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A comparison of achievement in silent reading and listening in grade four,

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Thesis

A Comparison of Achievement
In Silent Reading and Listening
In Grade Four

Submitted By

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In Partial Fulfillment of Requirements for the
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1954
A COMPARISON OF ACHIEVEMENT IN SILENT READING AND LISTENING IN GRADE FOUR
First Reader: Dr. Donald D. Durrell
Second Reader: Dr. Helen A. Murphy
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CHAPTER I

Statement of the Problem

The purpose of this study is to determine, by experimental means, whether silent reading or listening is more effective in teaching in grade four.

The need for this study is indicated by the apparent decline in the efficiency of listening as the child progresses educationally. For the first six years, the child's knowledge is largely a result of listening. Then comes the period when the amount of knowledge obtained by reading increases until, by the end of elementary school, the child's ability to learn by reading surpasses the ability to learn by listening. As Young says, "Improvement in silent reading comprehension is seemingly more accelerated than improvement in hearing comprehension in the intermediate grades... Children improve in their ability to comprehend through reading throughout the intermediate grades quite as fast, if not faster, than they improve in their ability to comprehend through hearing."1

The need is apparent in the classroom for a wider range of methods in presenting factual material to accommodate those

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1/ Young, William E. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention," Journal of Experimental Education. 5:30-39; September, 1936.
children who find it difficult to comprehend and assimilate written material.

This study is an attempt to:

1. Determine whether silent reading or listening is more effective in teaching factual material in grade four.
2. Compare the relative superiority of silent reading or listening for the poor readers.
3. Compare the relative superiority of silent reading or listening for the superior readers.
4. Compare the relative superiority of silent reading or listening for the girls.
5. Compare the relative superiority of silent reading or listening for the boys.
6. Compare the relative superiority of silent reading or listening for the history selections.
7. Compare silent reading and listening scores for exceptional cases in favor of silent reading.
8. Compare silent reading and listening scores for exceptional cases in favor of listening.
CHAPTER II

Previous Research

Previous studies in the comparison of reading and listening comprehension can be divided roughly into two major groups: those using adult populations and those using public school populations.

Larsen and Feder 1 used one hundred and fifty one University Freshmen chosen at random. Selections of two hundred words from the Nelson-Denny Reading Test (Form B) were used in this study. Selections were classified as easy, moderate or difficult. They reported that "Superiority of performance in reading comprehension over that in hearing comprehension was found to be dependent upon the level of difficulty of the material." 2 Results show that students who were low scholastically were about the same in hearing and reading. The middle group showed a slight preference for reading and the high group, scholastically, showed a decided preference for reading. Reading was superior to hearing as the difficulty of the selection increased. Larsen and Fedder found a correlation of .62+.04 between reading and hearing comprehension.

1/ Larsen, Robert P. and Feder, D. D. "Common and Differential Factors in Reading and Hearing Comprehension." *Journal of Educational Psychology.* 31:241-252; April, 1940.

2/ Ibid
A study by Carver\(^1\) using university undergraduates and adults also found that recognition, verbatim recall and suggestibility are shown to be more successful in response to auditory presentation while comprehension, criticalness and discrimination are improved by visual presentation. Carver said, "This capacity to benefit from auditory presentation tends to vary inversely with the difficulty of the material presented."\(^2\)

Young\(^3\) conducted a study with two thousand fourth, fifth and sixth grade pupils from six school systems - five in Iowa and one in Texas. The problem of the relation between reading comprehension and hearing comprehension was analyzed.

Fifteen reading selections from three hundred and fifty to eight hundred words were used. The selections were of three types: three descriptions of industrial processes, four nature science units, four hero stories from American history and four narrative poems. Each classroom experienced three modes of presentation and three selections from the four types of reading materials. The modes of presentation were as follows:

1. Teacher read aloud to pupils.

2. Teacher read aloud to pupils while they read selection silently.


\(^2/\) Ibid

\(^3/\) Young, William E. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention." Journal of Experimental Education. 5:30-39; September, 1936.
3. Pupils read once silently at own individual rate.

4. Pupils read selection silently for same amount of time assigned for the oral reading by the examiner.

Immediately following the selection each child was tested. The test was made up of thirty questions; the first twenty called for short definite answers, the last ten were three multiple choice type questions. The recall dealt with specific facts; the multiple choice with broad, general ideas. An experiment was also done with delayed recall. Pupils of each group were assumed to be equated.

"Findings showed that children get very little from an oral presentation (21 to 33% varying according to type of selection in grade four) as measured by immediate testing."¹ Findings showed that children do get more from teacher oral presentation than from reading the selection silently by themselves. The greatest difference was found in grade four and almost absent in grade six. It was almost uniformly statistically significant in the comparison of the two methods in grade four. "Findings of this thesis would indicate that improvement in silent reading comprehension is seemingly more accelerated than improvement in hearing comprehension in the intermediate grades."²

Tests that followed all types of presentation were done

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¹/ Young, William E. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention." Journal of Experimental Education. 5:30-39; September, 1936.

²/ Ibid.
silently. "In general children who do poorly in comprehending through reading do poorly in comprehending through hearing. No children were found to be in the highest quarter of one of these phases of language comprehension and in the lowest quarter of the other." 1

Four third grades and four fourth grades in Belmont were used in this study. A hearing test and reading comprehension test were given to two hundred and seventeen children. Boys were superior to girls in both reading and hearing comprehension. The critical ratio between boys and girls was 5.2.

This study also found that those children with higher mental ages were superior in both reading and hearing comprehension to those with lower mental ages.

The selections were placed in two groups - the easy selections were three history stories taken from a fourth grade textbook. Three nature study stories, classified as difficult, were also taken from the fourth grade textbook. A thirty question multiple choice type test was constructed to go with each of these reading selections.

Miller 2 showed in a study of relation between reading and hearing comprehension in third and fourth grades that hearing

1/ Young, William E. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention." Journal of Experimental Education. 5:30-39; September, 1936.

comprehension was higher than reading comprehension in both grades that she tested. Reading comprehension began to catch up in the fourth grade.

Similarly, Joney reported in a study of one hundred and forty fourth grade boys and girls in the Reading Public Schools that hearing is definitely superior to reading.

Three methods of presentation were used: oral reading selection followed by oral test, silent reading selection followed by a silent test and a silent reading selection followed by an oral test. A plan was made in which one easy and one difficult selection were presented in each of the three methods to each of the six classes taking part. No time limit was used.

