FIRST COPY
A COMPARISON OF READING ABILITIES OF FIRST GRADE CHILDREN
FROM ENGLISH-SPEAKING HOMES WITH THOSE OF CHILDREN
FROM NON-ENGLISH-SPEAKING HOMES
IN EAST CHICAGO

by

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O. B. K.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>A. Groups to be Compared</td>
<td>2</td>
</tr>
<tr>
<td>B. Discussion of Previous Investigations</td>
<td>2</td>
</tr>
<tr>
<td>C. Summary of Foregoing Investigations</td>
<td>8</td>
</tr>
<tr>
<td>D. The Problem</td>
<td>8</td>
</tr>
<tr>
<td>E. Purpose of the Study</td>
<td>9</td>
</tr>
<tr>
<td>II. METHODS AND MATERIALS USED IN GIVING TESTS AND IN COLLECTING DATA</td>
<td>10</td>
</tr>
<tr>
<td>A. The Selection of the Groups</td>
<td>10</td>
</tr>
<tr>
<td>B. Testing Program</td>
<td>10</td>
</tr>
<tr>
<td>C. The Statistical Treatment</td>
<td>11</td>
</tr>
<tr>
<td>III. DISCUSSION OF FINDINGS</td>
<td>12</td>
</tr>
<tr>
<td>IV. GENERAL SUMMARY AND CONCLUSIONS</td>
<td>20</td>
</tr>
<tr>
<td>V. APPENDIX</td>
<td>21</td>
</tr>
<tr>
<td>A. Bibliography</td>
<td>21</td>
</tr>
<tr>
<td>B. Supplementary Table</td>
<td>24</td>
</tr>
<tr>
<td>C. Supplementary Figure</td>
<td>25</td>
</tr>
</tbody>
</table>
LIST OF TABLES

TABLE | PAGE
--- | ---
I. Reliabilities of Differences in Means Between Various Groups | 16
II. Comparison of English-Speaking and Non-English-Speaking Groups That Have Been Equated for Intelligence | 19
III. Comparison of Means of Intelligence Quotients and Means of Reading Scores of Various Groups | 24
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The Distribution of the Reading Scores for the American White Group</td>
<td>13</td>
</tr>
<tr>
<td>2.</td>
<td>The Distribution of the Reading Scores for the Colored Group</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>The Distribution of the Reading Scores for the Mexican Group</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>The Distribution of the Reading Scores for the Polish Group</td>
<td>14</td>
</tr>
<tr>
<td>5.</td>
<td>The Distribution of Reading Scores for the English-Speaking Group That Has Been Equated With the Non-English-Speaking Group for Intelligence</td>
<td>25</td>
</tr>
<tr>
<td>6.</td>
<td>The Distribution of Reading Scores for the Non-English-Speaking Group That Has Been Equated With the English-Speaking Group for Intelligence</td>
<td>25</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

One of the most important problems of the school is the teaching of reading. This problem becomes a very complex one in a school system in which there are many pupils from non-English-speaking homes. These children have a language handicap, and yet reading is particularly essential to them as a means of acquiring knowledge.

In East Chicago, where this study was made, the population includes people of recent European and Mexican origin, negroes, and those of native white birth. A survey made in the spring of 1936 showed that there were children of twenty-eight different national backgrounds. Most of the parents of these children came to this country from their native homes in order to seek better living conditions. They live in small communities with their own churches and recreational centers. They speak their native language and retain many of their old world customs and traditions. Most of the negro parents came from Alabama and Mississippi and have all the traits of the southern negroes.

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A. Groups to be Compared

The purpose of this study is to compare the reading abilities of four groups of pupils who have been in the first grade for a period of one year. The groups selected for the study comprise: (1) children of native white parentage; (2) negro children; (3) children of Mexican parentage; and (4) children of Polish parentage.

The first two groups contain the pupils from homes where the English language is spoken. The other two groups include the children from non-English-speaking homes.

B. Discussion of Previous Investigations

There have been several recent investigations relative to the problem of teaching Mexicans and negroes as separate groups. Few studies have been made of Polish children except as a part of a group of foreign children.

A digest of the investigations shows the different phases of the problem, including studies of retardation, intelligence and race, intelligence and achievement, and language difficulty.

O. K. Garretson in his study of causes of retardation

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among Mexican children in a small public school system in Arizona found that there were 30.01 per cent more individuals of the Mexican group retarded than of the American group. The Mexican pupil of this system was retarded by liberal accounting 10.53 months.

3 Tireman found that Spanish-speaking pupils in a school in New Mexico were from two thirds of a grade to almost three grades below the English-speaking pupils.

