in many respects.

If we consider the differences existing among the
members of the typical first-grade group when they
enter school, their diversified background and inter-
est; that they differ widely in social maturity; in
mental ability; in physical strength and maturation;
in emotional behavior and development; that some come
from homes where they have been surrounded with an
educative background, where experiences have been
possible which tend to get the child ready to parti-
cipate effectively in school activities, while others
come from homes where contact with books, pictures,
and such has been very meager, where no encouragement
has been given to the development of language skills,
where experiences have been very narrow and quite
limited, we can begin to appreciate the task of adjust-
ment necessary in any first-year group.33

In order to meet this wide range of differences, some
schools have made organizational and curriculum changes in
the primary grades, especially in the first grade. Since
nearly all first-grade failures are due to a lack of success
in reading, many studies have been made on first-grade read-
ing readiness. Some early investigators concluded that read-
ing readiness was so dependent on mental maturity that a

33F. B. Peters, "Eliminating Failure in the Primary Grades
by Fitting the School to the Child," Educational Administration
and Supervision, XXVIII (January, 1942), 26-30.
mental age of at least six years, or preferably six years and six months, was required before a child could be expected to learn to read. However, later research has shown that there are many factors relating to reading readiness, and the relationship between some of the factors studied and progress in learning to read was by no means invariable. Gray found that most first-grade pupils made reasonable progress in learning to read when modern methods of teaching were adapted to individual differences. Gray says, in respect to the future of the study of reading readiness:

With the facts now available it should be possible to carry on studies in the future that will be very productive in clarifying thinking concerning the requisite for learning to read, in developing tests that will reveal the extent of a pupil's readiness for reading, and in modifying teaching in the pre-reading period in order to promote desirable types of growth.34

After making a critical survey of the scientific studies of reading readiness to determine the amount and character of the progress made in this field, Witty and Kopel concluded:

Reading should be delayed until children's background of experience and mental growth enable them to find meaning in the tasks presented to them; and until this process of maturation has engendered a condition in which reversals are few and perception of words and other meaningful units is possible.35


35 Paul Witty and David Kopel, Reading and the Educative Process, p. 912.
Since reading readiness is not wholly dependent upon the child's mental age, chronological age will probably continue to be the generally accepted basis for admission into the first grade. If this is true, in order to eliminate non-promotion from the first grade, the second grade must reorganize its classes and curriculum in such a way as to give the rather large group of children who do not read on second grade level a desirable background that they failed to get in the pre-school years.

To provide a more wholesome growing situation for each child, some schools have grouped the first three grades into a unit called the primary school, and the next three grades into another unit called the intermediate school. The idea of grades, promotions, and failures are entirely eliminated within each unit. There are no failures and no promotions for a period of at least three years. If, at the end of the three years, after close study of the child's complete record, it is thought that he would gain more than he would lose by spending a maximum of four years in the primary school, he is kept there one more year. Consequently, this plan does not entirely eliminate non-promotions.

A more widespread use of kindergarten is advocated as a means of helping to eliminate first-grade failure. If kindergartens are operated with the idea of preparing children for reading readiness, they can be of great help in
securing successful reading experiences in the first grade. Pugsley says that a child who has attended kindergarten has a thirty-three per cent better chance of completing the first grade in one year than a child who has not had the benefit of kindergarten training.\textsuperscript{36}

While authorities have not always been able to agree on the details of a proper solution, they do agree that non-promotion in the elementary school is still one of the major problems of American education. Some progress has been made toward equalizing educational opportunity through the reduction of retardation. The Committee on Promotion Problems of the Department of Superintendence of the National Education Association worked out the following six general principles, which are recommended to be used as a whole in governing promotions:

a. Promotion should be decided on the basis of the individual child.

b. Promotion should be made on the basis of many factors. The final decision as to whether a particular pupil should be promoted should not rest merely on academic accomplishment, but on what will result in the greatest good to the all-round development of the individual.

c. In order that promotion procedures may be more uniform throughout a particular school system, a definite set of factors should be agreed upon, which each teacher will take into consideration in forming his judgment as to whether or not a particular pupil should be promoted.

d. Criteria for promotion must take into consideration the curriculum offerings of the next higher

\textsuperscript{36}Pugsley, \textit{op. cit.}, p. 13.
grade or unit and the flexibility of its organization, its courses of study, and its methods.

