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A comparison of the fluency of oral and written recall of children in the fourth grade.

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A COMPARISON OF THE FLUENCY OF ORAL AND
WRITTEN RECALL OF CHILDREN IN
THE FOURTH GRADE

Boston University
School of Education

Thesis

A Comparison of the Fluency of Oral and
Written Recall of Children in
the Fourth Grade

Submitted by
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(A. B., Emmanuel College, 1947)

In Partial Fulfillment of Requirements for the
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Boston University
School of Education
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CHAPTER I
Introduction

CHAPTER I

STATEMENT OF PROBLEM

The purpose of this study is to compare the oral recall with the written recall of children in the fourth grade. Written reports of a motion picture give evidence of the amount of words children use in written recall while recordings of oral reports of the same motion picture give oral recall results. The word "recall", as used in this study, is the controlled expression of forty six fourth grade pupils when reporting on the same motion pictures.

Results of oral recall were obtained by the use of an electric recording machine. These oral reports were recorded in a room away from the classroom disturbances. Written reports were done in the classrooms. By using two groups of children, it was possible to secure immediate and delayed recall.

The purposes of the study are:

1. To compare oral and written recall in reporting on each motion picture.
2. To compare immediate oral and written recall.
3. To compare delayed oral and written recall.
4. To compare immediate oral and delayed oral recall.

5. To compare immediate written with delayed written recall.

6. To find the relationship between oral recall and written recall.

7. To find the relationship between oral recall and mental age.

8. To find the relationship between oral recall and reading age.

9. To find the relationship between written recall and mental age.

10. To find the relationship between written recall and reading age.

PREVIOUS RESEARCH

Oral and Written Recall

Betzner¹ made a study in which she compared children's written recall with their oral recall. She found that children reproduced easy material in written form as well if not better than they did orally. Children from the third to the sixth grade showed an increase in both abilities. She found a statistically significant correlation between general intelligence and oral recall.

Oral recall was compared with written recall of silent reading in the middle grades in a study by Potter.² It was her finding that children in grades three to six reproduce easy material in writing as well and better than orally. However, if the material was difficult, the results showed that oral recall was superior. Potter also stated that as the grades ascend, there is less and less difference between oral and written recall.

In Bushnell's³ investigation, oral language was contrasted with written language. The subjects of his study were tenth grade pupils. He concluded that written composi-

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1. Betzner, Jean., "Content and Form of Children's Original Compositions", Contributions to Education, No. 442, Teachers College, Columbia University, 1932
 2. Potter, Ruth., "Comparison of Oral Recall with Written Recall of Silent Reading in the Middle Grades", Unpublished Ed. M. Thesis, Boston University, 1934
 3. Bushnell, Paul P., "An Analytical Contrast of Oral with Written English", Contributions to Education, No. 451 Teachers College, Columbia University, 1930

tion was superior to oral composition. The percentage of material that a student can reproduce in writing is about one half of the material that he can successfully identify.

Bucknam⁴ compared the fluency of unaided oral recall with unaided written recall in the silent reading of geography in grade five. She found that unaided oral recall was superior to recall which was written. The difference between these two types of recall was greater for short than for long selections.

The research of Bucknam was continued by Elliott⁵ who compared the factors related to oral and written recall. She found that between oral and written recall there was a high relationship. Children whose oral recall was high, also tended towards more fluent written recall.

Oral Recall

A study of the oral expression of children was carried on by Tarrant.⁶ The investigation indicated that a greater number of ideas was recalled when children were aided by questions rather than when their recall was unaided. She found that twelve ideas were recalled when the children

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4. Bucknam, Margaret E., "Comparison of the Fluency of Oral Recall with Written Recall in Silent Reading in Geography in Grade Five", Unpublished Ed., M. Thesis, Boston University, 1941
 5. Elliott, Vera W., "Comparisons of the Factors Related to Oral and Written Recall", Unpublished Ed., M. Thesis, Boston University, 1943
 6. Tarrant, Katherine E., "Fluency in Oral Expression", Unpublished Ed., M. Thesis, Boston University, 1940

were aided by multiple choice questions and only five ideas were expressed when the recall was unaided.

Burke⁷ studied the effect of exercises built to develop oral recall in grade six. It was found that practice in oral recall by means of graded lessons produced marked gains in oral recall ability. Practice in oral recall also produced marked gains in written recall. No significant relationship was shown between gain in recall ability and mental age. Between gain in recall and reading age, there was no significant relationship.