4 T. R. Garth made a study of retardation in a large city, in a small town, and in rural communities in the states of Texas, New Mexico, and Colorado. He found an average of 80.5 per cent of the Mexican children to be retarded; the retardation being higher in the lower grades than in the upper, the boys being more retarded than the girls. Hill reports similar findings.

5 Alden Hewitt in his comparative study of white and colored pupils in a southern school system found that the


5 Merton E. Hill, The Development of an Americanization Program (Published by the Board of Trustees of the Chaffey Union High School and the Chaffey Junior College, Chaffey, California, 1928).

colored children were more severely retarded than were the white. Koch and Simmons found the Mexican children more retarded than the negroes. The negroes showed greater retardation than the white children.

Several studies have been made relative to the intelligence of the different nationalities. Pintner and Keller using the revision of the Binet test as a measure found the average intelligence quotient of the Polish children to be eighty-five. Haught reported the average Spanish child to have an intelligence quotient of seventy-nine as compared with one hundred for the average Anglo child. Garth found the intelligence quotient for a large group of Mexican children to be seventy-eight and one tenth. Garth and others, investigating a group of southern negro children, found

7 H. L. Koch and Rietta Simmons, "A Study of the Test Performance of American, Mexican, and Negro School Children," Psychological Monograph XXXV (1926), No. 5.


the mental age to be below that of the whites. The median intelligence quotient of the colored children was 77.9. Farr, after testing two hundred negro children reported results that show negroes to be far below normal in mental ability.

Investigations regarding the language handicap of foreign children in this country have been made. Pintner points out that great caution should be exercised in the comparison of children with different backgrounds when they are being compared by means of the results of verbal tests. That tests verbal in content as well as in directions are a greater handicap for non-English children is probable. The language handicap will presumably be greatest in Grade I. At what grade this language handicap will be entirely overcome will depend upon many factors, notably the opportunity to mix in an English-speaking environment and the general intelligence of the individual. A bilingual environment may prevent some individuals from ever really indicating their maximum intelligence on a verbal group intelligence test.

12 T. J. Farr, "Intelligence and Achievement of Negro Children," Education LI (1931), pp. 491-495.

Garretson found the factor of language difficulty operating to disadvantage in the first and second grades but apparently less in the higher grades.

Haught, in order to find some objective evidence that a language difficulty does or does not exist among Spanish-Americans, believes that until the existence of a language handicap on the part of Spanish children is demonstrated by properly controlled experiments, it seems safer to avoid the concept as an explanatory principle in educational problems.

Sanchez found that bilingualism, over and above its environmental attributes, is a handicap acting not only upon language expression and language understanding but upon more intricate psychological processes.

Thiesen in an article on primary reading says a foreign language spoken in the home is a distinct handicap.

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to a child's reading development. He also points out that it is difficult to determine the influence of nationality and intelligence. Intelligence rather than nationality per se, probably accounts for a large part of the differences in attainments of different language groups. Thiesen also reports that Polish children have been found to make slow progress during the first year but that they approximate the average in the next four grades.

18 Brown found that language presented the chief difficulty in the first grade. After a pupil had attended an American school for one or two years, he tested as high by employing the English language as by using his native language.

19 Tireman compared the reading ability of pupils in New Mexico. He selected a group of English-speaking children and a group of Spanish-speaking children, using the Monroe Standardized Silent Reading Test. He found the scores of the Spanish-speaking pupils to be considerably below standard in both comprehension and rate while the scores of the English-speaking children were practically normal.


Hewitt and Farr each found the reading abilities of negro children to be markedly below those of white children.

C. Summary of Foregoing Investigations

A summary of the foregoing studies leads to the following conclusions:

1. Retardation is high among Mexican and negro children.

2. Negro, Mexican, and Polish children have lower intelligence quotients than the children of native white parentage.

3. The factor of language difficulty does not operate beyond the second grade.

4. The reading ability of American children is superior to that of negro and foreign children.

D. The Problem

The problem in this study is to find out what difference there is in the reading abilities of children


21 T. J. Farr, op. cit., pp. 491-495.
coming from English-speaking homes and those that come from homes where a foreign language is spoken. The first group includes the American whites and negroes; while the other group is composed of Polish and Mexicans. The scores to be compared are those made in a test given at the end of the first year in school in the city of East Chicago.

E. Purpose of the Study

The purpose of this study is to determine whether children coming from homes where a foreign language is spoken have as high reading achievement at the end of the first grade as those children coming from homes where the English language is spoken.
CHAPTER II

METHODS AND MATERIALS USED IN GIVING TESTS
AND IN COLLECTING DATA

A. The Selection of the Groups

Two groups of children were chosen to form the English-speaking group. These were the American white children and the negroes. There are one hundred cases in the American white group and one hundred one cases in the negro group. To form the non-English-speaking group the Polish and Mexican children were chosen because the population of East Chicago includes large numbers of Polish and Mexican children. There are ninety-seven cases in the Polish group and ninety-nine in the Mexican group.