e. It is the duty of the next higher grade or unit to accept pupils who are properly promoted to it from the lower grade or unit and to adapt its work to fit the needs of these pupils.

f. Promotion procedures demand continuous analysis and study of cumulative pupil case history records in order that refinement of procedure may result and guess-work and conjecture be reduced to a minimum.\(^{37}\)

CHAPTER III

SOME FACTORS IN PUPIL PROGRESS OF THE BOWIE ELEMENTARY SCHOOLS

Purpose of the Chapter

An intensive study was made of retarded pupils in the first, second, third, and fourth grades of the Bowie Elementary Schools for the term 1948-1949. An effort was made to determine some factors thought to be causative in this lack of progress. An age-grade distribution chart was made of the school population, and forty-four pupils were selected for study. Intelligence tests, personality tests, and achievement tests were given each of these children selected for study.\(^1\) In addition, each teacher made out a record sheet in which various types of information were given.\(^2\) The purpose of this chapter is to present the information obtained from these sources.

Age-Grade Distribution of the Bowie Elementary Schools

Table 1 gives the age-grade distribution of the Bowie Elementary Schools during the year, 1948-1949. According

\(^{1}\)Kuhlmann-Anderson Intelligence Tests; California Test of Personality; Metropolitan Achievement Tests.

\(^{2}\)See Appendix, p. 50.
<table>
<thead>
<tr>
<th>Age</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 6</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>6-</td>
<td>55</td>
<td>50</td>
<td>105</td>
<td>44</td>
<td>51</td>
<td>95</td>
<td>45</td>
<td>44</td>
<td>89</td>
<td>26</td>
<td>45</td>
<td>71</td>
<td>117</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>3</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>9</td>
<td>3</td>
<td>11</td>
<td>14</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>109</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>11</td>
<td>20</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>111</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>22</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>22</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>12</td>
<td>24</td>
<td>12</td>
<td>12</td>
<td>24</td>
<td>12</td>
<td>12</td>
<td>24</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>59</td>
<td>129</td>
<td>58</td>
<td>60</td>
<td>118</td>
<td>51</td>
<td>57</td>
<td>108</td>
<td>43</td>
<td>61</td>
<td>104</td>
<td>439</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Under-age</th>
<th>5</th>
<th>6</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Normal-age</td>
<td>55</td>
<td>50</td>
<td>105</td>
</tr>
<tr>
<td>Number</td>
<td>Over-age</td>
<td>10</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Per Cent</td>
<td>Under-age</td>
<td>3.8</td>
<td>4.7</td>
<td>8.5</td>
</tr>
<tr>
<td>Per Cent</td>
<td>Normal-age</td>
<td>42.6</td>
<td>38.8</td>
<td>81.4</td>
</tr>
<tr>
<td>Per Cent</td>
<td>Over-age</td>
<td>7.7</td>
<td>2.3</td>
<td>10.1</td>
</tr>
<tr>
<td>Totals</td>
<td>54</td>
<td>46</td>
<td>100</td>
<td>49.1</td>
</tr>
</tbody>
</table>
to the data in Table 1, there were 459 students enrolled in the school during the year. Of these students, thirty-eight were under-age and sixty-one were retarded or over-age.

Table 2 gives a breakdown of the statistics in Table 1 and shows the grade levels of over-ageness, and per cents of retardation.

**TABLE 2**

**GRADE-PROGRESS DISTRIBUTION**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Pupils</th>
<th>Number Pupils Over-age</th>
<th>Number of Retarded Pupils</th>
<th>Per Cent of Retarded Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>129</td>
<td>13</td>
<td>13</td>
<td>10.1</td>
</tr>
<tr>
<td>2</td>
<td>118</td>
<td>11</td>
<td>11</td>
<td>9.3</td>
</tr>
<tr>
<td>3</td>
<td>108</td>
<td>16</td>
<td>16</td>
<td>14.8</td>
</tr>
<tr>
<td>4</td>
<td>104</td>
<td>21</td>
<td>21</td>
<td>20.2</td>
</tr>
</tbody>
</table>

The data in Table 2 indicate much variation in over-ageness. The highest per cent of over-ageness, 20.2, occurs in the fourth grade. The lowest per cent of retardation, 9.3, occurs in the second grade. There is a higher per cent of retardation in the third grade and the fourth grade than in either the first or the second grades.