Written Recall

A Comparison of aided and unaided recall was made by McGeoch and Whitley.⁸ They tested eight groups of college sophomores on their observation of Binet object cards. Four groups described what they had seen in written narrative and the other four groups recalled in the form of answers to questions. The authors concluded that the curve of forgetting was greater when recall was measured by narrative than by answers to questions.

Myers⁹ carried on a study in which he studied

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7. Burke, Marie L., "An Evaluation of Workbook Exercises for Developing Oral Recall in Grade Six", Unpublished Ed., M. Thesis, Boston University, 1946
 8. McGeoch, J. A. and Whitley, P. L., "The Recall of Observed Material", Journal of Educational Psychology, 17:419-425, November, 1926
 9. Myers, G. C., "Recall in Relation to Retention", Journal of Educational Psychology, 5:123, March, 1914

recall in relation to retention. His findings indicated that immediate recall obtained in the form of written reproduction was beneficial to later reproduction of a list of unrelated words.

Courtney¹⁰ compared the relative value of measuring recall in the form of answers to multiple choice questions and in the form of essay reproduction. The findings showed that multiple choice recall was greater than essay type recall and that this difference was twice as great as the recall obtained from essay reproduction.

Among the reasons which may be attributed to the differences in lengths of oral recall and written recall, one could be the pupils' weakness in ability to spell some of the words that they can use orally. Acomb's¹¹ study revealed that spelling is a limiting factor in the amount of children's written recall.

Factors Relating to Recall

Spitzer¹² did a study which consisted of measuring recall by multiple choice test questions. He found immediate recall to be an effective method of retaining learning.

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10. Courtney, Paul D., "Recall by Reproduction versus Recall by Recognition", Unpublished Ed., M. Thesis, Boston University, 1941
 11. Acomb, Allan., "A Study of the Psychological Factors in Reading and Spelling", Unpublished Ed., M. Thesis, Boston University, 1936
 12. Spitzer, Herbert F., "Studies in Retention", Journal of Educational Psychology, 30:641-656, December, 1939

The conclusion that there is a high relationship existing between intelligence and immediate recall, was stated by Watson¹³ in his study. He found, however, that there was a greater degree of relationship between intelligence and delayed recall. This relationship increased as the periods of delayed intervals increased.

A high relationship between reading ability and recall from memory was found by Howe.¹⁴ This study was conducted with 158 fifth grade pupils.

Scott¹⁵ compared the effect of two types of workbook exercises for the improvement of recall. One type workbook used the outline analysis method while the other workbook consisted of graduated question material. Scott's findings indicated that the use of the outline analysis method caused an improvement in oral recall. Bright children made better gains than did the dull children but this difference was not statistically significant. Superior readers made superior gains but again these gains were statistically insignificant. There was a significant gain in the written recall when the outline analysis method

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13. Watson, R. I., "Relationship between Intelligence and the Retention of Course Material in Psychology", Journal of Educational Psychology, 30:265-279, April, 1939
 14. Howe, Elizabeth., "Measurement of Recall with and without Text", Unpublished Ed., M. Thesis, Boston University, 1943
 15. Scott, Helen E., "An Evaluation of Two Types of Workbook Exercises for the Improvement of Recall", Unpublished Ed., D. Dissertation, Boston University, 1949

was used.

Methods of Recording

Betts¹⁶ made a study of methods of recording children's oral reports. The results showed that recordings using an electric method were ninety percent accurate, while a court reporter's recording was eighty five percent accurate if used in grades four, five or six. If a selected shorthand reporter did the recording, the results would show eighty three percent accuracy.

A later study by Greene and Betts¹⁷ found that children up through the fifth grade were not so sensitive as were adults to the microphone. They also found that the use of the dictaphone as a means of recording was 99.8 percent accurate. Recordings made by a court reporter were 94.6 percent accurate, those obtained by a selected shorthand reporter were 64.0 percent correct and only 38.1 percent accuracy was attained when the long hand method of recording oral reports was used.

