

1951

Children's preferences in types of assignments

<https://hdl.handle.net/2144/20553>

"Downloaded from OpenBU. Boston University's institutional repository."

ca.
Thesis
Jameson, V., and others
1951
Stored

BOSTON UNIVERSITY
SCHOOL OF EDUCATION

Thesis

CHILDREN'S PREFERENCES IN
TYPES OF ASSIGNMENTS

by

Vivian Jameson (B. S. in Ed., Boston University, 1948)

Eleanor Nager (B.S.inEd., Framingham State Teachers College, 1948)

June Zervas (B. S. in Ed., Boston University, 1947)

Submitted in partial fulfillment of
the requirements for the degree of
Master of Education

1951

Boston University
School of Education
Library

First Reader: B.Alice Crossley, Assistant Professor of Education

Second Reader: Donald D. Durrell, Professor of Education

ACKNOWLEDGMENTS

We wish to express our sincere appreciation to Dr. Donald D. Durrell, Dean, Boston University, School of Education, for his assistance and interest in planning and carrying out this study.

Sincere thanks are extended to Dorothy H. Stewart, Consultant of Elementary Education in Newton Public Schools and to Dr. B. Alice Crossley, Assistant Professor of Education at Boston University.

We should also like to express our appreciation to the principals, teachers, and pupils for their willing cooperation in this study.

TABLE OF CONTENTS

| Chapter | | Page |
|---------|--|------|
| I | Introduction | 1 |
| II | Related Studies and Previous Research | 4 |
| III | Preparation and Administration of Investigation | 19 |
| IV | Analysis of Data | 28 |
| V | Educational Implications | 61 |
| VI | Suggestions for Further Study | 63 |
| VII | Appendix | 65 |
| VIII | Bibliography | 69 |

LIST OF TABLES

| TABLE | PAGE |
|---|------|
| I. <u>Preferences of All Children</u> | |
| Tested..... | 29 |
| <u>Preferences by Grade</u> | |
| II. Grade VI..... | 31 |
| III. Grade V..... | 32 |
| IV. Grade IV..... | 33 |
| <u>Preferences by Sex</u> | |
| V. All Grades..... | 35 |
| VI. Grade VI..... | 36 |
| VII. Grade V..... | 37 |
| VIII. Grade IV..... | 38 |
| <u>Preferences by Mental Age</u> | |
| Grade VI. | |
| IX. Single Text vs. Multiple Text..... | 40 |
| X. Group Work vs. Partner Work | |
| vs. Individual Work..... | 41 |
| XI. Teacher-Direction vs. | |
| Self-Direction..... | 43 |
| Grade V. | |
| XII. Single Text vs. Multiple Text..... | 45 |
| XIII. GroupWork vs. Partner Work | |
| vs. Individual Work..... | 46 |

LIST OF TABLES
(continued)

| TABLE | PAGE |
|--------|--|
| | <u>Preferences by Mental Age</u> |
| | Grade V.(Continued) |
| XIV. | Teacher-Direction vs. Self-Direction..... 48 |
| | Grade IV. |
| XV. | Single Text vs. Multiple Text..... 50 |
| XVI. | Grade Work vs. Partner Work vs. Individual Work..... 51 |
| XVII. | Teacher-Direction vs. Self-Direction..... 53 |
| | <u>Preferences by Chronological Ages</u> |
| XVIII. | Single Text vs. Multiple Text..... 56 |
| XIX. | Group Work vs. Partner Work vs. Individual Work..... 57 |
| XX. | Teacher-Direction vs. Self-Direction..... 59 |

CHAPTER I

INTRODUCTION

NATURE OF THE PROBLEM

PURPOSE OF THE INVESTIGATION

CHAPTER I
INTRODUCTION

Now that modern educators have adopted the idea that the approach to school subjects should be through the child's interest, the child's experiences in life, and the child's attitudes toward life, adapting material to his level of understanding is not enough. Even though he can understand the reading matter, he may find the method of presentation not to his liking. Should he learn to like all material? Should he be expected to take it whether he likes it or not? Or should he have a say in the way he works?

Following the precept that one does best when he follows his inclination, shouldn't the child be allowed to select the method, at least, if not the actual material, which he is expected to follow in order to satisfy society's demand that he be educated. With this thought in mind, the present writers undertook to determine what actual studies had been made along the line of pupil preference as to method of study.

In making a thorough search for material regarding pupils' preferences in types of assignments, the writers found the best study directly related to the area was Stewart's thesis in 1945.^{1/} The students found that all studies pointed

^{1/} D. H. Stewart, "Children's Preferences in Types of Assignments", (unpublished Master's Thesis, Boston University) Boston, 1945.

to the fact that children will better direct their energies to material in which they are interested, rather than to super-imposed material which has no immediate appeal for them.

After much research in the area of children's preferences, the writers felt a definite need for a continuation of Stewart's thesis to discover the types of assignments children prefer.

PURPOSE

The purpose of this study is to determine, if possible, how children prefer to carry out assignments, and to discover ways children enjoy working in order to take advantage of interest as a motivating force for more effective planning.

Since the last study was conducted with a limited number of cases, the writers felt that to test a larger group might reveal even more significant data. They hope to discover the answers to these questions:

1. Do children want to find their own materials?
2. Do children want to have the teacher provide materials?
3. Do children want everyone in the class to use the same text?
4. Do children desire to use many different texts?
5. Do children like to work
 - a. in groups?
 - b. in pairs?
 - c. individually?

The students hope to determine children's preferences in the previous classifications in relation to

1. Grade
2. Sex
3. Intelligence
4. Age

ORGANIZATION

The following chapters will consider related studies, the construction and administration of the survey, the implications, and the summary and conclusions.

The students are especially anxious to find the answers to the following questions:

1. Should educators determine the types of assignments to be given children?
2. Should the interests of children be considered by the teacher when deciding the best type of assignment to use?
3. Should materials be devised for the classroom teacher to use at the beginning of a unit of work to help her to understand her group better?

Little material was found available in this area but much interest has been evidenced in the ways in which children accept and react to assignments. The following chapter will show the results of the study of the available literature relative to the subject.

CHAPTER II

RELATED STUDIES AND PREVIOUS RESEARCH

CHAPTER II

RELATED STUDIES AND PREVIOUS RESEARCH

Since, after research, the students found little material which had direct bearing on the area being studied, they decided that the following related areas would be discussed in their relationship to the study being investigated:

1. Interests
2. Individual differences
3. Group work
4. Use of textbooks
5. Reading ability

INTERESTS

When children are interested and want to learn, they learn more rapidly and more thoroughly. This fact has been recognized as a most significant one by many of the leading educators of the day. This desire to learn is closely allied with the interest to learn and both, in turn, are of extreme importance to the entire learning process. With this in mind, how, then, is one to discover these interests or through what medium can one appeal to children's interests?

Ernest Horn states: "The basic appeal to interests should be made through the intrinsic values of the subject matter rather than through the use of such extrinsic appeals

as grades, avoidance of penalties, or pedagogical devices. The more real the history, the more substantial the geography, the more vital the curriculum is as a whole, the greater the interest will be. There are many advantages in founding instruction on intrinsic interests. They have greater probable appeal than extrinsic motives, are more sincere, more permanent, and more likely to make clear to the student the real reasons for the study of any problem or topic. These fundamental interests are valuable, moreover, as bases in selecting and emphasizing the data essential to the solution of the problem at hand." 1/

In regard to "how to discover children's interests", the students referred to a study of children's interests made in Springfield, Missouri, by the Horace Mann-Lincoln Institute of School Experimentation to get information regarding "Children's interests and what they imply".