The critical ratio between the reading and listening was 6.45 in favor of hearing. The material heard with material read silently and followed by oral testing had a critical ratio of 6.36 in favor of the latter. With the poorest readers the critical ratio was 6.50 in favor of hearing. Good readers also favored hearing with a critical ratio of 4.15. Hearing was superior in both easy and difficult selections. The boys showed a slight preference for hearing over the girls.

A more recent study done by Hanna and Liberati\(^1\) comparing silent reading and listening by written recall and multiple choice type tests in the fourth grade also shows a preference for listening in favor of reading with a critical ratio of 3.48.

One hundred and twenty fourth graders from Waltham and Warwick, Massachusetts were used. The purpose of the study was to see if a greater number of ideas are retained through reading silently or listening.

Ten reading selections were used which covered history, science, art and adventure. The tests ranged from fifteen to thirty multiple choice type questions. The longest reading selections were three hundred words; the shortest one hundred and fifty words. Tests were rotated so each room had silent and oral selections. The tests were silent followed by a listing of ideas remembered from the reading. There was a slight preference for listening in long selections over the short selections.

A similar study was done by Kelly, Loughlin, Gill and Monteith\(^2\) on the sixth and seventh grade level. This study showed a slight preference for silent reading but not enough to be statistically significant.

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One hundred and twenty sixth graders were tested in Providence, Rhode Island and Greenwich, Connecticut. One hundred and twenty seventh graders were tested in Columbia, South Carolina and Bristol, Connecticut.

Ten reading selections were used with a vocabulary list no higher than a fourth grade level. Six of the selections were one hundred and fifty words; the other selections ranged up to three hundred words. The multiple choice type tests consisted of fifteen questions for shorter selections and thirty questions for the longer selections.

The present study is an attempt to use a new fourth grade population in order to contribute to this research.

The outstanding difference between this and the previous studies is that the multiple choice type test items used were all presented orally by the examiner. This was done to eliminate possible reading difficulties.
CHAPTER III

Procedure of Investigation

One hundred and thirty two fourth grade children were studied to find out by means of multiple choice type tests whether a greater number of facts were retained by means of silent reading or oral presentation by the examiner.

Material Used. Eight selections obtained from previous studies were used. Each selection contained approximately one hundred and fifty words. The subject matter covered history, fiction, art and travel. The vocabulary, according to the Rinsland Word List, was no higher than a fourth grade level. Each selection was accompanied by a multiple choice type test consisting of fifteen items.

In the multiple choice type tests each item contained three choices, one of which was correct according to the story. The purpose of the multiple choice type tests was to determine the number of facts retained by the individual after having read silently or listened to selections read aloud by the examiner.


The following schedule was kept which lists the selections according to whether they were read silently by the pupils or read aloud by the examiner:

<table>
<thead>
<tr>
<th>Test</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Oral</td>
<td>Silent</td>
</tr>
<tr>
<td>B</td>
<td>Silent</td>
<td>Oral</td>
</tr>
<tr>
<td>C</td>
<td>Oral</td>
<td>Silent</td>
</tr>
<tr>
<td>D</td>
<td>Silent</td>
<td>Oral</td>
</tr>
<tr>
<td>E</td>
<td>Oral</td>
<td>Silent</td>
</tr>
<tr>
<td>F</td>
<td>Silent</td>
<td>Oral</td>
</tr>
<tr>
<td>G</td>
<td>Silent</td>
<td>Oral</td>
</tr>
<tr>
<td>H</td>
<td>Oral</td>
<td>Silent</td>
</tr>
</tbody>
</table>

The tests were so divided that each group had two of the four history selections and one of the two fiction selections read to them by the examiner. Similarly, each group listened to either the art or travel type selection.

All material was mimeographed. Copies of each reading selection and test used will be found in the appendix.

Pupils. Of the one hundred and seventy three children who began this study, one hundred and thirty two completed it. The children tested were from the following schools: sixty eight from Natick, Mass., twenty five from Norfolk, Mass., and thirty nine from Boston, Mass.
Reading ages were obtained from the Metropolitan Achievement Tests\textsuperscript{1} and the Durrell Sullivan Reading Achievement Tests.\textsuperscript{2} Intelligence Quotients were obtained from the Kuhlmann Anderson Test.\textsuperscript{3}

Chronological ages were procured from school records.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline
\hline
\textbf{No.} & 2 & 2 & 2 & 9 & 13 & 11 & 12 & 26 & 22 & 13 & 6 & 5 & 7 & 1 & 1 \textbf{Total} & 132 \\
\hline
\end{tabular}
\end{table}

I.Q.'s ranged from 66 to 135. The median I.Q. was 102.40 and the quartile range was 8.87.


### TABLE I

**Chart 2**

**Distribution of Reading Grades**

<table>
<thead>
<tr>
<th>Grades</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-2.4</td>
<td>4</td>
</tr>
<tr>
<td>2.5-2.9</td>
<td>18</td>
</tr>
<tr>
<td>3-3.4</td>
<td>16</td>
</tr>
<tr>
<td>3.5-3.9</td>
<td>32</td>
</tr>
<tr>
<td>4-4.4</td>
<td>14</td>
</tr>
<tr>
<td>4.5-4.9</td>
<td>20</td>
</tr>
<tr>
<td>5-5.4</td>
<td>16</td>
</tr>
<tr>
<td>5.5-5.9</td>
<td>5</td>
</tr>
<tr>
<td>6-6.4</td>
<td>2</td>
</tr>
<tr>
<td>6.5-6.9</td>
<td>1</td>
</tr>
<tr>
<td>7-7.4</td>
<td>2</td>
</tr>
<tr>
<td>7.5-7.9</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
</tr>
</tbody>
</table>

The reading grades ranged from 2.1 to 7.8. The median was 3.88. The quartile range was .77.