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16. Betts, E. A. "An Experimental Appraisal of a Special Technique for the Study of Oral Compositions", Ph. D. Dissertation, Iowa State University, 1931
 17. Greene, H. A. and Betts, E. A., "A New Technique for the Study of Oral Language Activities", Elementary School Journal, 33:736-761, June, 1933

CHAPTER II

Plan and Conduct of the Experiment

CHAPTER II
PLAN OF THE STUDY

Plan:

The purpose of this study is to compare the fluency of oral and written recall used by children in the fourth grade. The study was carried on in two fourth grades of one school. Each class contained twenty three pupils who could be used for the complete study - making a total of forty six pupils.

Conduct:

1. Selection of Material Used in the Study

Four sound motion pictures, each one reel, were shown to the two groups. There was a period of from one week to ten days between the showing of each film. These four motion pictures were selected because of their primary grade level. This grade level motion picture contains material and vocabulary well within the range of all fourth graders. The particular titles were chosen as the result of a class poll taken previously to discover what type pictures appealed to the children. The animal type film was preferred by the largest number of children and consequently this film was shown first. A picture about milk and how it is obtained was selected as the second film. The last two films were selected because of the interest of the groups

in transportation. The four films were all produced by the Encyclopaedia Britannica Films Inc.

Film I - "Animals of the Zoo"

Film II - "Milk"

Film III - "A Boat Trip"

Film IV - "An Airplane Trip"

Corson's¹ reasons for showing a motion picture in her study have weight here also. Most children have interest in motion pictures. The motion picture is an insurance that the child will have something about which he can write or speak. The motion picture is an aid to the author in that the child will speak and write on the same subject and all the children will recall the same motion picture.

A radio recorder was the device used to record the oral reports. Although it was necessary to use a microphone, every effort was made to help those who might be afraid of such an instrument to become less conscious of its presence. Prior to the study, the children in the groups gave many oral reports of stories they had read. Finally a trial study was carried on in which the children gave oral reports with the use of the microphone. Before the actual recording, some tension was felt among the members of the group. But

¹Corson, Hazel., "Individual Differences in the Extent and Level of the Vocabulary Used by Intermediate Grade Children", Unpublished Ed. M. Thesis, Boston University, 1938.

after the first recordings were finished, there was great interest in looking forward to the next time they would have their voices recorded. This feeling was present among the majority of the cases used in the study.

The written reports were done in the classroom. The children were given paper and pencils and directed to write all that they could remember about the motion picture they had seen.

The classes were divided into two groups - Group A and Group B. There were twenty three children in each group. Immediately following the showing of the first motion picture, the children in Group A gave their individual oral reports. Meanwhile, the members of Group B wrote their reports of the motion picture. Later the same day, the children in Group B gave their oral reports while the Group A members wrote their reports. With each motion picture, the groups were reversed in their order of recording and writing the reports.

There was no time limit for either the oral or written reports. The instructions were simple. The instructor merely said for written reports:

"Please put your name on the top line of this paper. Now, I would like you to write all that you can remember about the picture that you saw this morning. When you have finished, please leave your paper on this desk. You may have as much time as you need."

For oral reports, the following wording was used:

"I would like you to tell me everything that you can remember about the picture that you saw this morning. I know that you can't remember everything but tell me as much as you can remember. When you can't think of any more to tell, you may walk away from the microphone. Please speak clearly so that when we play this record back you will be able to hear and understand every word that you said."

2. Subjects of the Study

The subjects of this study were forty six pupils from two fourth grades in the town of Ashland. The largest number of the children in the group came from families of moderate circumstances, while a few children came from better homes and a smaller number came from poorer homes. Most of the children's parents were born in America.

3. Chronological Age Distribution of the Subjects

Table I shows the chronological age distribution of the pupils used in this study. The age range of the forty six subjects was from eight years eleven months to ten years eight months. The mean age was nine years seven months, as of February 1, 1951.

4. Mental Age Distribution of the Subjects

Table II shows the mental age distribution of the pupils. The mental ages range from exactly eight years to twelve years eleven months plus. The mean mental age was ten years eleven months. The mental ages were derived from

the results of the Otis Quick Scoring Mental Ability Tests^d which were given in February, 1951. Since the Alpha Test, Form A for grades one to four was given, it was possible for some children to exceed the standard scores given for the test. Hence, the pupils who attained scores higher than the standard scores given were recorded as having mental ages of twelve years eleven months plus.