"Why are children in a certain setting interested in one thing and not in another which an adult might expect him to find equally fascinating? Is it because these particular children learned to be that way?" 2/ The institute employed as its instrument, an "interest finder", which sought the answers to such items as these:

- 1) Ernest Horn, Methods of Instruction in the Social Studies, New York: Charles Scribner's Sons, 1937. pp. 504-505
- 2) Progress Report of Horace Mann-Lincoln Institute of School Experimentation, Teachers College Records, February 1948

"my three wishes;
 what I like best in and out of school;
 what I'd like to learn more about in school:
 what I dislike most in school and out of
 school, etc."

This questionnaire was given to approximately 3000 children and the information that was gathered provided a means of determining an overlap of children's interests in and out of school, the extent to which replies in different parts of the instrument confirmed or contradicted each other; the extent to which interests persisted or changed as children grew older.

The findings of the report suggested these facts:

"The problem of utilizing children's interests in education becomes not simply a problem of finding what children like, but one of finding criteria for choosing among the vast range of things that they could learn to like, those that would be most valuable to them as individuals and as members of society." ^{1/}

Throughout the findings one must keep in mind that which is of greatest concern: the needs of each of the children and what is most valuable to each as an individual. Working in small groups more nearly provides for the individual level, interest, and rate of progress. As Sandin states, "A child in his peer group finds more understanding and greater continuity

^{1/} Progress Report of Horace Mann-Lincoln Institute of School Experimentation, Teachers College Record, 49: 314-24, February 1948 p. 136

^{2/} Adolph A. Sandin, "Social and Emotional Adjustments of Regularly Promoted and Non-Promoted Pupils," Bureau of Publications, Teachers College, Columbia University, 1944 Pg. 142

in terms of time than in most adult-directed groups, and this may in part explain the greater effectiveness of the peer group upon him." ^{1/}

"In spite of more than five decades of talk and research about individual differences in children, school practices are still geared largely to class-as-whole methods and procedures. All members of the class are given the same texts through which they progress as a group. Standards for promotion from grade to grade are conceived as group standards and applied to individuals as members of a group. These are but a few of the many examples that could be given to show that present practices are still geared largely to group procedures involving the class-as-a-whole concept.

"If we are going to go beyond the talk stage in meeting individual differences, we will have to:

1. abandon competitive and comparative marking systems as a means of appraising children's educational development
2. change many of our conventional motions and practices about promotion standards, grouping of pupils, and pupil progress through the school

^{1/} Adolph A. Sandin, "Social and Emotional Adjustments of Regularly Promoted and Non-promoted Pupils," Bureau of Publications, Teachers College, Columbia University, 1944
Pg. 142

3. look upon purposes of education as directional goals rather than as minimum essentials
4. provide each teacher with basal texts and supplementary books at from three to five grade levels
5. allow individuals and small groups within a class to progress in a given instructional area as slowly or as rapidly as their preparation and abilities permit
6. modify our teaching procedures to permit more sub-groups within classes.

"These are but a few of the problems which must be met realistically if we desire to implement our convictions about the importance of adapting education to the abilities, maturation levels, and educational potential of the children in our schools."^{1/}

With this allowance for the individual and his need for full development for a democratic society, modern education must meet this requirement. As Witty states:

"Attention is focused by modern educators on the need for functional programs of education and for the provision and maintenance of conditions which will promote continuous growth in all pupils. Education is now considered a process which aims

^{1/} Henry J. Otto, "Curriculum Issues in Elementary Education," Educational Leadership, Volume 7, Page 23, October 1949

to bring about the maximum development of every child in terms of his unique nature and needs." ^{1/}

Although the modern educator is concerned with the development of the whole child (physical, mental, moral, spiritual, and emotional), he is still aware of the fact that a child may be advancing rapidly in one phase of growth, while making slow progress in another and that provision must be made for these differences. Thus, daily classroom schedules are flexible and plans are made each day by the teacher and the pupils to provide for working periods long enough for each individual child to work according to his own needs in developing skills, learning subject matter, and participating in activities.

It has been stated that a child is different from each of his classmates; he may be different in many ways. We are aware of the fact that individuals differ with respect to general level of ability (mental capacity) and we are aware also of the fact that a child's past experience may greatly influence his interests and needs in the school program, and bear a direct influence upon his school life and the learning process.

GROUP WORK

Inasmuch as it is important for the child to be treated as an individual, for the reasons already discussed,

^{1/} Paul Witty, Reading in Modern Education, Boston; D. C. Heath Pages 21 - 32 , 1949, vi

it is also important for the individual to become part of a group and partake in group activities.

Klugman carried on a study in arithmetical problem solving to determine whether children in the fourth to the sixth grades could solve problems better when working in pairs than when working alone. The pairs were equated according to sex, race, grade in school, chronological age, and I. Q.'s. Using two forms of Otis Arithmetical Reasoning Test, Klugman carried on the program with careful alternation of pupils and testing to control practice effect, all pupils solving the problems in one or the other of the forms working as individuals and then on the opposite form working in pairs. All time limits were removed. The statistically significant results included:

- a. when working in pairs, the pupils averaged 7.27 problems correctly worked as against 5.18 correct when working alone;
- b. in the pairs, they averaged 1238 seconds of working time as against 1054 seconds when working alone;
- c. results in the sub-groups- boys, girls, whites, and sixth grades corresponded to the general findings. Other groups also tended to agree with the total group results, but the critical ratios fell below 3. $\frac{1}{2}$

Samuel F. Klugman, "Cooperative versus Individual Sufficiency in Problem Solving", *Journal of Educational Psychology*, 35:91-100; February, 1944.

Betts points out that a means of preventing maladjustment in behavior is attained by differentiating instruction. However, he states that, "While the very nature and extent of differences among children of any one age or grade level make imperative some differentiation of instruction, the logical conclusion is not individual instruction. Highly individualized instruction often misses the point because opportunities for give-and-take in social situations are lacking." "It is as important to know 'when' to contribute to discussion and 'when' to listen to others as to know 'how' to talk." "All class activities should capitalize on individual and group contributions and the effectiveness of them. Children are less apt to be frustrated by assignments which meet their abilities and are not too easy or too hard." 1/

There is still another advantage of working in a small group as stated by Gates: "Cooperative enterprise may be developed by having a small group work upon the same general topic. The pupils may be reading different selections, some easier than others, but the common interest provides an incentive for reading choice bits aloud to each other, giving oral reports, and engaging in various related enterprises such as searching the files of the library, visiting a museum, making a picture book, constructing objects, decorating the room, and so on." 2/

1/ Emmett A. Betts, "Social and Emotional Readiness for Reading", Educational Administration and Supervision, 30; 145, March, '42, pages 139-161

2/ Arthur I. Gates, The Improvement of Reading, New York: MacMillan, 1937, pp. 33

In order than, best to achieve the development of the child into a wholesome, dynamic personality, it is important fully to utilize his abilities, interests, and experiences, first as an individual, and then as an active participant in a group, by making available materials of varied levels and interests.