**Chart 3**

**Distribution of Chronological Ages**

<table>
<thead>
<tr>
<th>Ages</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-8.2</td>
<td>1</td>
</tr>
<tr>
<td>8.3-8.5</td>
<td>0</td>
</tr>
<tr>
<td>8.6-8.8</td>
<td>4</td>
</tr>
<tr>
<td>8.9-9.1</td>
<td>23</td>
</tr>
<tr>
<td>9-9.2</td>
<td>24</td>
</tr>
<tr>
<td>9.3-9.5</td>
<td>30</td>
</tr>
<tr>
<td>9.6-9.8</td>
<td>21</td>
</tr>
<tr>
<td>9.9-10.1</td>
<td>12</td>
</tr>
<tr>
<td>10-10.2</td>
<td>4</td>
</tr>
<tr>
<td>10.3-10.5</td>
<td>7</td>
</tr>
<tr>
<td>10.6-10.8</td>
<td>4</td>
</tr>
<tr>
<td>10.9-11.1</td>
<td>1</td>
</tr>
<tr>
<td>11-11.2</td>
<td>0</td>
</tr>
<tr>
<td>11.3-11.5</td>
<td>0</td>
</tr>
<tr>
<td>11.6-11.8</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
</tr>
</tbody>
</table>

Chronological ages ranged from 8-0 to 11-7. The median age was 9-4. The quartile range was 4 months.

**Presentation.** The eight stories were presented over a two week period. Two selections, one oral and one silent, were administered at each of the four sittings. The presentation of each pair of selections took approximately thirty minutes. The
examiner read aloud all test items for both oral and silent selections. The pupils followed silently and underlined the correct answer. This procedure was used to eliminate reading difficulties.

The six fourth grade classes taking part were divided into two groups. Group A consisted of one class from Norfolk, Natick and Boston. Group B consisted of one class from Boston and two from Natick. These groups each consisted of sixty six pupils.

The directions for the administration of the tests were as follows:

**Silent Presentation:**

1. "I am going to put a paper on your desk. Please do not turn this paper over until I say so. When I say 'begin', turn it over and read it to yourself once very carefully. Do not write on this paper. As soon as you finish reading, turn your paper over. Once it is turned do not turn it back again. After you have finished we will answer some questions about what you have read."

2. Collect all reading papers.

3. Distribute test papers face down.

4. "Please do not turn this paper over until I tell you. At the bottom of the paper write your name and the name of your school. I will read each question aloud. You may follow the reading silently. Draw a line under the word or words
that make each sentence correct after I have finished reading all parts of the question. Only one answer is correct. Put your pencils down and turn your papers over when you have finished."

5. Collect test papers.

**Oral Presentation:**

1. "I am going to read a story to you. When I am finished we are going to answer some questions about it. Listen carefully."

2. Read story to pupils.

3. Pass out test papers face down.

4. "Please do not turn this paper over until I tell you. At the bottom of the paper write your name and the name of your school. I will read the questions aloud. You may follow along silently. Draw a line under the word or words that make each sentence correct after I have finished reading all parts of the question. Only one answer is correct. Put your pencils down and turn your papers over when you have finished.

5. Collect test papers.

**Scoring and Recording.** One point was given for each correct answer in the multiple choice type tests. Results for each child were recorded on individual mimeographed charts where
reading age, chronological age, I.Q., school and test group had been recorded.

Pages 17 and 18 present a sample of a reading selection and multiple choice type test.
What the Colonists Learned from the Indians (F)

The Indians taught the white man many valuable things, -- the worth of Indian Corn, the way of hunting and fishing, the value of the canoe, the wigwam form of tent, the use of the moccasin for traveling in the forest, and of the snowshoe for walking on the surface of the snow in winter in search of food.

They also taught the colonists how to make corn grow in the forest by burning or girdling the trees, thereby killing them and letting in the sunshine. Thus the crops grew without the hard labor of cutting down the trees. The colonists were also taught by the red man how to hunt and trap game and to fish through the ice of the lakes and rivers. When treated with kindness the Indian was a friend and often warned the colonists of the approach of Indian war parties.
A MULTIPLE CHOICE TEST (F)

1. The things which the Indians taught the colonists were (a) harmful, (b) valuable, (c) unimportant.

2. Indians taught the white man the worth of Indian (a) corn, (b) wigwams, (c) cooking.

3. The value of the (a) boat, (b) canoe, (c) ship was learned from the Indians.

4. The Indians cleared the forest by (a) burning the trees, (b) chopping the trees, (c) growing corn in the forest.

5. They planted corn (a) in plowed fields, (b) in cleared forest, (c) on hilly land.

6. The colonists learned better ways of hunting and (a) trapping, (b) shooting, (c) fishing.

7. For traveling through the forest the Indians (a) walked barefoot, (b) wore snowshoes, (c) wore moccasins.

8. Girdling the trees (a) destroys them, (b) weakens them, (c) strengthens them.

9. When we say "colonists" we mean (a) natives, (b) red men, (c) white men.

10. The Indians were (a) always, (b) sometimes, (c) never a friend of the white man.

11. Burning and girdling the trees let in (a) heat, (b) sun, (c) rain.

12. The approach of Indian Parties was often a sign of (a) war, (b) rejoicing, (c) friendship.

13. Indians broke through the ice of lakes and rivers so that they could (a) obtain water for drinking, (b) fish, (c) paddle their canoes.

14. Indian methods of growing corn made the colonists work (a) harder, (b) about the same, (c) easier.

15. The Indians were friendly if they were (a) treated with kindness, (b) paid with corn, (c) allowed to hunt.
CHAPTER IV

ANALYSIS OF DATA

The data was analyzed to determine:

1. Whether silent reading or listening is more effective in teaching factual material in grade four.

2. Compare the relative superiority of silent reading or listening for the poor readers.

3. Compare the relative superiority of silent reading or listening for the superior readers.

4. Compare the relative superiority of silent reading or listening for the boys.

5. Compare the relative superiority of silent reading or listening for the girls.

6. Compare the relative superiority of silent reading or listening for the history selections.

7. Compare silent reading and listening scores for exceptional cases in favor of silent reading.

8. Compare silent reading and listening scores for exceptional cases in favor of listening.
TABLE II

Comparison of Material Heard and Material Read Silently

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.E. M.</th>
<th>Diff.</th>
<th>S.E. Diff.</th>
<th>C.R.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent Reading</td>
<td>132</td>
<td>42.76</td>
<td>9.96</td>
<td>.87</td>
<td>.24</td>
<td>1.11</td>
<td>.22</td>
</tr>
<tr>
<td>Hearing</td>
<td>132</td>
<td>42.52</td>
<td>8.08</td>
<td>.70</td>
<td>1.11</td>
<td>.22</td>
<td></td>
</tr>
</tbody>
</table>

The mean test score for those selections read silently was 42.76 as compared with 42.52 for those selections heard.

The difference between the means was .24 in favor of silent reading.