5. Reading Ages of the Subjects

Table III shows the reading age distribution of the subjects as obtained from the results of the Durrell Sullivan Reading Capacity Test.³ The ages range from nine years eight months to thirteen years four months with a mean reading age of eleven years two months.

6. Comparison of the Subjects in the Two Groups

The chronological ages of the children in Group A ranged from eight years eleven months to ten years eight months with a mean of nine years nine months.

The members of Group B ranged in chronological age from nine years to ten years with a mean of nine years five months.

2. Otis, Arthur S., Otis Quick Scoring Mental Ability Tests-Alpha Test: Form A, for Grades 1-4 World Book Company, Yonkers-on-Hudson, New York.

3. Durrell-Sullivan Reading Capacity Test, World Book Company, Yonkers-on-Hudson, New York.

Table I

Chronological Ages of Subjects
in the Study

<u>Ages</u>		<u>No. of Pupils</u>	
10- 8	10-10	1	
10- 5	10- 7	0	
10- 2	10- 4	1	
9-11	10- 1	9	<u>Mean Chronological Age</u> 9-7
9- 8	9-10	10	
9- 5	9- 7	13	
9- 2	9- 4	7	
8-11	9- 1	5	
N = 46			

Table II

Mental Ages of Subjects
in the Study

<u>Mental Ages</u>		<u>No. of Pupils</u>	
12- 8	12-11	10	
12- 4	12- 7	1	
12- 0	12- 3	7	
11- 8	11-11	2	<u>Mean Mental Age</u> 10-11
11- 4	11- 7	3	
11- 0	11- 3	1	
10- 8	10-11	2	
10- 4	10- 7	3	
10- 0	10- 3	2	
9- 8	9-11	2	
9- 4	9- 7	2	
9- 0	9- 3	3	
8- 8	8-11	1	
8- 4	8- 7	5	
8- 0	8- 3	2	
N = 46			

Table III
Reading Ages of Subjects
in the Study

<u>Reading Ages</u>	<u>No. of Pupils</u>	
13- 2 13- 4	1	
12-11 13- 1	1	
12- 8 12-10	1	
12- 5 12- 7	1	
12- 2 12- 4	7	
11-11 12- 1	1	
11- 8 11-10	3	
11- 5 11- 7	1	
11- 2 11- 4	2	
10-11 11- 1	7	
10- 8 10-10	6	
10- 5 10- 7	1	
10- 2 10- 4	7	
9-11 10- 1	5	
9- 8 9-10	2	

Mean Reading Age

11-2

N = 46

The mean chronological age of Group A was four months above the mean chronological age of Group B.

The mental ages of the children in Group A ranged from eight years two months to twelve years eleven months plus with a mean of eleven years two months.

The range of the mental ages of the pupils in Group B was from eight years to twelve years eleven months plus with a mean of ten years seven months.

The mean mental age of Group A was seven months above the mean mental age of Group B.

The reading age range of the members of Group A was from nine years eight months to twelve years eleven months with a mean of eleven years three months.

The range of Group B's members was from nine years nine months to thirteen years four months with a mean of eleven years.

The mean reading age of Group A was three months above the mean reading age of Group B.

Since the two groups were not exactly matched, it was decided to join the two groups each containing twenty three pupils and thereby obtain one group of forty six pupils.

Procedure:

Four motion pictures were shown to forty six fourth grade children. This was a small sampling but it is felt that it did reveal the tendencies of fourth grade children

toward oral and written language.

The motion pictures that were shown were sound pictures. Hence, much vocabulary was suggested to the pupils.

There was no time limit although, in the case of the written reports, it was necessary to collect one or two papers after a reasonable amount of time had been spent with little accomplished.

No help was given to the children. They were not permitted to ask questions since any questions might be an influencing factor on the reports of the other children. The dictionary was not suggested as a means of finding the correct spelling of words but a few children did make use of their dictionaries.

Motion Picture I was shown to Group A and Group B. Immediately following the showing of the film, Group A gave their oral reports while Group B did their written reports. Later, the same day, Group B gave their oral reports of the motion picture they had seen in the morning while Group A wrote reports of the same picture.

Motion Picture II was shown several days later to both groups. At this time Group B gave their oral reports immediately following the showing of the film while Group A wrote their reports. Later, Group A gave their oral reports while Group B did their written reports.

Motion Picture III was shown several days after

Picture II and the same procedure was followed as in the first study made after Picture I.