Stewart found in her study of 546 children of grades four, five, and six that

1. multiple texts were favored more than a single text, in most instances
2. group participation was selected by older children and upper age and intelligence levels; partner participation was selected by the slow learning and younger children
3. self-direction was more favored than teacher-direction

The teacher, therefore, can feel that she is satisfying the children's desires as well as their best educational interests by providing many books, using group activities, and allowing self-direction. ^{1/}

CLASSROOM MATERIALS AND THE READING PROGRAM

Witty feels, as do most of the leading educators of the day, that it is urgent to stimulate interest and appreciation among the children during the learning process. Every teacher should make sure "that each child has many happy,

^{1/} D. H. Stewart, "Children's Preferences in Types of Assignments", (unpublished Master's Thesis, B. U.) Boston, 1945.

satisfying associations with various kinds of printed materials. And the way to guarantee satisfaction in reading is to bring him into contact with the 'right book at the right time'. For any child, the right book is one of appropriate difficulty in which the subject matter satisfies a strong interest. The right time is the moment when the child's experiences have been such that he can enter into the mood of a selection or story, the time when he can readily appreciate the fact that the printed material really answers his questions and extends his experience." 1/

In order to accomplish this, as well as to meet the individual needs of children, it is absolutely necessary that children be surrounded with a variety of easy, interesting, attractive reading materials. As Betts believes, "In order to provide for each individual child, there should be materials representing a wide interest and difficulty range available in each classroom." 2/

Witty states: "Some children who have little desire to read may be stimulated to do so when they observe the pleasure their classmates find in reading, or when they become interested in unusually attractive and appealing books which are immediately available to them on the book tables." 3/

-
- 1/ Paul Witty, Reading in Modern Education, Boston; D. C. Heath and Company, 1949 p. 132
 - 2/ Emmett Betts, Foundations of Reading Instruction, New York; American Book Company, 1946 p. 65
 - 3/ Paul Witty, Reading in Modern Education, Boston; D. C. Heath and Company, 1949 p. 132

Gray also stresses the importance of adequate library facilities. "School and classroom libraries are of primary importance in initiating and establishing satisfactory reading attitudes and habits. A generous supply of attractive and suitable books enriches instruction, satisfies the reading interests of pupils, and modifies to a large extent the procedures adopted in teaching and study."^{1/} These schoolroom libraries will remove the problem suggested by Betts who writes that children may lack interest in a given reading situation because of reading material unsuitable either because of its difficulty or because of its meagreness.^{2/}

It appears evident, then, that it is desirable to have many books available for children's use. However, the problem of selection of a variety of texts still exists as described by Witty: "The task of becoming acquainted with children's literature - old and new - may seem overwhelming to some teachers who have depended in the past almost entirely upon the use of a single textbook for instruction in reading." "A balanced reading program, by offering wide reading experience from a variety of carefully chosen materials, will care for individual differences."^{3/}

-
- 1/ William S. Gray, "A Decade of Progress," The Teaching of Reading; A Second Report V. 36: p. 5-21, Washington: N.S.S.E., 1937, p. 8.
- 2/ Emmett Betts, Foundations of Reading Instruction, New York; American Book Company, 1946 p. 263
- 3/ Paul Witty, Reading in Modern Education, Boston; D. C. Heath and Company, 1949 p. 36

Although children will need guidance from the teacher, they should be encouraged to become independent in choosing and evaluating books.

Reed discusses the advantages of choosing materials for interest's sake, as follows: "The advantages of selecting reading materials with reference to children's interests are rapid learning, increased effort, good adjustment of content to the ability of the reader, and good comprehension. Selections in which the children are interested also contribute directly to the objectives of developing a permanent interest in reading and of developing the ability to read for enjoyment."^{1/}

Adequate library facilities, therefore, meet the children's preference for many books, as well as provide opportunities for the greatest progress educationally.

With the foregoing facts in mind, the reader can readily see the limitation of the one-text assignment for an entire class. The most obvious disadvantage is to the children who are ready to advance more rapidly than their classmates. These faster learners will be bored and find the classroom program dull and monotonous. Oftentimes, this boredom encourages undesirable habits and characteristics which lead to serious behavior problems. As Lazar says; "Too much prescribed reading may be unwise or even harmful."^{2/}

^{1/} Homer B. Reed, Psychology of Elementary School Subjects, Boston; Ginn and Company, 1938, p. 115

^{1/} May Lazar, "Reading Interests, Activities, and Opportunities of Bright, Average and Dull Children," New York; Bureau of Publications, Teachers College, Columbia University, 1937.

Another undesirable effect that may result from a mass assignment in reading is that of indifference of children who are not being recognized as individuals. Each child feels the need of recognition in some form. Witty points out that, "The wide range of ability within the typical classroom makes difficult the provision of conditions through which every child may gain recognition. A classroom rich in opportunities for varied experience and individual expression is likely to be one in which every child has a chance to achieve success. Under such conditions, boys and girls learn to respect the achievements of their classmates and to accept different levels of competency with appreciation and understanding. ^{1/}

Another weakness of the mass assignment is that class motivation cannot appeal to the individual child as can motivation aimed at the individual or small group. Children properly motivated will respond to the instruction more readily. Also, proper motivation minimizes cases of remedial reading or cases of children who just do not like to read.

Brueckner states this well when he says that, "Without doubt there are individuals who can read but who do not read. Such persons lack the interest or motive for reading. Among other things it is possible that the methods by which they have been taught were such that a distaste for or an indifference toward reading resulted. The progressive teacher of

^{1/} Paul Witty, Reading in Modern Education, Boston; D. C. Heath and Company, 1949 p. 22-23

reading would, therefore, like to teach in such a way that pupils will acquire a genuine interest in reading and in fact will continue to read throughout life." 1/

SUMMARY

Throughout the students' search for related material, the same important factors were evident: effective programs in the modern classroom are based upon children's needs which have been discovered through an analysis of their physical and social maturation, previous experience, and interests.

"We have referred repeatedly to the significance of the interest factor. For years capable teachers have utilized children's interests as strong motives for learning." 2/

It is also apparent to the students in their readings, that throughout the entire learning process, the child must be made to feel satisfaction and real success in his everyday work, as well as an awareness of making steady progress. This follows along, quite naturally, to the aforementioned interest factor. "This approach guarantees the child the chance to follow worthwhile interests in a program characterized by systematic guidance and continuous evaluation." 3/

These factors already discussed, must be used hand-in-hand with the following factors as found by Jenkins in her thesis:

1. A wide variety of materials and techniques should be employed.

1/ L. J. Brueckner and E. O. Melby, Diagnostic and Remedial Teaching, Boston: Houghton Mifflin Co., 1931, p. 295
2/ Paul Witty, Reading in Modern Education, Boston; D. C. Heath 1949, p. 49
3/ Ibid p. 50

2. Materials and techniques should be well adjusted to the interests, ability, and learning rate of individuals and groups within the class.
3. Teaching materials including fiction and non-fiction should be accessible to the pupils. A small classroom library is of real value.
4. Many reading schools should be emphasized.^{1/}

Realizing the importance of the facts as revealed by the research, the students concluded that the more knowledge gathered about children's interests and pleasurable activities, the more effective can be teacher planning for better results in education, results such as described by Spock who says, "The teacher who leads democratically, who encourages the fullest participation of the pupils in planning their projects and in cooperatively carrying them out, can leave the room knowing that the work will go on almost as efficiently as when she is there. In such a classroom the children are learning co-operation, responsibility, self-discipline, not as mottos, but as ways of living."^{2/}

By giving opportunity for practice in "co-operation", "responsibility", and "self-discipline", surely the teacher is educating for modern democracy.

^{1/} E. M. Jenkins, "Characteristics of Reading Programs That Appeal to Children" (unpublished Master's Thesis, Boston University) Boston, 1948, p.7

^{2/} Benjamin Spock, M. D. "What We Know About the Development of Healthy Personalities in Children", Understanding the Child, No. 1 Vol. XX, January 1941

CHAPTER III

PREPARATION AND ADMINISTRATION OF INVESTIGATION

CHAPTER III

PREPARATION AND ADMINISTRATION OF INVESTIGATION

An explanation of the construction of the instrument used in this study is given so that the reader may better understand the results obtained in the following chapter.

We referred to this list of books in the construction of the test:

Motivation of School Work

Wilson, H. B.

Wilson, G. M.

Houghton Mifflin Company, 1933

The Nature and Direction of Learning

Burton, William H.

D. Appleton-Century Company, 1938

A Look at Our Schools

Mort, Paul R.

Vincent, William S.

Cattell and Company, Inc. 1946

Some Principles of Teaching

Spears, Harold

Prentice-Hall, Inc. 1949

POPULATION

In order to obtain a true picture of the type of assignment preferred by all children, we took a representative population over a large area. The children tested ranged from eight years to fourteen years chronologically and from seven years to seventeen years mentally.