The critical ratio was .22 which is not statistically significant and shows only a very slight tendency for this population to make better gains by silent reading than by hearing.
TABLE III
Comparison of Material Heard and Material Read Silently for 44 Poorest Readers

Chart 1
Distribution of Reading Grades for 44 Poorest Readers

<table>
<thead>
<tr>
<th>Reading Grade</th>
<th>2-2.4</th>
<th>2.5-2.9</th>
<th>3-3.4</th>
<th>3.5-3.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>4</td>
<td>18</td>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>

The reading grades ranged from 2.1 to 3.5. The mean reading grade was 2.98. The median was 2.95 and the quartile range was .32.

Chart 2
Comparison of Material Heard and Material Read Silently

<table>
<thead>
<tr>
<th>Total Scores for 44 Poorest Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Hearing</td>
</tr>
<tr>
<td>Silent Reading</td>
</tr>
</tbody>
</table>

The mean hearing score for the 44 poorest readers was 37.50 as compared with a mean score of 34.58 for those selections read silently. The difference between the means was 2.92 in favor of
The critical ratio was 1.93 which is not statistically significant although it shows a tendency for poor readers to make better gains by hearing than by silent reading.
TABLE IV

Comparison of Material Heard and Material Read Silently for 44 Superior Readers

Chart 1

Distribution of Reading Grades for 44 Superior Readers

<table>
<thead>
<tr>
<th>Reading Grade</th>
<th>4.5-4.9</th>
<th>5-5.4</th>
<th>5.5-5.9</th>
<th>6-6.4</th>
<th>6.5-6.9</th>
<th>7-7.4</th>
<th>7.5-7.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>16</td>
<td>16</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

The reading grades ranged from 4.5 to 7.8. The mean reading grade was 5.36. The median was 5.36. The quartile range was .48.

Chart 2

Comparison of Material Heard and Material Read Silently

<table>
<thead>
<tr>
<th>Total Scores for 44 Superior Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Silent Reading</td>
</tr>
<tr>
<td>Hearing</td>
</tr>
</tbody>
</table>

The mean silent reading score for the 44 superior readers was 49.40 as compared with the hearing score of 47.90. The difference between the means was 1.50 in favor of silent reading.

The critical ratio was 1.03 which is not statistically significant although it shows a slight tendency for the superior
readers in this population to make better gains by silent reading than by hearing.
TABLE V

Comparison of Hearing and Reading Scores for Girls (58)

<table>
<thead>
<tr>
<th></th>
<th>Total Scores for All Girls (58)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Silent Reading</td>
<td>58</td>
</tr>
<tr>
<td>Hearing</td>
<td>58</td>
</tr>
</tbody>
</table>

The mean test score for silent reading for the girls was 41.92 as compared with a mean score of 40.84 for hearing. The difference between the two means was 1.08 in favor of silent reading.

The critical ratio was .61 which is not statistically significant and shows only a very slight tendency for the girls in this population to make better gains by silent reading.
TABLE VI

Comparison of Hearing and Reading

Scores for Boys (74)

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.E. M.</th>
<th>Diff.</th>
<th>S.E. Diff.</th>
<th>C.R.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing</td>
<td>74</td>
<td>43.80</td>
<td>7.08</td>
<td>.82</td>
<td>.28</td>
<td>1.38</td>
<td>.20</td>
</tr>
<tr>
<td>Silent Reading</td>
<td>74</td>
<td>43.52</td>
<td>9.60</td>
<td>1.12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean test score for hearing for the boys was 43.80 as compared with a mean score of 43.52 for silent reading. The difference between the means was .28 in favor of hearing.

The critical ratio was .20 which is not statistically significant and shows only a very slight tendency for the boys in this population to make better gains by hearing.
This analysis was made because the entire four selections contained purely factual material, whereas the remaining four selections were of a more general nature.

**TABLE VII**

Comparison of Material Heard and Material Read Silently in Four History Selections

<table>
<thead>
<tr>
<th></th>
<th>Total Scores for 132 Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Silent Reading</td>
<td>132</td>
</tr>
<tr>
<td>Hearing</td>
<td>132</td>
</tr>
</tbody>
</table>

The mean test score in silent reading for the four history selections used was 20.73 as compared with a score of 20.55 for those selections heard. The mean difference was .18 in favor of silent reading.

The critical ratio was .20 which is not statistically significant.
In spite of the general conclusions reached, the following exceptions were found. Each of these cases scored ten or more points difference between silent reading and hearing.

**TABLE VIII**

Exceptional Cases in Silent Reading

Chart 1

Comparison of Material Heard and Material Read Silently

For 15 Exceptional Cases

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.E. M.</th>
<th>Diff.</th>
<th>S.E. Diff.</th>
<th>C.R.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent Reading</td>
<td>15</td>
<td>48.92</td>
<td>7.80</td>
<td>2.00</td>
<td>16.80</td>
<td>2.81</td>
<td>5.97</td>
</tr>
<tr>
<td>Hearing</td>
<td>15</td>
<td>32.12</td>
<td>7.72</td>
<td>1.98</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean silent reading score was 48.92 as compared with a hearing score of 32.12. The difference between the means was 16.80 in favor of silent reading.

The critical ratio was 5.97 which is statistically significant. This shows that these pupils gained more from silent reading than from hearing the selections.
Although more than half of the cases noted were reading below grade level these pupils scored much higher in silent reading than in hearing.

Chart 2

Distribution of Reading Grades for 15 Exceptional Cases

<table>
<thead>
<tr>
<th>Reading Grades</th>
<th>2.5-2.9</th>
<th>3-3.4</th>
<th>3.5-3.9</th>
<th>4-4.4</th>
<th>4.5-4.9</th>
<th>5-5.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

The reading grades ranged from 2.9 to 5.4. The median grade was 3.80. The quartile range was .62.