As shown in Table 1, there was a total of sixty-one retarded children in the Bowie Elementary School in 1948-49. Some of this number started early, some dropped out; complete records were available for only forty-four of the retarded
pupils. Data on these forty-four retarded pupils form the basis of the present chapter. Factors, considered to be causative in lack of grade progress are as follows: (1) age at entrance; (2) chronological and mental age; (3) mental capacity of intelligence quotients; (4) physical health; (6) achievement and adjustment scores; and (7) socio-economic status of the pupils.

Age as a Factor in Lack of Grade Progress

Several phases of age figure in the study of the retarded children: age at entrance, chronological age, and mental age. Table 3 gives these data on all forty-four children being studied.

According to the data in Table 3, only one of the first-grade retarded children entered school at seven years. Two pupils entered at eight, and one at five in the third grade. Two in the fourth grade started to school at the age of seven. Only one child entered at five years. Late or early entrance into school, therefore, cannot be ascribed as major factors in causing retardation among the pupils.

A comparison of the educational age of the child with the chronological and mental ages determined by the Kuhlmann-Anderson Tests, however, shows a lack of mental maturity in a large number of instances. For example, a ten-year-old child in the second grade has a mental age of only 7.11,
### TABLE 3

**AGE-DISTRIBUTION OF FORTY-FOUR RETARDED PUPILS**

<table>
<thead>
<tr>
<th>Pupil</th>
<th>Age at Entrance</th>
<th>Chronological Age</th>
<th>Mental Age</th>
</tr>
</thead>
</table>
| **First Grade**
| **Boys** |                |                   |            |
| 1     | 7              | 8.0               | 7.0        |
| 2     | 6              | 7.9               | 6.10       |
| 3     | 6              | 8.0               | 6.11       |
| 4     | 6              | 8.1               | 7.2        |
| 5     | 6              | 7.8               | 7.3        |
| 6     | 6              | 8.4               | 7.1        |
| 7     | 6              | 8.2               | 7.7        |
| **Girls** |            |                   |            |
| 8     | 6              | 7.9               | 6.4        |
| 9     | 6              | 8.0               | 7.0        |
| **Second Grade**
| **Boys** |                |                   |            |
| 1     | 6              | 11.0              | 7.11       |
| 2     | 7              | 10.9              | 8.3        |
| 3     | 6              | 9.0               | 7.0        |
| 4     | 7              | 8.9               | 8.5        |
| 5     | 6              | 8.9               | 8.2        |
| **Girls** |            |                   |            |
| 6     | 6              | 8.9               | 7.11       |
| 7     | 6              | 8.4               | 7.4        |
| 8     | 6              | 8.11              | 8.0        |
| **Third Grade**
| **Boys** |                |                   |            |
| 1     | 8              | 8.7               | 8.3        |
| 2     | 7              | 9.6               | 9.0        |
| 3     | 6              | 13.5              | 9.1        |
| 4     | 6              | 9.3               | 7.9        |
| 5     | 7              | 9.3               | 8.11       |
| 6     | 7              | 9.6               | 8.2        |
| **Girls** |            |                   |            |
| 7     | 6              | 9.6               | 8.11       |
| 8     | 6              | 9.3               | 8.9        |
| 9     | 6              | 9.10              | 9.10       |
| 10    | 6              | 13.2              | 9.9        |
| 11    | 6              | 10.4              | 9.9        |
| 12    | 7              | 10.2              | 8.7        |
Table 3—Continued

<table>
<thead>
<tr>
<th>Pupil</th>
<th>Age at Entrance</th>
<th>Chronological Age</th>
<th>Mental Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>10.7</td>
<td>8.4</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>11.10</td>
<td>8.5</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>10.8</td>
<td>9.1</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>10.1</td>
<td>9.8</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>10.1</td>
<td>8.5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>10.1</td>
<td>8.1</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>11.0</td>
<td>8.3</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>10.7</td>
<td>10.2</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>10.1</td>
<td>8.1</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>10.1</td>
<td>8.1</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>12.7</td>
<td>9.3</td>
</tr>
<tr>
<td>12</td>
<td>7</td>
<td>10.6</td>
<td>9.0</td>
</tr>
<tr>
<td>13</td>
<td>6</td>
<td>10.8</td>
<td>10.1</td>
</tr>
<tr>
<td>14</td>
<td>6</td>
<td>11.1</td>
<td>10.8</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
<td>11.1</td>
<td>10.1</td>
</tr>
</tbody>
</table>

while a thirteen-year old in the third grade has a mental age of only 7.9.