The test was designed to reveal the interests of children in the various types of assignments with which they work. Do children prefer

1. to find their own materials
2. to have the teacher provide materials
3. to have everyone use the same text
4. to use many different texts
5. to work
 - a. in groups
 - b. in pairs
 - c. individually

Middle grades were selected because the writers were especially interested in these grades and because children of this age level could be expected to be more independent in their study habits and interests. It was felt that younger children would necessarily demand more direct guidance in their work.

A trial test was given representative pupils to determine time allotment and language difficulties. In the light of this trial test, the instrument was given to an entire class with the same objectives. It was discovered that a testing time of ten to twenty minutes would be necessary - depending upon the age and reading ability of the children involved. The language was suited to the abilities of the fourth grade child.

Sample questions were included as an introduction to the test so that the teacher could explain the procedure to be followed.

Sample

We want to find out how you like to work. Everyone likes to do things in different ways. Check the way you would like best to work if you had your own choice.

The class is going to study about pioneers. Which would you like to do?

- () Have everyone in the class read the same story to find out about pioneers, how they lived, the dangers they met.
- () Have everyone read out of different books to find out about pioneers, how they lived, the dangers they met.

Instructions to the teachers:

We are making a study to determine the types of assignments preferred by children in the fourth, fifth, and sixth grades.

We would appreciate it if you would give the enclosed test to each child in your grade. Be sure all information possible is on the front page.

Since the results of these tests are to be used in a thesis, it is important to get them back as soon as possible. If it is convenient, we would like all tests back within two weeks.

Thank you very much for giving your time to help us with this survey.

Mrs. Vivian Jameson
Miss Eleanor Nager
Mrs. June Zervas

Claflin School
Hyde School
Oak Hill School

Permission to give the tests was obtained from the superintendent of schools involved and from their respective principals.

No teacher was asked to tabulate any results of the tests.

The Mental Age of each child was based on the Intelligence Quotient obtained from a Kuhlman Andersen Intelligence Test and the Inglis Intelligence Quotient Values. ^{1/}

The final test, after many alterations, was as follows:

^{1/} Alexander Inglis, Ph. D. Inglis Intelligence Quotient Values, World Book Company, 1938.

Name..... I.Q.....

School.....Grade.....M.A.....

Boy or girl.....Date.....C.A.....

We want to find out how you like to work. Everyone likes to do things in different ways. Check the way you would like best to work if you could have your choice.

Sample: The class is going to study about pioneers. Which would you like to do?

- () Have everyone in the class read the same story to find out about pioneers, how they lived, the dangers they met.
- () Have everyone read out of different books to find out about pioneers, how they lived, the dangers they met.

.....

1. You have invited your parents to hear you tell about Mexico. Which would you like to do?

- () Have everyone in the class read the same story to find out about Mexican children and Mexican customs.
- () Have each child read out of different books to find out about Mexican children and Mexican customs.

2. The class is going to prepare a program on the life of Washington. Which would you like to do?

- () Have all the children read the same story to find out about Washington as a boy and Washington as a leader of his country.
- () Have every child read different stories to find out about Washington as a boy and Washington as a leader of his country.

3. Your class wants to learn about lumbering in New England. Which would you like to do?

- () Have all the children read the same story to find out about the ways of lumbering and the kinds of lumber found in New England.
- () Have everyone read out of many different books to find out about the ways of lumbering and the kinds of lumber found in New England.

4. The class is preparing a science program for the P.T.A. Which would you rather do?

- () Have each child use as many books as possible to find out about magnets, uses of magnets, how to make a magnet.
- () Have everyone in the class read the same book to find out about magnets, uses of magnets, how to make a magnet.

5. We have decided to learn as much as we can about Canada. Which would you rather do?

- () Have every child read by himself to see what he can find about the Canadian Rockies, the rivers of Canada, the forests of Canada.
- () Have everyone in the class read the same story to find out about the Canadian Rockies, the rivers of Canada, the forests of Canada.

6. The class is planning to do experiments on air pressure. Which would you like to do?

- () Make the class into small groups and see what you can find out about air pressure.
- () Choose a partner to work with you to see what you can find out about air pressure.
- () Work all by yourself to see what you can find out about air pressure.

7. We are going to give a health program for the school. Which would you rather do?
- () Work by yourself to see what you can find out about the basic foods and why they are good for us.
 - () Have everyone in the class choose a partner to find out about the basic foods and why they are good for us.
 - () Divide the class into small groups to find out about the basic foods and why they are good for us.
8. We want to find out all we can about Mozart's childhood. Which would you like to do?
- () Choose partners to see what you can learn about Mozart's childhood.
 - () Divide the class into small groups to see what they can learn about Mozart's childhood.
 - () Work by yourself to see what you can learn about Mozart's childhood.
9. We are interested in learning about cattle raising in our West. Which would you rather do?
- () Study all by yourself to learn about the work of a cowboy and life on a ranch.
 - () Work with your chum and read about the work of a cowboy and life on a ranch.
 - () Work with a small group of children to learn about the work of a cowboy and life on a ranch.
10. A man is coming to talk to the class about asbestos mining in Canada. Which way would you choose to get information before he comes?
- () Choose a friend to look up information about asbestos mining in Canada.
 - () Work by yourself to look up information about asbestos mining in Canada.
 - () Work with a small group to look up information about asbestos mining in Canada.

11. We are planning an assembly program on Memorial Day for the school. How would you choose to work?
- () Have the teacher find books and give them to you to read about the first Memorial Day and ways of observing Memorial Day.
 - () Look in different places yourself to find what you can about the first Memorial Day and ways of observing Memorial Day.
12. If you were going to give a talk about tobacco, how would you choose to go about finding information you needed?
- () Find the materials you needed in encyclopedias, geography books, and reading books about where tobacco is raised, when it is planted, the treatment of tobacco after it is picked.
 - () Have your teacher tell you where to look to find where tobacco is raised, when it is planted, the treatment of tobacco after it is picked.
13. You want to invite another grade to hear about deep-sea fishing. Which would you rather do?
- () Use materials which the teacher has chosen to find out about the importance of fishing to New England, the kinds of fish caught, the methods of catching fish.
 - () Be responsible yourself for finding about the importance of fishing to New England, the kinds of fish caught, the methods of catching fish.
14. We are studying about the ancient Incas of Peru. Which would you rather do?
- () Look in several places yourself to find out about their culture and their treatment by the Spaniards.
 - () Let the teacher find books that will tell you about their culture and their treatment by the Spaniards.

15. If you want to be able to tell about the climate of Mexico to a friend who is going there, would you rather do?

- () Use books which the teacher has chosen to tell you about the climate of Mexico and its influence?
- () Search through as many materials as you can find by yourself to learn about the climate of Mexico and its influence?

CHAPTER IV

ANALYSIS OF DATA

CHAPTER IV

ANALYSIS OF DATA

INTRODUCTION

This study was undertaken to discover the answers to these questions:

1. Do children have definite preferences as to assignment and classroom methods?
2. Does grade, sex, intelligence, or age have any bearing on their preferences as to assignments and procedures?

In this chapter, the writers try to interpret the results of the quest in relation to these questions.

Graph-tables give statistical analysis of the tabulated results of the test arranged by grade, sex, intelligence, and age. These charts are so arranged as to enable the reader to make ready comparisons; that is - grade with grade, boys with girls, high intelligence with low intelligence, and younger children with older children.

TABLE I
COMPARISON OF PREFERENCES OF ALL CHILDREN OF
GRADES IV, V, AND VI, 1632 PUPILS

| All Pupils | % | S.E.% | DIFF.% | S.E. DIFF. % | C. R. |
|------------------|----|-------|--------|--------------|-------|
| Same Text | 13 | .8 | | | |
| | | | * .74 | 1.1 | 67.27 |
| Mult. Text | 87 | .8 | | | |
| Partner Work | 43 | 1.2 | | | |
| | | | * .09 | 1.7 | 5.29 |
| Group Work | 34 | 1.2 | | | |
| | | | * .14 | 1.5 | 7.33 |
| Individual Work | 23 | 1.0 | | | |
| | | | ** .20 | 1.5 | 13.33 |
| Teacher Directed | 26 | 1.1 | | | |
| | | | * .48 | 1.5 | 32.00 |
| Self Directed | 74 | 1.1 | | | |

* Difference between each percent and the one above.