Chart 3

Exceptional Cases in Silent Reading

<table>
<thead>
<tr>
<th>Pupil</th>
<th>C.A.</th>
<th>R.A.</th>
<th>I.Q.</th>
<th>Reading Score</th>
<th>Hearing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8-10</td>
<td>4.7</td>
<td>114</td>
<td>51</td>
<td>28</td>
</tr>
<tr>
<td>2</td>
<td>8-10</td>
<td>3.3</td>
<td>109</td>
<td>41</td>
<td>27</td>
</tr>
<tr>
<td>3</td>
<td>9-1</td>
<td>3.8</td>
<td>95</td>
<td>47</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>9-3</td>
<td>4.8</td>
<td>105</td>
<td>52</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>9-4</td>
<td>3.8</td>
<td>91</td>
<td>46</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>9-5</td>
<td>5.4</td>
<td>99</td>
<td>55</td>
<td>44</td>
</tr>
<tr>
<td>7</td>
<td>9-6</td>
<td>5.4</td>
<td>123</td>
<td>56</td>
<td>42</td>
</tr>
<tr>
<td>8</td>
<td>9-7</td>
<td>4.3</td>
<td>100</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td>9</td>
<td>9-9</td>
<td>3.0</td>
<td>89</td>
<td>45</td>
<td>32</td>
</tr>
<tr>
<td>10</td>
<td>9-10</td>
<td>3.7</td>
<td>82</td>
<td>38</td>
<td>24</td>
</tr>
<tr>
<td>11</td>
<td>9-11</td>
<td>2.9</td>
<td>82</td>
<td>29</td>
<td>16</td>
</tr>
<tr>
<td>12</td>
<td>9-11</td>
<td>3.6</td>
<td>97</td>
<td>54</td>
<td>36</td>
</tr>
<tr>
<td>13</td>
<td>10-1</td>
<td>3.3</td>
<td>82</td>
<td>45</td>
<td>21</td>
</tr>
<tr>
<td>14</td>
<td>10-5</td>
<td>3.8</td>
<td>86</td>
<td>53</td>
<td>39</td>
</tr>
<tr>
<td>15</td>
<td>10-5</td>
<td>4.5</td>
<td>69</td>
<td>57</td>
<td>30</td>
</tr>
</tbody>
</table>
Again in spite of the general conclusions reached, the following exceptions were found. Each of these cases scored ten or more points difference between silent reading and hearing.

**TABLE IX**

Exceptional Cases in Hearing

Chart 1

Comparison of Material Heard and Material Read Silently for 15 Exceptional Cases

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.E. M.</th>
<th>Diff.</th>
<th>S.E. Diff.</th>
<th>C.R.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing</td>
<td>15</td>
<td>45.72</td>
<td>6.28</td>
<td>1.61</td>
<td>16.24</td>
<td>2.15</td>
<td>7.55</td>
</tr>
<tr>
<td>Silent Reading</td>
<td>15</td>
<td>29.48</td>
<td>5.60</td>
<td>1.44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean hearing test score for the 15 exceptional cases in hearing was 45.72 as compared with a mean score of 29.48 for those selections read silently. The difference between the means was 16.24 in favor of hearing.

The critical ratio was 7.55 which is statistically significant and shows that these 15 pupils gained much more from hearing than from silent reading of these selections.
TABLE IX - Continued

Chart 2
Distribution of Reading Grades for 15 Exceptional Cases

<table>
<thead>
<tr>
<th>Reading Grades</th>
<th>2-2.4</th>
<th>2.5-2.9</th>
<th>3-3.4</th>
<th>3.5-3.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

The reading grades ranged from 2.1 to 3.8. The median grade was 3.03. The quartile range was .51.

Chart 3
Exceptional Cases in Hearing

<table>
<thead>
<tr>
<th>Pupil</th>
<th>C.A.</th>
<th>R.A.</th>
<th>I.Q.</th>
<th>Reading Score</th>
<th>Hearing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8-9</td>
<td>3.0</td>
<td>111</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>2</td>
<td>8-9</td>
<td>3.2</td>
<td>114</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>9-0</td>
<td>3.7</td>
<td>105</td>
<td>35</td>
<td>51</td>
</tr>
<tr>
<td>4</td>
<td>9-2</td>
<td>2.1</td>
<td>97</td>
<td>25</td>
<td>39</td>
</tr>
<tr>
<td>5</td>
<td>9-5</td>
<td>2.8</td>
<td>93</td>
<td>33</td>
<td>49</td>
</tr>
<tr>
<td>6</td>
<td>9-5</td>
<td>3.6</td>
<td>87</td>
<td>37</td>
<td>52</td>
</tr>
<tr>
<td>7</td>
<td>9-5</td>
<td>2.9</td>
<td>108</td>
<td>31</td>
<td>43</td>
</tr>
<tr>
<td>8</td>
<td>9-6</td>
<td>2.9</td>
<td>85</td>
<td>43</td>
<td>53</td>
</tr>
<tr>
<td>9</td>
<td>9-6</td>
<td>3.7</td>
<td>103</td>
<td>33</td>
<td>57</td>
</tr>
<tr>
<td>10</td>
<td>9-6</td>
<td>2.8</td>
<td>105</td>
<td>34</td>
<td>46</td>
</tr>
<tr>
<td>11</td>
<td>9-8</td>
<td>2.9</td>
<td>81</td>
<td>31</td>
<td>45</td>
</tr>
<tr>
<td>12</td>
<td>9-10</td>
<td>3.5</td>
<td>91</td>
<td>27</td>
<td>39</td>
</tr>
<tr>
<td>13</td>
<td>10-5</td>
<td>3.8</td>
<td>82</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>14</td>
<td>10-5</td>
<td>2.5</td>
<td>80</td>
<td>18</td>
<td>37</td>
</tr>
<tr>
<td>15</td>
<td>10-7</td>
<td>3.0</td>
<td>73</td>
<td>24</td>
<td>37</td>
</tr>
</tbody>
</table>
CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine by means of multiple choice type tests whether silent reading or listening is more effective in teaching in grade four.

Eight selections were presented to one hundred and thirty two fourth grade children, in six different classes, in three Massachusetts communities. The examiner read four selections aloud to the pupils and the pupils read four selections silently. After each presentation the examiner read aloud each item from the multiple choice type tests. The pupils followed silently and underlined the correct answer. Each correct response was allotted one point.

Conclusions. The following conclusions were made from analysis of the scores:

1. For the group as a whole there was no significant difference between silent reading and hearing. The mean for silent reading score was 42.76 as compared with a mean score of 42.52 for those selections heard. The difference between the means was .24 in favor of silent reading. A critical ratio of .22 indicates this.

2. Hearing was slightly superior to silent reading for the poorer readers. The mean for hearing was 37.50 as compared with a mean score of 34.58 for silent reading. The difference
between these means was 2.92. The critical ratio was 1.93.