Motion Picture IV was the last picture to be shown and the same procedure was followed as in the second study.

Each child gave four written reports and four oral reports in this study. Two oral reports were given immediately following the showing of the film while two written reports were done immediately following the showing of the film. The other two oral and written reports were given after a period of a few hours. Here we are able to compare immediate and delayed recall. By reversing the order of the groups for each motion picture, more accurate vocabulary results could be obtained. One group did not always give immediate oral and written recall while the other group did not always give delayed oral and written recall.

Motion Picture I

Immediate Recall

Group A - Oral Recall
Group B - Written Recall

Delayed Recall

Group A - Written Recall
Group B - Oral Recall

Motion Picture II

Immediate Recall

Group A - Written Recall
Group B - Oral Recall

Delayed Recall

Group A - Oral Recall
Group B - Written Recall

Motion Picture IIIImmediate Recall

Group A - Oral Recall
 Group B - Written Recall

Delayed Recall

Group A - Written Recall
 Group B - Oral Recall

Motion Picture IVImmediate Recall

Group A - Written Recall
 Group B - Oral Recall

Delayed Recall

Group A - Oral Recall
 Group B - Written Recall

The members of Group A were selected for the study because they were pupils in one fourth grade while the members of Group B were pupils in the other fourth grade in the same school. There was no division because of mental age, chronological age, reading capacity or any other factor.

Actually, in this study there were sixty subjects at the time the recording was commenced. But as the study continued, absences from one or more showings of the films caused fourteen pupils to become ineligible to remain in the study.

It was the task of the author to record all written and oral reports and then to tabulate the words used in the reports. All words were counted in both reports, except the pupil's name. If a word was repeated in either the written or oral reports, it was counted as often as it was repeated. Unmeaningful sounds, such as "er", "ah" and the like were not counted as words. Words that seemed to have no relation to

the story were counted since it was felt that these words did have meaning to the pupils. Slang words and misspelled words were counted. Necessary words which were left out by the pupil, sometimes unintentionally, were omitted in the tabulation.

<u>Group A</u>				
<u>No. of Pupils</u>	<u>Chronological Age</u>	<u>Reading Age</u>	<u>Reading Grade</u>	<u>Mental Age</u>
1.	10- 1	12- 3	6-7	13- 7
2.	9- 3	11- 1	5-6	9- 7
3.	9- 1	12-11	7-4	14-10
4.	9- 1	10- 8	5-2	10-11
5.	9- 7	11- 4	5-8	11- 5
6.	9- 2	12- 2	6-6	12- 1
7.	9- 5	10- 8	5-2	10- 2
8.	9-11	10- 3	4-8	10- 6
9.	10- 8	10- 3	4-8	12- 3
10.	9- 2	10- 4	4-9	9- 9
11.	9- 1	12- 2	6-6	12- 3
12.	9-10	11- 9	6-2	12- 3
13.	9- 5	12- 4	6-8	12- 1
14.	9- 6	9- 8	4-3	8- 4
15.	10- 2	10- 9	5-3	11- 8
16.	9- 9	10- 1	4-7	8- 6
17.	9- 6	11- 1	5-6	12- 3
18.	9- 6	12- 2	6-6	13- 0
19.	10- 0	11- 0	5-5	11- 5
20.	9- 6	12- 8	7-1	12- 9
21.	8-11	10- 7	5-1	10-11
22.	9- 3	12- 1	6-5	11-10
23.	9- 2	10-11	5-4	8- 2
<u>Group B</u>				
24.	9- 7	10- 0	4-6	8- 4
25.	9-11	12- 4	6-8	14- 9
26.	9- 8	10- 0	4-6	8- 9
27.	9-10	10- 3	4-8	9-10
28.	10- 0	10- 4	4-9	10- 4
29.	9- 4	11- 9	6-2	12-11
30.	9- 5	11- 0	5-5	8- 5
31.	9-10	10- 4	4-9	9- 4
32.	9-10	10- 8	5-2	14- 6
33.	10- 0	10- 9	5-3	12- 1
34.	9- 7	10- 4	4-9	8- 0
35.	10- 0	13- 4	7-8	9- 3
36.	9-11	10- 0	4-6	11- 5
37.	9- 5	11- 8	6-1	10- 0
38.	9- 6	12- 3	6-7	10- 4
39.	9-10	12- 6	6-9	12- 6
40.	9- 8	11- 5	5-9	14- 8