** Difference between highest and lowest percent.

As the graph-table indicates, both boys and girls of grades 4, 5, and 6 show a definite preference for multiple texts with an overwhelming critical ratio of 67.27.

Group and partner participation almost equal each other; however, there is a greater choice for working in pairs, shown by a significant critical ratio of 5.29.

Self-directed work proves to be more highly favored than teacher-directed activities, the critical ratio being 32.00.

TABLE 11
COMPARISON OF PREFERENCES IN GRADE VI
506 CASES

| All Pupils | % | S.E.% | Diff.% | S.E.Diff.% | C.R. |
|------------------|----|-------|--------|------------|-------|
| Same Text | 9 | 1.3 | | | |
| | | | *.82 | 1.8 | 45.50 |
| Mult. Text | 91 | 1.3 | | | |
| Partner Work | 44 | 2.2 | | | |
| | | | *.10 | 3.0 | 3.33 |
| Group Work | 34 | 2.1 | | | |
| | | | *.12 | 2.7 | 4.44 |
| Individual Work | 22 | 1.8 | | | |
| | | | ** .22 | 2.8 | 7.85 |
| Teacher Directed | 18 | 1.7 | | | |
| | | | *.64 | 2.4 | 26.60 |
| Self Directed | 82 | 1.7 | | | |

*Difference between each percent and the one above.
**Difference between the highest and lowest percent.

The choices of the sixth grades were significant. They definitely prefer multiple text, partner participation, and self-directed assignments. There is a significant difference between partner participation and group participation, for the table reveals that children prefer partner work.

TABLE III
COMPARISON OF PREFERENCES IN GRADE V
566 PUPILS

| All Pupils | % | S.E.% | Diff.% | S.E.Diff.% | C.R. |
|------------------|----|-------|--------|------------|-------|
| Same Text | 13 | 1.5 | | | |
| | | | *.74 | 2.1 | 35.23 |
| Mult.Text | 87 | 1.5 | | | |
| Partner Work | 43 | 2.1 | | | |
| | | | *.09 | 2.9 | 3.10 |
| Group Work | 34 | 2.1 | | | |
| | | | *.11 | 2.6 | 4.23 |
| Individual Work | 23 | 2.0 | | | |
| | | | ** .20 | 2.8 | 7.14 |
| Teacher Directed | 23 | 1.8 | | | |
| Self Directed | 77 | 1.8 | *.54 | 2.5 | 21.60 |

*Difference between each percent and the one above.
** Difference between the highest and lowest percent.

As was found in the sixth grade, there is a definite preference among all children in Grade V for multiple texts. Both groups, significantly, have high critical ratios.

Again the children show that they prefer partner participation, but that they would be satisfied with group work. They table shows that few children favor individual work.

Like Grade VI, Grade V children choose self-direction rather than teacher-direction. In both grades the critical ratios are high and significant.

TABLE IV
COMPARISON OF PREFERENCES IN GRADE IV
560 PUPILS

| All Pupils | % | S.E.% | Diff.% | S.E.Diff.% | C.R. |
|------------------|----|-------|--------|------------|-------|
| Same Text | 16 | 1.6 | *.68 | 2.2 | 30.90 |
| Mult.Text | 84 | 1.6 | | | |
| Partner Work | 43 | 2. | *.9 | 2.9 | 3.10 |
| Group Work | 34 | 2.1 | *.11 | 2.6 | 4.23 |
| Individual Work | 23 | 1.8 | ** .20 | 2.7 | 7.40 |
| Teacher Directed | 35 | 2. | *.30 | 2.8 | 10.70 |
| Self Directed | 65 | 2. | | | |

*Difference between each percent and the one above.
**Difference between the highest and lowest percent.

Table IV reveals that Grade IV definitely prefers to use many books rather than a single text for gaining information on any given topic.

Grade IV prefers companionship while doing assignments. More children like group work than partner work, but few children, apparently, would choose to work alone.

If given a choice, Grade IV would like to plan its own work and assignments rather than to have the teacher do the directing.

SUMMARY OF GRADES IV, V, AND VI

All three grades agree that many books are more to be desired than a single text; that group or partner work is preferable to individual assignments; and that pupil direction is better than teacher direction.

Because the higher the grade the greater the proportion of children showed these preferences, it would seem to follow that the farther a child progresses in school, the greater is his interest in self-direction. It follows, therefore, that the teacher may allow more independence of work among older children; conversely, the teacher must give more direction to the younger ones.

Apparently all would be satisfied with either partner or group work. Individual assignments have least appeal at any of these three grade levels.

TABLE V
COMPARISON OF PREFERENCE IN ALL GRADES BASED ON SEX, 875 BOYS

| | % | S.E.% | DIFF.% | S.E.DIFF.% | C.R. |
|------------------|----|-------|--------|------------|-------|
| Same Text | 15 | 1.2 | | | |
| | | | *.70 | 1.6 | 43.75 |
| Mult. Text | 85 | 1.2 | | | |
| Partner Work | 42 | 1.7 | | | |
| | | | *.9 | 2.3 | 3.91 |
| Group Work | 33 | 1.6 | | | |
| | | | *.8 | 2.1 | 3.81 |
| Individual Work | 25 | 1.5 | | | |
| | | | **17 | 2.2 | 7.72 |
| Teacher Directed | 26 | 1.5 | | | |
| | | | *.48 | 2.1 | 22.85 |
| Self Directed | 74 | 1.5 | | | |

| COMPARISON OF PREFERENCE IN ALL GRADES BASED ON SEX, 757 GIRLS | | | | | |
|--|----|-------|--------|------------|-------|
| | % | S.E.% | DIFF.% | S.E.DIFF.% | C.R. |
| Same Text | 10 | 1.1 | | | |
| | | | *.80 | 1.5 | 53.33 |
| Mult. Text | 90 | 1.1 | | | |
| Partner Work | 46 | 1.8 | | | |
| | | | *.11 | 2.4 | 4.58 |
| Group Work | 35 | 1.7 | | | |
| | | | *.16 | 2.1 | 7.61 |
| Individual Work | 19 | 1.4 | | | |
| | | | **27 | 2.2 | 12.27 |
| Teacher Directed | 26 | 1.6 | | | |
| | | | *.48 | 2.2 | 21.81 |
| Self Directed | 74 | 1.6 | | | |

*Difference between each percent and the one above.

**Difference between highest and lowest percent.

From these data, it would seem that sex has little bearing on the choices of Grades IV, V, and VI for the results are little different from those of all children of these grades. Their choices are the same: multiple texts, group work or partner work, and self-directed assignments. A slightly larger percentage of girls chose multiple texts and partner work, but there is hardly enough difference for any general conclusion. These figures merely point out that a few more boys would be satisfied with one book and to work alone.

It is interesting to note that the same proportion of boys and girls chose self-direction.

TABLE VI
COMPARISONS OF PREFERENCES IN GRADE SIX BASED ON SEX DIFFERENCES
231 GIRLS

| | % | S.E.% | DIFF.% | S.E.DIFF.% | C.R. |
|------------------|----|-------|--------|------------|-------|
| Same Text | 8 | 1.8 | | | |
| | | | *.84 | 2.5 | 33.60 |
| Mult. Text | 92 | 1.8 | | | |
| Partner Work | 47 | 3.3 | | | |
| | | | *.13 | 4.5 | 2.88 |
| Group Work | 34 | 3.1 | | | |
| | | | *.15 | 4.0 | 3.75 |
| Individual Work | 19 | 2.6 | | | |
| | | | ** .26 | 4.2 | 6.19 |
| Teacher Directed | 18 | 2.5 | | | |
| | | | *.64 | 3.5 | 18.28 |
| Self Directed | 82 | 2.5 | | | |

*Difference between each percent and the one above.