B. Testing Program

In order to compare the reading abilities of children coming from homes in which a foreign language is spoken with those of children coming from homes in which English is spoken the Gates Primary Reading Test, Types I, II, and III were used. These tests were given to the first grade children at the end of the school year. A teacher skilled in testing administered the tests in the different buildings. The papers were sent
to the office of the general supervisor to be scored. The sum of the scores was used in this study. From this same office the writer was able to get the nationality of each child taking the test. This information had been gained at the time of his school entrance.

C. The Statistical Treatment

The scores were tabulated separately for each of the four groups. The mean and standard deviations were found for each group. To measure the reliability of each mean the standard error of the mean was computed for each group. The standard error of the difference in each comparison was obtained in order to determine if observed differences were true differences.
CHAPTER III
DISCUSSION OF FINDINGS

The purpose of this chapter is to discuss and interpret the statistical treatment of the data.

After the scores for each group were tabulated they were arranged in a frequency distribution using intervals of five. The distribution of scores for the American whites is shown in Figure 1, page 13. This histogram shows that the distribution has a distinct tendency toward the normal curve. The mean for the American white is 48.05 which is almost five points below the norm 53. The distribution of scores for the negroes, Polish, and Mexicans are shown in Figures 2, 3, and 4, pages 13 and 14. These show a skewed distribution. The mean for the negroes is 32.22, which is approximately 20 points below the norm. The mean for the Mexican is 41.14, about 12 points below the norm and for the Polish is 40.57, which is about 12 points below the norm.

The standard deviations were figured in order to measure further the dispersion of the measures and to secure a more accurate measure than is shown by a mere range of scores. The standard error of each mean was computed to measure the reliability.
Figure 1. The distribution of the reading scores for the American white group.

Figure 2. The distribution of the reading scores for the colored group.
Figure 3. The distribution of the reading scores for the Mexican group.

Figure 4. The distribution of the reading scores for the Polish group.
Comparisons between the means of the various groups were made and the reliabilities of differences in means were obtained as shown in Table I, page 16.

A comparison of the means of the American whites and negroes is in favor of the whites, the critical ratio being 5.4, indicating that in one hundred chances in one hundred the whites do better than the negroes.

A comparison of the means of the American whites and Polish in this study gives a critical ratio of 2.3, which indicates that in ninety-nine chances out of one hundred, the American whites will do better than the Polish.

A comparison of the means of the American whites and Mexicans is in favor of the whites, the critical ratio being 2.2, indicating that in ninety-nine chances in one hundred the whites do better than the Mexicans.

A comparison of the means of the negroes and Mexicans is in favor of the Mexicans, the critical ratio being 3.2, indicating that in one hundred chances in one hundred the Mexicans do better than the negroes.

A comparison of the means of the negroes and Polish is in favor of the Polish, the critical ratio being 2.9, indicating that in one hundred chances in one hundred the Polish do better than the negroes.

A comparison of the means of the Mexican and Polish is in favor of the Mexican, the critical ratio being .18,
### TABLE I

RELIABILITIES OF DIFFERENCES IN MEANS BETWEEN VARIOUS GROUPS

<table>
<thead>
<tr>
<th>Groups</th>
<th>Difference in Means</th>
<th>In Favor of Difference</th>
<th>Reliability of Difference</th>
<th>Critical Ratio</th>
<th>Chances in 100 of a True Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>American White Negroes</td>
<td>15.83</td>
<td>American White</td>
<td>2.9</td>
<td>5.4</td>
<td>100</td>
</tr>
<tr>
<td>American White Polish</td>
<td>7.48</td>
<td>American White</td>
<td>3.2</td>
<td>2.3</td>
<td>99</td>
</tr>
<tr>
<td>American White Mexican</td>
<td>6.91</td>
<td>American White</td>
<td>3.1</td>
<td>2.2</td>
<td>99</td>
</tr>
<tr>
<td>Negroes Mexican</td>
<td>8.92</td>
<td>Mexican</td>
<td>2.8</td>
<td>3.2</td>
<td>100</td>
</tr>
<tr>
<td>Negroes Polish</td>
<td>8.35</td>
<td>Polish</td>
<td>2.9</td>
<td>2.9</td>
<td>100</td>
</tr>
<tr>
<td>Mexican Polish</td>
<td>0.57</td>
<td>Mexican</td>
<td>3.1</td>
<td>0.18</td>
<td>58</td>
</tr>
</tbody>
</table>
indicating that in fifty-eight chances in one hundred the Mexican will do better.