Table 4 shows the number of children in each grade who are above or below the mental-age equivalent of their educational age. The data in Table 4 show that the disparity in educational and mental ages is more pronounced in the grades above the primary level. More children have higher mental ages than educational ages in the first grade than in any other grade. Failure in grade progress in the first grade, therefore, cannot be ascribed to lack of mental ability. The intelligence quotients of the retarded pupils give more information on this question.
TABLE 4

NUMBER OF RETARDED PUPILS WHO ARE ABOVE OR BELOW EDUCATIONAL AGE IN MENTAL AGE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
<th>Number</th>
<th>Per Cent</th>
<th>Number</th>
<th>Per Cent</th>
<th>Number</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>1</td>
<td>11.0</td>
<td>1</td>
<td>41.5</td>
<td>1</td>
<td>41.5</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>1</td>
<td>12.5</td>
<td>5</td>
<td>62.5</td>
<td>2</td>
<td>25.0</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>83.3</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>0</td>
<td>0.0</td>
<td>12</td>
<td>80.0</td>
<td>3</td>
<td>20.0</td>
</tr>
</tbody>
</table>

A child with an intelligence quotient of eighty-five or below is considered a slow learner.\(^3\) Eleven of these retarded children, according to Table 5, have intelligence quotients below eighty, but none of these are in the first grade. Fourteen pupils have a range in intelligence quotients from 80 to 90, barely above the slow-learner point. Only two pupils had intelligence quotients of 100 or above.

Achievement Scores as a Factor in Retardation

The achievement scores of the forty-four pupils are further evidence of their ability to do academic work. These scores were taken from the Metropolitan Achievement Tests which were given all the pupils and indicate the grade level of achievement.

\(^3\)Lewis M. Terman and Maud A. Merrill, Measuring Intelligence, p. 9.
TABLE 5
INTELLIGENCE QUOTIENTS OF FORTY-FOUR RETARDED CHILDREN

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Retarded Pupils</th>
<th>Number of Pupils in Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>60-70</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>44</td>
<td>2</td>
</tr>
</tbody>
</table>

An analysis of the data in Table 6 shows that in achievement many of the retarded pupils fell below their grade level. Two pupils in the second grade, two in the third, and five in the fourth made scores below their grade level. Four of the first grade made scores on the second grade level, three in the second grade, three in the third grade, and one in the

TABLE 6
ACHIEVEMENT SCORES MADE BY FORTY-FOUR RETARDED CHILDREN

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Pupils in Score Ranges of Grade Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.00-2.00</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>7</td>
</tr>
</tbody>
</table>
fourth grade were one grade above their level, respectively. One third-grade pupil made a score between 5.0 and 6.0, which is the fifth-grade level. These data indicate mediocre work on the part of many pupils, with greater occurrence in the higher elementary grades.

Attendance Records as a Factor in Retardation

All the attendance records covering the retarded pupils are not available for the study due to the fact that only twenty-two students had attended the Bowie schools all the years they had been in school. Attention will be given the attendance factor when the teachers' records are presented and their opinion stated.

Adjustment of Pupils as a Factor in Grade Progress

The California Test of Personality was given to forty-three pupils. One parent refused permission for her child to take the test. Results of this test are given in Table 7.

Personality difficulties, it is indicated by the data in Table 7, are pronounced in these retarded children, with emphasis on need for adjustment in the third and fourth grades. Eight pupils in the fourth grade made a score of less than fifty. Since personality difficulties are believed to be important causative factors in lack of grade progress, these low scores assume important significance.
TABLE 7

ADJUSTMENT SCORES OF FORTY-FOUR RETARDED CHILDREN

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Pupils in Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25-50</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>14</td>
</tr>
</tbody>
</table>

Health as a Factor in Grade Progress

Health screening tests were given all the children in the school for the purpose of locating deficiencies, especially in vision, hearing and speech. The records made by the teachers of the retarded pupils reveal few deficiencies in health. Two pupils in the first grade had speech defects; one pupil in the second grade had glandular trouble and another was undernourished. One pupil in the fourth grade had poor vision and wore glasses. These data indicate that some factors other than health have been the causes of retardation.