<u>No. of Pupils</u>	<u>Chronological Age</u>	<u>Reading Age</u>	<u>Reading Grade</u>	<u>Mental Age</u>
41.	10- 0	9- 9	4-4	8- 4
42.	9-10	10- 9	5-3	9- 0
43.	9- 7	11- 1	5-6	13- 0
44.	9- 0	11- 0	5-5	11- 2
45.	9- 8	10-11	5-4	9- 1
46.	9- 3	11- 4	5-8	12- 9

CHAPTER III
Analysis of Data

Table IV shows the total number of words used by the children in reporting on the four motion pictures.

Table IV

Total Number of Words Used by Forty Six
Pupils in Recall of Motion Pictures

	<u>Picture I</u>	<u>Picture II</u>	<u>Picture III</u>	<u>Picture IV</u>
<u>Oral</u>	8,214	8,417	9,506	9,811
<u>Written</u>	4,829	5,767	6,613	5,417

The total number of oral words used by the pupils in their reports was 36,048. In the written recall, the total number of words used was 23,626.¹

Table V on the following page, shows a comparison between the total number of oral and written words used in reporting on the motion pictures. The mean number of oral words was higher than the mean number of written words. The critical ratio of 3.24 shows that this difference is statistically significant. In this comparison and all of the following comparisons it was necessary to find and use an average number of words used by each pupil rather than the total number of words.

1. See Appendix, page 36.

Table V
Comparison of Total Oral and Written Recall
of Four Motion Pictures

Groups	No. of Pupils	Mean	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
Oral Recall	46	195.5	19.98	70.50	21.73	3.24
Written Recall	46	125.0	12.68			

In Table VI, a comparison of immediate oral and written recall is shown. The mean number of oral words indicates that a greater number of oral words are used in recall compared to the number of written words.

Table VI
Comparison of Immediate Oral
and Immediate Written Recall

Groups	No. of Pupils	Mean	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
Oral Recall	46	198.0	21.17	75.00	25.15	2.98
Written Recall	46	123.0	13.57			

A critical ratio of 2.98 is again evident in the comparison of delayed oral and delayed written recall. This ratio is not statistically significant although a difference between delayed oral and written recall may be noted. Table

VII shows that the mean of oral recall is 198.0 while the mean of the written recall is 123.0.

Table VII
Comparison of Delayed Oral with
Delayed Written Recall

Groups	No. of Pupils	Mean	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
Oral Recall	46	195.5	19.98	56.50	18.96	2.98
Written Recall	46	139.0	14.09			

Table VIII shows a comparison between immediate oral and delayed oral recall. It may be seen that the mean of immediate oral recall is slightly greater than the mean of delayed oral recall. The critical ratio of .10 shows this difference to be statistically insignificant.

Table VIII
Comparison of Immediate Oral
with Delayed Oral Recall

Groups	No. of Pupils	Mean	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
Immediate	46	198.0	21.17	2.50	24.68	.10
Delayed	46	195.5	19.98			

Table IX shows that there is a difference between the means of immediate written and delayed written recall.

Delayed written recall is higher than immediate written recall. The critical ratio of .82 shows this difference to be statistically insignificant.

Table IX
Comparison of Immediate Written
with Delayed Written Recall

Groups	No. of Pupils	Mean	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
Immediate	46	123.0	13.57	16.0	19.56	.82
Delayed	46	139.0	14.09			

Several correlations were made in this study. In computing these correlations, the Pearson Product Moment Method was used.

Relation of Oral and Written Recall

$$r = .609 \quad \pm .063$$

The high positive correlation of .609 is statistically significant. Oral and written recall are, therefore, related.

Relation of Oral Recall and Mental Age

$$r = .436 \quad \pm .081$$

The correlation of .436 shows that generally there is a relationship between mental age and oral recall.

Relation of Oral Recall and Reading Age

$$r = .399 \quad \pm .081$$

There is a correlation of .399 between oral recall and the reading age of the pupils used in the study. The relationship is significant.

Relation of Written Recall and Mental Age

$$r = .674 \quad \pm .055$$

A high positive relationship is found between written recall and mental age. A correlation of .674 is statistically significant.