These findings reveal certain facts. The American white children coming from English-speaking homes are superior to the children coming from non-English-speaking homes, in reading ability. The negro children coming from English-speaking homes are inferior to the children coming from non-English-speaking homes, in reading ability.

These facts caused the writer to believe that a factor, other than language, influenced the reading abilities of these groups.

The children in these groups had been given the Detroit First Grade Intelligence Test at the beginning of their first year in school. The results of this test were obtained from the same office as were those of the reading test. The scores were tabulated and converted into intelligence quotients. These are shown in the Appendix of this study, page 24. The mean intelligence quotient for each group was computed. The mean intelligence quotient for the American whites is 104.1, for the negroes 86.2, for the Polish 87.4, and for the Mexicans 87.2.

In order to show the relation of intelligence to reading ability, two correlations were made. One was between the Detroit intelligence quotients and the scores on the Gates Reading Test made by the negro children. The other correlation was between the Detroit intelligence
quotients and the scores on the Gates Reading Test made by the American white children. Each correlation was found to be .15 and the probable error ±.06. These low correlations may be due to a tendency toward laziness. They also indicate that there is little correlation between intelligence and reading achievement in the first grade in East Chicago.

A comparison was also made between the English-speaking groups and the non-English-speaking groups that have been equated for intelligence. One hundred cases from the English-speaking group were paired with one hundred cases from the non-English-speaking group, each pair matched in intelligence. The reading score of each case in these matched groups was tabulated. These scores were arranged in a frequency distribution with intervals of five and the means were computed. The mean for the English-speaking group was found to be 41.97 and the mean for the non-English-speaking group was found to be 41.76, as shown in Figure 5, which is found in the Appendix of this study, page 25. A comparison of these means gives a critical ratio of .07, which indicates that in fifty-three chances out of one hundred the English-speaking children will do better. This is shown in Table II, page 19. This difference is therefore of no statistical significance.
TABLE II

COMPARISON OF ENGLISH-SPEAKING AND NON-ENGLISH-SPEAKING GROUPS THAT HAVE BEEN EQUATED FOR INTELLIGENCE

<table>
<thead>
<tr>
<th>Groups</th>
<th>Difference in Means</th>
<th>In Favor of Difference</th>
<th>Reliability Ratio</th>
<th>Critical Chances in 100 of a True Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Speaking</td>
<td>41.97</td>
<td>.21</td>
<td>English Speaking 2.9</td>
<td>.072</td>
</tr>
<tr>
<td>Non-English Speaking</td>
<td>41.76</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER IV
GENERAL SUMMARY AND CONCLUSIONS

The purpose of this study was to determine whether children coming from homes where a foreign language is spoken have as high reading achievement at the end of the first grade as those children coming from homes where the English language is spoken. This achievement was measured by a standardized test.

A comparison of the two groups has shown that the factor of foreign language spoken in the home does not account for reading ability. A mastery of the printed page does not depend upon a knowledge of vocal sounds.

A study of the findings reveals that probably other unknown factors influenced the reading ability of the groups studied rather than intelligence.

An evaluation of the facts derived from this study seems to justify the following conclusions:

1. The American white children are superior in reading ability to the negro children and the children of Polish and Mexican parentage.

2. The negro children have the lowest reading ability when compared with the American white children and children of Polish and Mexican parentage.
3. The reading abilities of children of Polish and Mexican parentage show a slight difference in favor of the Mexicans.

4. The reading abilities of English-speaking children and non-English-speaking children do not differ to any noticeable degree when the two groups are equated for intelligence.

5. The factor of a foreign language spoken in the home does not account entirely for reading ability.
V. APPENDIX

A. Bibliography


Farr, T. J. "Intelligence and Achievement of Negro Children." Education, LI, April, 1931. Pp. 491-495.


Hill, Merton E. **The Development of an Americanization Program.** Published by the Board of Trustees of the Chaffey Union High School and the Chaffey Junior College, Chaffey, California, 1928.


TABLE III

COMPARISON OF MEANS OF INTELLIGENCE QUOTIENTS
AND MEANS OF READING SCORES
OF VARIOUS GROUPS

<table>
<thead>
<tr>
<th></th>
<th>American White</th>
<th>Negroes</th>
<th>Polish</th>
<th>Mexican</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Score</td>
<td>48.1</td>
<td>32.2</td>
<td>40.5</td>
<td>41.1</td>
</tr>
<tr>
<td>I. Q.</td>
<td>104.4</td>
<td>86.2</td>
<td>87.4</td>
<td>87.2</td>
</tr>
</tbody>
</table>
Figure 5. The distribution of reading scores for the English-speaking group that has been equated with the non-English-speaking group for intelligence.

Figure 6. The distribution of reading scores for the non-English-speaking group that has been equated with the English-speaking group for intelligence.