Socio-Economic Status as a Factor in Lack of Grade Progress

Teachers' observations were largely relied upon as a source of information relative to the socio-economic status of the retarded children. The teachers were in daily contact with the children and had numerous opportunities for observation
without invading the pupils' personal rights. Table 8 gives
the information derived from teacher reports and observations.

TABLE 8

SOCIO-ECONOMIC STATUS OF FORTY-FOUR RETARDED CHILDREN

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number Pupils from Broken Homes</th>
<th>Education of Parents</th>
<th>Occupation of Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Grade School</td>
<td>High School</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>22</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>78</td>
<td>3</td>
</tr>
</tbody>
</table>

*In this instance, the parent had graduated from both high school and college.

The total number of broken homes represented in the group
is only nine. Seventy-eight of the parents had not completed
high school. Only three parents had completed high school and
three had attended college. Thirty-one of the parents were
listed as day laborers, ten as members of trades, and three
were listed as being professional workers. The data indicate
that the socio-economic level of the children was predomi-
nantly low and that many of the parents perhaps had had few
opportunities to take much interest in educational activities.

Teacher Opinions on Causes for Retardation

Each teacher was asked to state what, in her opinion,
was the cause for retardation. Table 9 gives the data on
teacher opinion.
### TABLE 9

**TEACHER OPINIONS ON CAUSES FOR RETARDATION OF FORTY-FOUR CHILDREN**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Opinion</th>
<th>Number of Teachers Expressing Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irregular Attendance</td>
<td>2</td>
</tr>
<tr>
<td>1 2 3</td>
<td>Lack of ability</td>
<td>0 0</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Poor health or deficiencies</td>
<td>2 0</td>
</tr>
<tr>
<td>1 2 3</td>
<td>Low economic status</td>
<td>2 3</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Moving around</td>
<td>0 0</td>
</tr>
<tr>
<td>1 2 3</td>
<td>Spoiled child</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>
As shown in Table 9, eight teachers attributed lack of grade progress to irregular attendance at school. According to four teachers, the lack of mental ability was the predominant cause. Poor health was mentioned only six times, while low economic status was mentioned ten times. Too much moving around had been instrumental in delaying seven pupils in the opinions of their teachers. One child, in the teachers' opinion, had been spoiled too much. The three main causative factors in lack of grade progress in the opinions of the teachers, were in order of importance: (1) lack of mental ability, (2) poor home environment; and (3) poor attendance.

The statistics on the mental ability of the forty-four children, Table 5, indicate that a number of the retarded children have intelligence quotients below 85, the point which usually indicates a slow learner. However, the majority of the pupils were above this point, and were capable of learning under a sound, constructive school program. Attention is given to the promotional policies of the school which the children attended.

Promotion Policy of the Bowie Elementary School

The Bowie elementary school is traditional in its promotion system. Definite goals or standards are set up for each grade. The child who cannot meet these standards is
automatically retained in the grade. This is no new or strange policy; it is the one in effect in the majority of schools today. Otto describes such a policy as follows:

The elementary school is an institution which takes children of varying physical and intellectual capacities who are approximately six years of age, and requires them to reach certain minimum standards of educational accomplishment before they are promoted to the junior high school. Unless they are of average ability or above, this may involve seven, eight, or more years of attendance in the elementary school and promotion to the junior high school at the age of 13, 14, or older.4

Under such a policy the school must retain students who do not meet certain standards. Research has developed that the majority of failures in the elementary schools occur in the first year.5 The lack of reading ability is the chief cause of about ninety-nine per cent of the non-promotions in the first grade.6

The statistics on the forty-four retarded children in regard to their point of failure assume new significance in light of these statements. A check of the teachers' records reveals statistics which are given in Table 10.

Thirty of the forty-four pupils, or sixty-eight and one-tenths per cent, failed in the first grade. These


TABLE 10
GRADE IN WHICH FORTY-FOUR PUPILS WERE RETAINED

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Number of Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupils in first grade retained in first grade</td>
<td>8</td>
</tr>
<tr>
<td>Pupils in second grade retained at first grade level</td>
<td>7</td>
</tr>
<tr>
<td>Pupils in third grade retained at first grade level</td>
<td>8</td>
</tr>
<tr>
<td>Pupils in fourth grade retained at first grade level</td>
<td>7</td>
</tr>
</tbody>
</table>

figures are significant because they reveal that the schools are still clinging to the old policy of failing all who do not meet academic standards. In the case of first-grade pupils, lack of reading ability is the greatest cause of non-promotion.