Relation of Written Recall and Reading Age

$$r = .452 \quad \pm .081$$

The relationship of .452 is significant. There is a relationship between written recall and the reading age of the children.

CHAPTER IV

Summary and Conclusions

CHAPTER IV
SUMMARY AND CONCLUSIONS

The purpose of this study was to compare the fluency of oral and written recall used by children in the fourth grade. "Recall" was defined as being the controlled expression of the pupils after they had viewed certain motion pictures. Comparisons of immediate and delayed oral recall and immediate and delayed written recall were made. Immediate oral and written recall were compared as well as delayed oral and written recall. The relationship of oral and written recall was obtained. Finally, the relationships existing between mental and reading age and oral and written recall were computed.

The study included oral and written recall used in reporting on four motion pictures. Forty six pupils from the two fourth grades in one school were the subjects of the study. The following results were obtained:

1. There was a statistically significant difference between the total number of oral words the children used to express themselves and the total number of written words. The children used a greater number of oral words, the critical ratio being 3.24.

2. In comparing immediate oral and written recall, it was found that the difference between the oral and

written recall was not as great as in the study of the total number of words. However, immediate oral was greater than immediate written recall. The mean number of oral words was 198 while 123 words was the mean number of written recall.

3. The critical ratio of 2.98 obtained in the comparison of delayed oral and delayed written recall was the same as the critical ratio which was obtained in the comparison of immediate oral and written recall.

4. In the comparison of immediate oral and delayed oral recall, a statistically insignificant difference was noted. Hence, delaying oral recall for a period of several hours makes relatively little difference upon the number of words the children will use in their oral reports.

5. A statistically insignificant difference was also found between immediate written and delayed written recall. However, the difference that was present showed that the children used a larger number of words when their written recall was delayed. The fact that the oral reports had been recorded prior to the writing of the reports might have had an influence on the written reports.

6. A high relationship existed between the number of oral and written words the children used to express their ideas of the motion pictures.

7. A correlation of .43 was found between oral recall and mental age which indicates a relationship between oral recall and mental age.

8. The relationship between oral recall and reading ability showed that they correspond, although the relationship is not high.

9. A high positive relationship of .67 existed between written recall and mental age. There was a much greater relationship here than in the correlation that was computed between oral recall and mental age.

10. Written recall and reading age correspond favorably. Their relationship was .45 while that of oral recall and reading age was only .39.

CHAPTER V

Suggestions for Further Study

CHAPTER V

SUGGESTIONS FOR FURTHER STUDY

The following studies, which came to the attention of the author during the writing of this thesis, could be conducted in the future.

1. A study of oral and written recall, using the same procedure as was used in this thesis, but having as the subjects, children from the upper grade levels.

2. A study of oral and written recall, using the same procedure but a larger number of cases.

3. A study of oral recall in which the number of different words used by the pupils is tabulated.

4. A study of written recall in which the number of different words used by the pupils is tabulated.

5. A study to determine the relationship between the choice of oral and written vocabulary.

CRITICISMS

The writer is aware of certain criticisms of the conduct of this study.

1. Oral recall was recorded by means of an electric radio recorder. Since only one machine was used, just one report could be recorded at a time. The recording of immediate oral recall was begun immediately following the showing of each motion picture. There were twenty three immediate reports to be recorded and this recording required approximately two hours. The children who gave their oral reports at the beginning of this two hour period, gave immediate oral recall, whereas, the children who gave their reports at the end of the two hour period were actually giving delayed oral recall. However, no reports were written by this group until all their oral reports had been recorded.

2. Another criticism of the conduct of the study is that the oral reports were not recorded under ordinary classroom conditions and this situation could have an effect on the amount of oral recall.

3. It is possible that a larger number of subjects used in the study would affect the results of the thesis.

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Appendix

<u>Length of Recall</u>		
<u>No. of Words</u>	<u>Oral Recall</u>	<u>Written Recall</u>
	<u>No. of Pupils</u>	<u>No. of Pupils</u>
700-749	1	
650-699		
600-649		
550-599		
500-549		1
450-499		
400-449	2	
350-399	3	
300-349	3	1
250-299	3	
200-249	7	3
150-199	9	6
100-149	5	18
50- 99	8	10
0- 49	5	7

	<u>Mean</u>	<u>S. D.</u>
<u>Oral Recall</u>	195.5	135.50
<u>Written Recall</u>	125.0	86.0