3. Silent reading was slightly superior to hearing for the superior readers. The mean for silent reading was 49.40 as compared with a mean for hearing of 47.90. The difference between the means was 1.50 in favor of silent reading. The critical ratio was 1.03.

4. Girls were only slightly superior in silent reading. A mean silent reading score of 41.92 as compared with a hearing score of 40.84 reveals this. The difference between the means was 1.08 in favor of silent reading. The critical ratio was .61.

5. Boys were only slightly superior in hearing. This is revealed by a mean for hearing of 43.80 as compared with a silent reading mean of 43.53. The difference between the means was .28 in favor of hearing. The critical ratio was .20.

6. There is no significant difference between silent reading and hearing in the four history selections used. The mean for silent reading was 20.73 as compared with the mean for hearing of 20.55. The difference between the means was .18 in favor of silent reading. The critical ratio was .30.

The following conclusions concerned those pupils whose silent reading scores differed from the hearing scores by ten or more points.

1. For the fifteen exceptional cases in silent reading the mean for silent reading was 48.92 as compared with a hearing mean of 32.12. The difference between the means was 16.80 in
favor of silent reading. The critical ratio was 5.97.

2. For the fifteen exceptional cases in hearing the mean for hearing was 45.72 while the mean for silent reading was 29.48. The difference between the means was 16.24 in favor of hearing. The critical ratio was 7.55.

The following implications may be drawn from these conclusions:

1. A need for an individual study of those cases who scored higher in silent reading than in hearing despite low reading grades seems to be indicated in order to determine the cause of such differences.

2. It seems probable that these children who scored higher in hearing than in silent reading would benefit educationally from an increased amount of oral presentation of material in the classroom.


Larsen, Robert P., Feder, D. D. "Common and Differential Factors in Reading and Hearing Comprehension." Journal of Educational Psychology. 31: 241-252; April, 1940.


Young, William E. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention." Journal of Experimental Education. 5:30-39; September, 1936.
Selection A

The Early Stove Industry of Detroit

The first stoves were shipped to Detroit from the East on the Erie Canal. This early stove did not satisfy the needs of the people because they were little more than iron boxes with a smaller iron box on top which was used for an oven.

The manufacture of stoves really began in Detroit during the 1830's. The people did not like waiting for a new stove or new parts if their stove became broken or cracked. The new stove and new parts had to be shipped from Albany and Troy, New York. Someone started repairing the parts of the broken stoves under the name of "Iron Works."

Young Jerry Dwyer, who was left alone at the age of eleven years, went to work in the "Iron Works." After a long while he decided to go into the stove business for himself. Later because of many hardships he took two partners into his business. The business then became known as the Detroit Stove Works. Other people started making stoves in Detroit, too, thus causing Detroit to become the largest stove-producing center in this country.
Multiple Choice Test - A

1. The first stoves were shipped to Detroit from (a) the north (b) the west (c) the east

2. The body of water used to ship the stoves was (a) Lake Michigan (b) Lake Superior (c) Lake Erie

3. The early stoves shipped to Detroit were like (a) an iron box (b) a round tube (c) a large tub

4. The oven on these early stoves was (a) on the side (b) on the top (c) in the middle

5. This early stove (a) pleased the people (b) did not satisfy the people (c) was very small

6. The people did not like to wait for (a) old parts (b) new parts (c) iron kettles

7. Very often these early stoves became (a) very hot (b) broken (c) dirty

8. These early stoves were made of (a) copper (b) steel (c) iron

9. Young Jerry Dwyer was left (a) on the street (b) alone (c) in a house

10. When the stoves became broken or cracked they were (a) thrown away (b) repaired (c) sent back

11. Because young Jerry was alone he went (a) away (b) to play (c) into business

12. In his business Jerry had (a) many hardships (b) many friends (c) many buildings

13. The number of partners Jerry had in his business was (a) six (b) three (c) two

14. The name of Jerry's business was (a) Stove Business (b) Jerry's Stoves (c) The Detroit Stove Works

15. Detroit became the stove producing center in this country because (a) more stoves were shipped (b) many people started making stoves (c) more people bought stoves
Selection B

Peace With Canada

Part of our second war with Great Britain in 1812 was fought on the Great Lakes. This was quite natural, because they lie between the U.S. and Canada and Canada belonged to Great Britain. The position of the lakes makes them an easy road into either country. When the war ended, and the treaty was signed in 1815, both nations had gunboats on the lakes, and each side continued to build more boats at a great rate. However in 1815 Congress told President Madison to sell or lay up all the lake fleet not needed to prevent smuggling. England was asked to do the same thing, so she sent over Charles Bagot to discuss such an arrangement. He and the American representative signed a treaty which put a limit to the number of ships each country might have. This was the beginning of what has turned out to be a long peace with good feeling between the United States and Canada.
Multiple Choice Test - B

1. The second war was fought with (a) Great Britain (b) France (c) Canada

2. This war was fought in (a) 1815 (b) 1812 (c) 1817

3. Part of the war was fought on (a) England's shore (b) United States (c) Great Lakes

4. This was natural because (a) the lakes are a good way into either country (b) the two countries wanted to fight (c) the lakes always have water

5. The lakes lie between (a) Canada and Spain (b) Canada and England (c) Canada and the United States

6. When the war started (a) both nations built more boats (b) both nations stopped building boats (c) both nations did nothing

7. Some gunboats belonged to (a) Canada and the United States (b) Canada and Spain (c) Canada and the Great Lakes

8. The President at the time was (a) Adams (b) Madison (c) Jefferson

9. The President was told by (a) the king (b) the Congress (c) the people

10. England was asked (a) to build more boats (b) limit the number of boats (c) scrap all her boats

11. England's representative was (a) William Harrison (b) Charles Bagot (c) James Polk

12. Both representatives signed (a) a truce (b) a treaty (c) a check

13. This agreed to (a) sink all the boats left (b) keep no boats (c) limit the number of boats

14. The boats kept were used to (a) stop smuggling (b) hold the boundary (c) hold war games

15. Both countries then had (a) a long period of war (b) a long period of peace (c) a long period of sailing
The Clipper Ship Trade Of Boston