**Difference between highest and lowest percent.

275 BOYS

| | % | S.E.% | DIFF.% | S.E.DIFF.% | C.R. |
|------------------|----|-------|--------|------------|-------|
| Same Text | 11 | 1.9 | | | |
| | | | *.78 | 2.6 | 30.00 |
| Mult. Text | 89 | 1.9 | | | |
| Group Work | 42 | 3.0 | | | |
| | | | *.60 | 4.1 | 1.46 |
| Partner Work | 36 | 2.9 | | | |
| | | | *.14 | 3.8 | 3.63 |
| Individual Work | 22 | 2.5 | | | |
| | | | ** .20 | 3.6 | 5.55 |
| Teacher Directed | 20 | 2.4 | | | |
| | | | *.60 | 3.3 | 18.10 |
| Self Directed | 80 | 2.4 | | | |

*Difference between each percent and the one above.

**Difference between highest and lowest percent.

TABLE VII
 PREFERENCES IN GRADE V BASED ON SEX DIFFERENCES
 269 GIRLS

| | % | S.E.% | Diff.% | S.E.Diff.% | G.R. |
|--------------|----|-------|--------|------------|-------|
| Same Text | 11 | 2.0 | | | |
| | | | *.78 | 2.8 | 27.85 |
| Mult.Text | 89 | 2.0 | | | |
| Partner Work | 47 | 3.2 | | | |
| | | | *.19 | 4.2 | 4.52 |
| Group Work | 28 | 2.8 | | | |
| | | | *.03 | 3.8 | .79 |
| Ind. Work | 25 | 2.7 | | | |
| | | | **22 | 4.1 | 5.36 |
| Teacher Dir. | 21 | 2.5 | | | |
| | | | *.58 | 3.5 | 16.57 |
| Self Direct. | 79 | 2.5 | | | |

297 Boys

| | % | S.E.% | Diff.% | S.E.Diff% | G.R. |
|--------------|----|-------|--------|-----------|-------|
| Same Text | 15 | 2.2 | | | |
| | | | *.70 | 3.1 | 22.58 |
| Mult.Text | 85 | 2.2 | | | |
| Part.Work | 41 | 2.9 | | | |
| | | | *.07 | 3.6 | 1.94 |
| Group Work | 33 | 2.7 | | | |
| | | | *.08 | 3.9 | 2.05 |
| Ind. Work | 26 | 2.5 | | | |
| | | | **15 | 3.8 | 3.94 |
| Teacher Dir. | 25 | 2.6 | | | |
| | | | *.50 | 3.6 | 13.83 |
| Self Dir. | 75 | 2.6 | | | |

*Difference between each percent and the one above.
 **Difference between the highest and lowest percent.

As the chart of grade five shows, there is a close correlation between the boys and girls in their preference for many books, partner work, and self-directed assignments.

It is apparent that sex is not significant in children's preferences in Grade V.

TABLE VIII
PREFERENCES IN GRADE IV BASED ON SEX DIFFERENCES

| 257 GIRLS | | | | | |
|------------------|----|-------|--------|------------|-------|
| | % | S.E.% | Diff.% | S.E.Diff.% | C.R. |
| Same Text | 12 | 2.1 | | | |
| Multiple Text | 88 | 2.1 | *.76 | 2.9 | 26.20 |
| Partner Work | 43 | 3.1 | | | |
| Group Work | 35 | 3.0 | *.08 | 4.5 | 1.77 |
| Individual Work | 22 | 2.6 | *.13 | 3.9 | 3.33 |
| Teacher Directed | 39 | 3.1 | **21 | 4.0 | 5.25 |
| Self Directed | 61 | 3.1 | *.22 | 3.1 | 7.09 |
| 303 BOYS | | | | | |
| | % | S.E.% | DIFF.% | S.E.DIFF.% | C.R. |
| Same Text | 19 | 2.3 | | | |
| Multiple Text | 81 | 2.3 | *61 | 3.2 | 19.06 |
| Partner Work | 44 | 2.9 | | | |
| Group Work | 31 | 2.7 | *13 | 3.9 | 3.33 |
| Individual Work | 25 | 2.5 | *06 | 3.6 | 1.66 |
| Teacher Directed | 32 | 2.7 | **19 | 3.8 | 5.00 |
| Self Directed | 68 | 2.7 | *36 | 3.8 | 9.47 |

*Difference between each percent and the one above.
**Difference between the highest and lowest percent.

This table shows that boys and girls have very nearly the same preferences about the way they do their school work, -both choosing many books, partner work or group work, and self-direction.

COMMENTS ON DATA

The statistics thus far compiled seem to indicate that preferences are determined by maturity rather than by sex. As might be expected, with advancement in grade, pupils more often choose multiple texts as a basis for finding information, partner or group work, and self-direction. In each grade these preferences are shown, but the higher the grade the larger the proportion of pupils make these choices.

Whether the small proportion of girls choosing individual work is due to individual differences among these particular girls or to sex cannot be definitely stated; however, from these tables it might be concluded that of a very small proportion of any class, preferring to work individually, the greater number would be boys. Both boys and girls of all three grades generally prefer companionship in their educational ventures.

Other than this one interesting conclusion, sex seems to matter little in the preferences of boys and girls in grades IV, V, and VI.

TABLE IX
SINGLE TEXT VS. MULTIPLE TEXTS
PREFERENCES BASED ON M. A. OF PUPILS OF GRADE VI

| M.A. | | % | S.E. DIFF. | DIFF.% | S.E. % | C. R. |
|------|---------------------------|------|------------|--------|--------|-------|
| 8 | 5 children Same Text | .50 | 10. | -- | 14.0 | -- |
| | Mult. Text | .50 | 10. | | | |
| 9 | 31 children Same Text | .37 | 9.9 | *.26 | 13.7 | 1.97 |
| | Mult. Text | .63 | 9.7 | | | |
| 10 | 110 Children Same Text | .12 | 6.5 | *.76 | 9.1 | 8.35 |
| | Mult. Text | .88 | 6.5 | | | |
| 11 | 102 Children Same Text | .15 | 3.5 | *.70 | 4.9 | 14.28 |
| | Mult. Text | .85 | 13.5 | | | |
| 12 | 137 Children Same Text | .11 | 2.7 | *.78 | 3.8 | 20.52 |
| | Mult. Text | .89 | 2.7 | | | |
| 13 | 121 Children Same Text | .09 | 2.6 | *.82 | 3.6 | 22.78 |
| | Mult. Text | .91 | 2.6 | | | |
| 14 | 58 Children Same Text | .08 | 3.6 | *.84 | 5.1 | 10.39 |
| | Mult. Text | .92 | 3.6 | | | |
| 15 | 16 Children Same Text | .07 | 5.1 | *.86 | 7.2 | 11.94 |
| | Mult. Text | .93 | 5.1 | | | |
| 16 | 30 Children Same Text | .17 | 7.5 | *.66 | 7.2 | 11.94 |
| | Mult. Text | .83 | 7.5 | | | |
| 17 | 1 Child Same Text | .0 | -- | -- | -- | -- |
| | Mult. Text | .100 | -- | | | |

* Difference between each percent and the one above.