The adjustment scores of the children, as shown in Table 7, indicate that the largest number of personality misfits were found in the fourth grade where eight pupils made scores ranging from twenty to fifty. In this grade (Table 2) there were twenty-one over-age pupils. Much of the poor adjustment, it is believed, has resulted from the disparity in age and size of the older pupils with those at the regular grade levels.
Generalizations

This chapter has been a presentation of data on forty-four retarded children in the Bowie Elementary School. Attention has been given to the age-grade distribution figures, the amount and per cent of over-ageness and under-ageness, and to some factors believed to be causative in the failure in grade progress. These factors are as follows: (1) age of pupil, chronological and mental; (2) intelligence quotient; (3) achievement scores; (4) attendance; (5) personality adjustment; (6) physical health of child; (7) socio-economic status; and (8) promotion policy of the school.

The findings of the analysis of data are as follows:

1. Of the 459 students in the school during 1948-1949, sixty-three were retarded.

2. Records and tests results were available for forty-four of these retarded children, and they were used as a basis for the study.

3. Six children had been over-age on entering school; one had been under-age.

4. The mental age of the first-grade children was higher in comparison with their chronological age, than the mental age of children in the other grades.

5. Eleven of the pupils had intelligence quotients of less than eighty, but only two pupils had extremely low scores; nineteen of the pupils had scores ranging between ninety and one hundred ten.
6. The achievement scores of the pupils showed that many of them were able to do work on a higher level than the grade in which they were enrolled; four in the first grade were on second-grade level; three in the second grade were on a third-grade level and two were on the fourth-grade level; three in the third grade were on the fourth-grade level and one on the fifth-grade level; and one student in the fourth grade was on a fifth-grade level. Conversely, five fourth-grade students were on the third-grade level, and one was on the second-grade level. In the third grade, two students were on the second-grade level, and two second-grade students made scores on the first-grade level. There were more higher-grade scores than there were lower ones.

7. Attendance records were not available on all the students; only twenty-two, or fifty per cent, had attended Bowie schools.

8. The adjustment scores of the retarded pupils were good for the first and second grades, but very poor for the fourth grade; four pupils in the third grade had scores below seventy-five.

9. The health of the pupils was fairly good; there were two children with speech defects, one with a visual defect, one undernourished, and one with glandular trouble.
10. The socio-economic status of the children, in the majority of instances, was low. There were nine broken homes represented. Thirty one of the parents were listed as day laborers, ten as members of trades, and only three as professional people.

11. In the opinion of the teachers, the three chief causes of non-promotion were: (1) mental ability, (2) poor home environment, and (3) poor attendance.

12. The promotion policy of the Bowie Elementary School is based upon the pupil meeting academic standards.

The conclusions and recommendations resulting from these findings are presented in the next chapter.
CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to ascertain some causes of delay in school progress of forty-four pupils in a Bowie elementary school. Background material included a review of literature on causes of failure in grade progress, but the focal point for the study was the factors believed to be causative in the failure in these forty-four pupils.

Data were presented on the age-grade distribution of all the pupils, the age, intelligence quotient, achievement scores, adjustment scores, physical health, and socio-economic status of the retarded pupils under consideration. An analysis of the data was made and findings were listed.

Conclusions

A study of the findings resulted in some definite conclusions. These are listed below as follows:

1. The degree of retardation in the Bowie Elementary Schools was significant, but not any higher than the usual rate found in other schools.

2. The retarded pupils were studied through teacher observation.
3. The factor of late entrance into school was not operative to any appreciable extent in this situation.

4. The majority of the retarded children were younger mentally than chronologically; this was least true in the first grade and most true in the fourth grade.

5. The intelligence quotients of a high per cent of the children indicated that they were capable of learning under favorable learning conditions.

6. The achievement scores likewise indicated that many of the children could do work on a higher level; this was least true in the fourth grade and most true in the first grade.

7. A high per cent of the retarded pupils had changed schools during their period of attendance which indicates instability.