A few years after the United States won its freedom, a ship "The Grand Turk," came back from China. It was the first Yankee clipper to have made the voyage. It started an age that was full of excitement. Within six years the merchants had established a new trade route from Boston to the northwest coast. There the ships were loaded with skins from the Indians to trade with the Chinese. They returned to Boston carrying treasures from the far East. The smell of cinnamon and sandlewood drifting up from Long Wharf scented the air. Fine china and beautiful silks became common luxuries in Boston. Brave men rounded South America as fearlessly as Cape Cod. An American was greeted in the Far East as "Bostonian." Ships and lives were lost in this bold adventure, but great fortunes were made.
Multiple Choice Test - C

1. The name of the ship that came back from China was the
   (a) Flying Cloud (b) Grand Turk (c) Star of Kansas

2. The clipper returned from China after the United States
   (a) won its freedom (b) lost its freedom (c) invaded
   England

3. The first ship to return was the (a) Star of Kansas
   (b) The Flying Cloud (c) The Grand Turk

4. The merchants established new trade routes (a) with
   England (b) with northeast (c) with the northwest

5. This trading with the Far East started a new age (a) that
   was full of calmness (b) that was full of excitement
   (c) that was unimportant

6. The trade routes were established (a) in six years
   (b) in one year (c) in twenty years

7. The ships were loaded in the northwest (a) with fish
   (b) with skins (c) with coffee

8. The ships returned from China carrying (a) articles of
   little value (b) corn (c) treasures

9. The air was scented with the smell of (a) rubber
   (b) cinnamon (c) violets

10. The smell drifted up from the (a) factory (b) wharf
    (c) hills

11. From China the merchants brought back (a) fine china
    (b) coffee (c) rubber

12. A common luxury in Boston at this time was (a) cotton
    (b) silk (c) rayon

13. An American was greeted in the Far East as (a) "Virginian"
    (b) "New Yorker" (c) "Bostonian"

14. Brave men went to China by rounding (a) North America
    (b) South America (c) Greenland

15. The new trading with China made many merchants in Boston
    (a) poor (b) wealthy (c) unhappy
The Hippopotamus

In the dense forest hidden behind the vines, the jungle friends dwelt. The bravest of all the animals was the hippopotamus who called himself king of the animal kingdom. Perched high in the tree was an owl who seemed to guard the forest by night. As the hippopotamus lay near the pool the owl gave a weird shriek, "Who gave you the right to rule the kingdom? This forest rightfully belongs to my father. I am commanding you to release your kingship at once. All day you give orders to the forest dwellers and they follow your orders. In the name of Sir Owl the Great, I bid you dismount the throne."

Boldly the hippopotamus spoke, "Just one whisk at you my fine feathered friend and all this kingdom would come to pass. I absolutely refuse to take orders from one as small and commanding as you. This native home I will never leave."

As the last words faded from the hippopotamus' lips, the owl landed on the hippopotamus' back and pierced his claws near the king's heart. This brought immediate death to the ruler of the kingdom.
Multiple Choice Test - D

1. The forest rightfully belonged to the (a) owl's uncle (b) owl's father (c) hippopotamus
2. The jungle friends dwelt (a) in the woods (b) in the dense forest (c) in the kingdom
3. The hippopotamus was killed by (a) owl's beak (b) owl's claws (c) another animal
4. Sir Owl the Great bade the hippopotamus (a) come out of the pool (b) dismount the throne (c) follow his orders
5. Very still the hippopotamus lay near (a) the river (b) the lake (c) the pool
6. The owl guarded the forest (a) all day (b) all night (c) day and night
7. The kingdom would come to pass from (a) whisk (b) battle (c) death
8. When last words faded from Owl's lips (a) owl fell dead (b) hippopotamus fell dead (c) owl pierced claws in hippopotamus
9. The bravest of all the animals was (a) lion (b) owl (c) hippopotamus
10. All day the "hippo" gave orders to (a) cave dwellers (b) forest dwellers (c) tree dwellers
11. The owl gave a (a) funny laugh (b) weird shriek (c) snort
12. Sir Owl the Great was called (a) high feathered friend (b) fine feathered friend (c) feathered friend
13. The hippopotamus spoke to the owl (a) pleasantly (b) angrily (c) boldly
14. The hippopotamus was pierced by the owl (a) near his brain (b) near his heart (c) in his back
15. The hippopotamus told Sir Owl the Great (a) that he would never leave home (b) that he was happy to leave home (c) that he was afraid to leave home
Selection E

Mexican Pottery

Pedro is a Mexican boy who lives in Puebla. He is part Spanish and Indian.

Long ago missionaries from Spain settled in Mexico. These Spanish missionaries introduced a coating which is used on pottery that the people of Puebla make. This coating which contains lead and tin is often called glaze. The pottery is baked once, then coated or glazed, and later decorated with bright blue or yellow. Although many kinds of things are made of this pottery, the most important ones are tiles and large jars. These are decorated with colorful designs of birds and flowers. Figures of saints are also used on the tiles.

Some of the pottery of Puebla is a copy from the 1700's. It can be recognized by its colors of orange, black, and pale green. Many different designs are drawn on it which make us think of Europe and China. Pedro helps his parents make this pottery.
A MULTIPLE CHOICE TEST (E)

1. The Mexican boy in this story is called (a) Pedro (b) Laredo (c) Jose

2. He lives in (a) Mexico City (b) Puebla (c) Taxco

3. Mexicans are part (a) Chinese (b) Indian (c) Italian

4. Missionaries who settled in Mexico in early times came from (a) India (b) Mexico (c) Spain

5. The people of Puebla make (a) coats (b) rugs (c) pottery

6. The glaze used on the pottery contains (a) copper and tin (b) lead and copper (c) tin and lead

7. The coating put on the pottery is called (a) glaze (b) copper (c) yellow

8. The pottery is baked (a) once (b) twice (c) three times

9. After the pottery is baked it is (a) decorated (b) glazed (c) painted

10. Pictures of saints are painted mostly on (a) jars (b) tiles (c) birds

11. Some of the pottery is copied from pottery of (a) 1492 (b) 1918 (c) 1700

12. Pottery is decorated with (a) ships (b) birds (c) Indians

13. Some of the designs make us think of (a) China (b) Europe (c) United States

14. Pedro helps his (a) friends (b) brother (c) parents make pottery.

15. (a) Many (b) Few (c) No things are made of pottery in Puebla.
Selection F

What the Colonists Learned from the Indians

The Indians taught the white man many valuable things, - - the worth of Indian corn, the way of hunting and fishing, the value of the canoe, the wigwam form of tent, the use of the moccasin for traveling in the forest, and of the snowshoe for walking on the surface of the snow in winter in search of food.