TABLE X
 GROUP WORK VS. PARTNER WORK VS. INDIVIDUAL WORK
 PREFERENCE BASED ON M. A. FOR PUPILS OF GRADE VI

| M.A. | | % | S. E. % | DIFF % | S.E. DIFF % | C. R. |
|------|------------------------------|----|---------|--------|-------------|-------|
| 8 | 5 children Partner Work | 56 | 9.9 | | | |
| | | | | *.26 | 13.5 | 1.93 |
| | Group Work | 30 | 9.2 | | | |
| | | | | *.15 | 11.5 | 1.39 |
| | Indiv. Work | 14 | 6.9 | | | |
| | | | | ** .42 | 12.4 | 3.39 |
| 9 | 31 children Group Work | 58 | 9.9 | | | |
| | | | | *.35 | 12.1 | 2.89 |
| | Partner Work | 23 | 8.4 | | | |
| | | | | *.04 | 11.4 | 0.35 |
| | Indiv. Work | 19 | 7.8 | | | |
| | | | | ** .39 | 12.6 | 3.09 |
| 10 | 110 children Group Work | 41 | 9.8 | | | |
| | | | | *.05 | 13.4 | .37 |
| | Partner Work | 36 | 9.6 | | | |
| | | | | *.13 | 12.6 | 1.03 |
| | Indiv. Work | 23 | 8.4 | | | |
| | | | | ** .18 | 11.6 | 1.56 |
| 11 | 102 children Partner Work | 45 | 9.9 | | | |
| | | | | *.12 | 10.9 | 1.10 |
| | Group Work | 33 | 4.7 | | | |
| | | | | *.11 | 32.2 | 0.34 |
| | Individual Wk.22 | | 4.1 | | | |
| | | | | ** .23 | 10.7 | 2.14 |
| 12 | 137 children Partner Work | 43 | 4.3 | | | |
| | | | | *.01 | 32.2 | 0.03 |
| | Group Work | 42 | 4.3 | | | |
| | | | | *.17 | 5.3 | 3.21 |
| | Individual Wk.15 | | 3.1 | | | |
| | | | | ** .18 | 5.3 | 3.29 |
| 13 | 121 children Partner Work | 48 | 4.6 | | | |
| | | | | *.19 | 6.3 | 3.01 |
| | Group Work | 29 | 4.1 | | | |
| | | | | *.06 | 5.5 | 1.09 |
| | Indiv. Work | 23 | 3.8 | | | |
| | | | | ** .25 | 6.0 | 4.76 |

TABLE X (CONTINUED)

| M.A. | % | S. E. % | DIFF. % | S. E. DIFF. % | G. R. |
|------|--------------------------------|---------|---------|---------------|-------|
| 14 | 58 children Partner Work 48 | 6.6 | | | |
| | | | *.17 | 8.9 | 1.79 |
| | Group Work 31 | 6.1 | | | |
| | | | *.10 | 8.1 | 1.23 |
| | Indiv. Work 21 | 5.4 | | | |
| | | | ** .27 | 8.5 | 3.17 |
| 15 | 16 children Partner Work 45 | 9.9 | | | |
| | | | *.12 | 13.6 | .88 |
| | Group Work 33 | 9.4 | | | |
| | | | *.11 | 12.5 | .88 |
| | Indiv. Work 22 | 8.3 | | | |
| | | | ** .23 | 12.9 | 1.78 |
| 16 | 30 children Partner Work 61 | 9.8 | | | |
| | | | *.36 | 13.11 | 2.67 |
| | Indiv. Work 25 | 8.7 | | | |
| | | | *.11 | 11.09 | 0.99 |
| | Group Work 14 | 6.9 | | | |
| | | | ** .47 | 13.11 | 3.53 |
| 17 | 1 child Group Work 100 | -- | | | |
| | Partner Work -- | | | | |
| | Indiv. Work -- | | | | |

* Difference between each percent and the one above.

** Difference between highest and lowest percent.

TABLE XI
TEACHER-DIRECTION VS. SELF-DIRECTION
PREFERENCE BASED ON M. A. OF PUPILS OF GRADE VI

| M.A. | % | S.E.% | DIFF.% | S.E. DIFF.% | C. R. |
|--------------|---------------------|-------|--------|-------------|-------|
| 5 children | | | | | |
| 8 | Teacher-Direct. 53 | 10. | | | |
| | | | *.06 | 14.1 | .42 |
| | Self-Directed 47 | 10. | | | |
| 31 children | | | | | |
| 9 | Teacher-Direct. 66 | 9.5 | | | |
| | | | *.32 | 13.4 | 1.64 |
| | Self-Directed 34 | 9.5 | | | |
| 110 Children | | | | | |
| 10 | Teacher-Directed 20 | 6.5 | | | |
| | | | *.60 | 9.19 | 6.52 |
| | Self-Directed 80 | 6.5 | | | |
| 102 Children | | | | | |
| 11 | Teacher-Direct. 26 | 4.3 | | | |
| | | | *.48 | 6.1 | 7.86 |
| | Self-Directed 74 | 4.3 | | | |
| 137 children | | | | | |
| 12 | Teacher-Direct. 15 | 3.1 | | | |
| | | | *.70 | 4.3 | 16.04 |
| | Self-Directed 85 | 3.1 | | | |
| 121 children | | | | | |
| 13 | Teacher-Direct. 15 | 3.4 | | | |
| | | | *.70 | 4.8 | 14.58 |
| | Self-Directed 85 | 3.4 | | | |
| 58 children | | | | | |
| 14 | Teacher-Direct. 8 | 3.7 | | | |
| | | | *.84 | 5.2 | 16.15 |
| | Self-Directed 92 | 3.7 | | | |
| 16 children | | | | | |
| 15 | Teacher-Direct. 14 | 6.9 | | | |
| | | | *.72 | 9.7 | 7.42 |
| | Self-Directed 86 | 6.9 | | | |
| 30 children | | | | | |
| 16 | Teacher-Direct. 18 | 7.7 | | | |
| | | | *.64 | 10.9 | 5.87 |
| | Self-Directed 82 | 7.7 | | | |
| 1 child | | | | | |
| 17 | Teacher-Direct. 0 | -- | | | |
| | Self-Directed 100 | -- | | | |

* Difference between each percent and the one above.

COMMENTS ON DATA

PREFERENCES OF CHILDREN IN GRADE VI WITH MENTAL AGES
RANGING FROM EIGHT YEAR TO SEVENTEEN YEARS

Most of the children of Grade VI prefer multiple texts to a single book. Those of M.A. eight were indecisive. Regardless of mental age, then, sixth graders would rather use many books than confine their study to one text.

Partner work is preferred by most age groups. In one case there is a significant difference of 2.67. This is in the M.A. 16 group. This study would lead one to believe that Grade VI would accept and work well in pairs or in small groups. Only a small percentage of any age group is interested in using individual assignments.

Self-direction shows a significant critical ratio in all mental age groups except M.A. 8 and 9. These groups choose teacher-directed assignments rather than self-directed assignments. Considering these choices, the teacher might realize that the very low mental age group needs more direction than others.

TABLE XII
SINGLE TEXT VS. MULTIPLE TEXTS
PREFERENCE BASED ON MENTAL AGES OF PUPILS OF GRADE V

| M. A. | | % | S.E.Diff. | Diff.% | S.E.% | C. R. |
|-------|--------------|-----|-----------|--------|-------|-------|
| | 5 children | | | | | |
| 8. | Same Text | 0 | -- | | | |
| | Mult. Text | 100 | -- | | | |
| | 30 children | | | | | |
| 9 | Same Text | 26 | 8. | | | |
| | | | | *.48 | 11.3 | 4.24 |
| | Mult. Text | 74 | 8. | | | |
| | 115 children | | | | | |
| 10 | Same Text | 15 | 3. | | | |
| | | | | *.70 | 4.6 | 15.21 |
| | Mult. Text | 85 | 3. | | | |
| | 133 children | | | | | |
| 11 | Same Text | 13 | 2.9 | | | |
| | | | | *.74 | 4.12 | 17.96 |
| | Mult. Text | 87 | 2.9 | | | |
| | 26 children | | | | | |
| 12 | Same Text | 13 | 4.2 | | | |
| | | | | *.74 | 5.9 | 12.7 |
| | Mult. Text | 87 | 4.2 | | | |
| | 12 children | | | | | |
| 13 | Same Text | 15 | 7.1 | | | |
| | | | | *.70 | 10.3 | 6.77 |
| | Mult. Text | 85 | 7.1 | | | |
| | 3 children | | | | | |
| 14 | Same Text | 0 | -- | | | |
| | Mult. Text | 100 | -- | | | |
| | 2 children | | | | | |
| 16 | Same Text | 50 | 10. | | | |
| | | | | *14. | 0 | -- |
| | Mult. Text | 50 | 10. | | | |

* Difference between each percent and the one above.