8. Personality disturbances, it is indicated, were influential factors in retardation of the pupils, especially in the third and fourth grades. This fact brings the added conclusion that retardation brings on personality difficulties, and that these increase as the grade level rises.

9. The physical health of the pupils, it is indicated, was not an important factor in their retardation.

10. Low socio-economic conditions and lack of education of the parents, it is believed, contributed to retardation through indifference and lack of parental encouragement.
11. The teachers' opinions of the chief causes of retardation are not corroborated by the scientific data obtained on the retarded pupils.

12. The traditional method of promoting according to academic standards, it is indicated by these statistics, was perhaps the most influential of all factors in the retardation of pupils. Personality difficulties, it was shown, were more pronounced in the higher grade levels and contributed to failure in grade progress. Many of these difficulties, it is believed, stemmed directly from the fact that the pupils were over-age in their particular group. Socio-economic conditions were perhaps the second influential factor; indifference on the part of parents causes non-attendance, poor morale, and other difficulties.

13. The over-all conclusion reached from the study is that the school and society, not the intelligence ratings of these retarded children, were the causative factors in their failure in grade progress.

Recommendations

The main recommendation offered, in light of this conclusion, is that the school make a critical study of its own teaching and promotional problems. Inasmuch as the school is a unit in a city system, it cannot make any radical changes
without a change in the entire system, or without the approval of the central school administration. The data collected in this study, however, may be used to call attention to the need for such study.

It is further recommended that a more complete system of cumulative records, including adequate individual case histories, be kept.

Early in the school year, each classroom teacher should study the available records of the children she teaches. Teachers should know something of the children's background, and get an understanding of their interests and needs. In cooperation with the principal and other teachers concerned, she can plan school work to meet individual needs. Then the teacher can give concrete basic instructions that will enable the child to develop mentally and physically at his own level of comprehension. Promotion policies should be studied and amended, and better ones adopted. The child would then have a feeling of success.

Better policies for admission to school are also recommended. At the present, all children six years of age are admitted to the first grade regardless of mental ability. There is need for the establishment of a pre-primary group. Some children lack a readiness for reading. These children may be placed where they will not be urged to read, but where experiences are such that a good foundation may be laid,
and they may experience success in reading activities. The
schools cannot hope to compensate for the effects of all
the undesirable characteristics of the child's out-of-school
environment. However, if personality maladjustments are
to be lessened or prevented, the school must make its in-
fluence as socially effective as possible. The existing
cordial relationship of the school with the city, county,
and state health and other welfare agencies, service club
officials, and others interested in child welfare should be
continued and strengthened as opportunities for extended
service through cooperation can be found.
APPENDIX
Report of All Children in the First Four Grades of Bowie Public Schools

Name of School_________________ Home Room Teacher___________________

Name of Child_________________ Age_______ Sex_______________________

Date of Birth___________, 19______ Place of Birth____________________

Birth Based on: Birth Certificate_Census Statement_Affidavit

Age at Entrance in any Public School_School Entered________

School Last Attended_________ Date Entered This Session________

Present Classification_Failed of Promotion How Many Times________

In What Grades Did Failure Occur?____________________________

Condition of Health_Vision_Hearing_Speech____________________

When last Year of Smallpox Vaccination 19__ Remarks__________

Parents or Guardian________________________________________

Street Address_____________ Town________ Phone_______________

Do you Live with Your Parents?__ Parent’s Occupation__________

Are Parents Separated?___ Divorced__ Father living________

Mother Living___ Father Re-married__ Mother Re-married__

Language Spoken in the Home____ Number of Children in Home____

Position of this Child in the Family___________________________

Date This Child First Entered Bowie Public Schools____ 19____

Date Dropped from Bowie School Roll__ 19__ Reason____________

How Many Days Attended School in the First Grade__________

Second Grade______ Third Grade______ Fourth Grade__________
Scores on These Tests

Intelligence Tests ___ Readiness Test ___ Personality ___
Academic Achievement Test ___ Socio-Economic Test ___

Educational Attainment of Parents

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>Father</th>
<th>Mother</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did Not Attend College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attended High School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did Not Attend High School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finished High School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Your Opinion Why Was This Child Not Promoted:
1. __________________________ 2. __________________________
3. __________________________ 4. __________________________
5. __________________________ 6. __________________________

Has repeating the grade helped in any way? ________________________

Remarks ______________________________________________________
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