They also taught the colonists how to make corn grow in the forest by burning or girdling the trees, thereby killing them and letting in the sunshine. Thus the crops grew without the hard labor of cutting down the trees. The colonists were also taught by the red man how to hunt and trap game and to fish through the ice of the lakes and rivers. When treated with kindness the Indian was a friend and often warned the colonists of the approach of Indian war parties.
A MULTIPLE CHOICE TEST (F)

1. The things which the Indians taught the colonists were (a) harmful (b) valuable (c) unimportant.

2. Indians taught the white man the worth of Indian (a) corn (b) wigwams (c) cooking.

3. The value of the (a) boat (b) canoe (c) ship was learned from the Indians.

4. The Indians cleared the forest by (a) burning the trees (b) chopping the trees (c) growing corn in the forest.

5. They planted corn (a) in plowed fields (b) in cleared forest (c) on hilly land.

6. The colonists learned better ways of hunting and (a) trapping (b) shooting (c) fishing.

7. For traveling through the forest the Indians (a) walked barefoot (b) wore snowshoes (c) wore moccasins.

8. Girdling the trees (a) destroys them (b) weakens them (c) strengthens them.

9. When we say "colonists" we mean (a) natives (b) red men (c) white men.

10. The Indians were (a) always (b) sometimes (c) never a friend of the white man.

11. Burning and girdling the trees let in (a) heat (b) sun (c) rain.

12. The approach of Indian parties was often a sign of (a) war (b) rejoicing (c) friendship.

13. Indians broke through the ice of lakes and rivers so that they could (a) obtain water for drinking (b) fish (c) paddle their canoes.

14. Indian methods of growing corn made the colonists work (a) harder (b) about the same (c) easier.

15. The Indians were friendly if they were (a) treated with kindness (b) paid with corn (c) allowed to hunt.
The Matterhorn

The Matterhorn is a beautiful glittering mountain peak on the Italian border of the Swiss Alps. Climbing the mountain is often dangerous because fog and snowstorms often occur.

As one travels up the valley the Matterhorn looks like the paws of a crouching tiger. Along the roadside are broken cliffs and steep slopes. Nearby is a museum containing clothes and ice axes of English climbers. From here the zigzag path stretches on. Behind them is a deep valley with high steep slopes. Along the ice-covered trail is a shelter. Rising above is a huge half circle of rocky crags. The Matterhorn is now an overhanging cliff a mile high. Following the trail the climber must climb up and down pointed rocks which are like the teeth of a saw. These rocks are not more than twenty inches wide. He must then climb straight upward on rocks and cliffs a thousand feet. The wind blows very hard all the time.

Near the top ropes are tied to iron stakes. The climber has to pull himself up these ice-covered ropes hand over hand. As he reaches the top the snow blows around and it is hard to breathe because of the thin air.

Adapted from Richard Haliburton's "Royal Road to Romance"
A MULTIPLE CHOICE TEST (G)

1. The Matterhorn is a mountain peak that is (a) low (b) dismal (c) sparkling.

2. The Matterhorn is located on the (a) Swiss border (b) Italian border (c) English border.

3. Climbing the mountain is dangerous because of (a) fog (b) thin air (c) crouching tigers.

4. Along the roadside are broken (a) valleys (b) cliffs (c) sticks.

5. Near the roadside is a (a) restaurant (b) store (c) museum.

6. The trail up the mountain is covered with (a) ice (b) snow (c) sand.

7. For protection from the storms the mountain climbers use (a) the museum (b) a shelter (c) ropes.

8. The overhanging cliff of the Matterhorn from the path is (a) a mile high (b) a thousand feet (c) a hundred feet.

9. The rocks are (a) flat (b) smooth (c) pointed.

10. The climber must climb on rocks less than (a) 12 inches wide (b) 20 inches wide (c) 36 inches wide.

11. The wind blows (a) hard (b) little (c) none at all.

12. (a) Ropes (b) Stakes (c) Irons are tied near the top to help the climbers.

13. (a) Wooden (b) Iron (c) Concrete stakes are driven into the rock near the top of the mountain.

14. At the top of the mountain it is hard to (a) hear (b) breathe (c) see.

15. The air on the top of the mountain is (a) heavy (b) thin (c) quiet.
Selection H

A Thrilling Experience

When Tom arrived at his uncle's ranch in Texas, his eyes were wide with excitement. He had just been told that a panther, an animal similar to a lion, had been killing cattle and spreading terror in the village.

That night several men were going to set a trap for the wild animal. Tom was invited to go along. A piece of meat was placed near a cave where the panther was believed to hide. Armed with rifles the men waited for the animal to approach.

Suddenly there was a great howl from the woods and the fierce animal emerged close to where Tom was standing. The boy was scared and trembled at the sight of the beast. Tom's uncle was an excellent shot as he had been a hunter. Calmly taking his gun, he fired at the animal's head. The animal bounded toward Tom, but his uncle fired again as it was ready to bounce on the boy. It snarled fiercely and with a great thud fell to the ground. While inspecting the animal's body, the men shuddered at the thought of what might have happened to the boy. Tom's uncle promised him that he might take the panther's skin home as a souvenir of their adventure.
1. The ranch belonged to Tom's (a) father (b) cousin (c) uncle.

2. The ranch was (a) in Colorado (b) in Texas (c) in Canada.

3. A panther is an animal similar to (a) a deer (b) a gazelle (c) a lion.

4. The panther killed (a) birds (b) cattle (c) natives.

5. The wild animal spread terror (a) in the mountains (b) in the desert (c) in the village.

6. A group of men decided (a) to tame the panther (b) to set a trap for the panther (c) to help the panther.

7. Tom was (a) invited to go (b) not invited to go (c) forgotten.

8. The boy thought it would be (a) a thrill (b) unexciting (c) unimportant.

9. A piece of meat was placed near (a) a hill (b) a barn (c) a cave.

10. The men were (a) unarmed (b) armed with clubs (c) armed with rifles.

11. The wild animal appeared very close to (a) a ranchman (b) Tom (c) the uncle.

12. The animal was ready to pounce on (a) the uncle (b) the ranchman (c) Tom.

13. The panther was shot by (a) a ranchman (b) the boy (c) the uncle.

14. The sight of the beast made the boy (a) bold (b) courageous (c) tremble.

15. Tom's uncle promised him that he might take home (a) the panther's skin (b) the rifle (c) a photograph.