TABLE XIII
GROUP WORK VS. PARTNER WORK VS. INDIVIDUAL WORK
PREFERENCE BASED ON M. A. FOR PUPILS OF GRADE V

| M. A. | | % | S. E. % | Diff. % | S.E. Diff. % | C.R. |
|-------|-----------------|----|---------|---------|--------------|------|
| 8 | 5 children | | | | | |
| | Group Work | 40 | 9.8 | -- | 13.86 | -- |
| | Partner Work | 40 | 9.8 | *.20 | 12.65 | 1.57 |
| 9 | 9 children | | | | | |
| | Partner Work | 41 | 9.0 | *.07 | 12.41 | .56 |
| | Group Work | 34 | 8.6 | *.09 | 11.66 | .77 |
| 10 | 115 children | | | | | |
| | Partner Work | 44 | 4.6 | ** .12 | 6.20 | 1.93 |
| | Group Work | 32 | 4.3 | *.08 | 5.80 | 1.38 |
| 11 | 133 children | | | | | |
| | Partner Work | 43 | 4.3 | *.08 | 5.92 | 1.35 |
| | Group Work | 35 | 4.1 | *.13 | 5.40 | 2.41 |
| 12 | 64 children | | | | | |
| | Partner Work | 48 | 6.3 | *.15 | 8.66 | 1.73 |
| | Group Work | 33 | 5.9 | *.14 | 7.68 | 1.82 |
| 13 | 12 children | | | | | |
| | Group Work | 39 | 9.8 | *.01 | 13.70 | .07 |
| | Partner Work | 38 | 9.7 | *.15 | 12.80 | 1.17 |
| | Individual Work | 23 | 8.4 | ** .16 | 12.9 | 1.24 |

TABLE XIII (CONTINUED)

| M. A. | | % | S. E.% | Diff.% | S.E. Diff.% | C. R. |
|-------|-----------------|----|--------|--------|-------------|-------|
| | 3 children | | | | | |
| 14 | Group Work | 47 | 10.0 | | | |
| | | | | *.14 | 13.7 | 1.02 |
| | Partner Work | 33 | 9.4 | | | |
| | | | | *.13 | 12.3 - | 1.05 |
| | Individual Work | 20 | 8.0 | | | |
| | | | | ** .27 | 12.8 | 2.11 |
| | 2 children | | | | | |
| 16 | Indiv. Work | 50 | 10.0 | | | |
| | | | | *.10 | 14.0 | .43 |
| | Group Work | 40 | 9.8 | | | |
| | | | | *.10 | 32.8 | .30 |
| | Partner Work | 30 | 9.2 | | | |
| | | | | ** .10 | 13.5 | 1.48 |

* Difference between each percent and the one above.

** Difference between highest and lowest percent.

TABLE XIV
TEACHER-DIRECTION VS. SELF-DIRECTION
PREFERENCE BASED ON M. A. FOR PUPILS OF GRADE V.

| M. A. | | % | S. E. Diff. | Diff. % | S.E.Diff. | C. R. |
|-------|------------------|----|-------------|---------|-----------|-------|
| | 5 children | | | | | |
| 8 | Teacher-Directed | 60 | 9.8 | | | |
| | | | | *.20 | 13.86 | 1.44 |
| | Self-Directed | 40 | 9.8 | | | |
| | 30 children | | | | | |
| 9 | Teacher-Directed | 39 | 8.9 | | | |
| | | | | *.22 | 12.57 | 1.59 |
| | Self-Directed | 61 | 8.9 | | | |
| | 115 children | | | | | |
| 10 | Teacher-Directed | 27 | 4.2 | | | |
| | | | | *.46 | 5.92 | 7.77 |
| | Self-Directed | 73 | 4.2 | | | |
| | 133 children | | | | | |
| 11 | Teacher-Directed | 24 | 3.8 | | | |
| | | | | *.52 | 5.3 | 9.81 |
| | Self-Directed | 76 | 3.8 | | | |
| | 64 children | | | | | |
| 12 | Teacher-Directed | 22 | 5.2 | | | |
| | | | | *.56 | 6.93 | 8.08 |
| | Self-Directed | 78 | 5.2 | | | |
| | 12 children | | | | | |
| 13 | Teacher-Directed | 05 | 4.4 | | | |
| | | | | *.90 | 6.2 | 14.51 |
| | Self-Directed | 95 | 4.4 | | | |
| | 3 children | | | | | |
| 14 | Teacher-Directed | 20 | 8.0 | | | |
| | | | | *.60 | 11.3 | 5.31 |
| | Self-Directed | 80 | 8.0 | | | |
| | 2 children | | | | | |
| 16 | Teacher-Directed | 50 | 10. | | | |
| | | | | -- | 14.1 | -- |
| | Self-Directed | 50 | 10. | | | |

* Difference between each percent and the one above.

PREFERENCES OF CHILDREN IN GRADE V WITH MENTAL AGES
RANGING FROM EIGHT YEARS TO SIXTEEN YEARS

In all groups, with the exception of the sixteen-year old group, multiple texts are favored more than a single text. The sixteen-year-old group likes the use of either multiple texts or a single text. However, there are only two cases in this group, so the findings are not too significant.

Most of the children prefer partner participation. In the M. A. 8 group, they are equally satisfied with either partner work or group work. The M. A. 13 group, the M. A. 14 group favor group participation. The children with mental ages of 16 prefer individual work. This reaction may be indicative of the impatience some children feel toward groups of people who do not progress fast enough.

All groups except the M. A. 8 group and the M. A. 16 favor self-direction. The M. A. 8 group prefers teacher-direction and the children in the M. A. 16 group are equally satisfied with teacher-direction or self-direction. Since there are so few children in either of these groups, the data probably are not significant.

TABLE XV
SINGLE TEXTS VS. MULTIPLE TEXTS, PREFERENCE
BASED ON M. A. FOR PUPILS OF GRADE IV

| M. A. | % | S.E.Diff. | Diff. % | S.E.Diff.% | G. R. |
|--------------|-----|-----------|---------|------------|-------|
| 7 children | | | | | |
| 7 Same Text | 50 | 10. | | | |
| Mult. Text | 50 | 10. | 0 | 44.7 | 0 |
| 44 children | | | | | |
| 8 Same Text | 21 | 6.4 | | | |
| Mult. Text | 79 | 6.4 | *.58 | 9.5 | 6.10 |
| 145 children | | | | | |
| 9 Same Text | 18 | 3.2 | | | |
| Mult. Text | 82 | 3.2 | *.64 | 4.5 | 14.22 |
| 162 children | | | | | |
| 10 Same Text | 12 | 2.6 | | | |
| Mult. Text | 88 | 2.6 | *.76 | 3.74 | 20.32 |
| 82 children | | | | | |
| 11 Same Text | 12 | 3.6 | | | |
| Mult. Text. | 88 | 3.6 | *.76 | 5.5 | 13.80 |
| 12 children | | | | | |
| 12 Same Text | 2 | 2.8 | | | |
| Mult. Text | 98 | 2.8 | *.96 | 3.9 | 24.61 |
| 3 children | | | | | |
| 14 Same Text | 0 | -- | | | |
| Mult. Text | 100 | -- | -- | -- | -- |

*Difference between each percent and the one above.

TABLE XVI
 GRADE WORK VS. PARTNER WORK VS. INDIVIDUAL WORK
 BASED ON M. A. FOR PUPILS OF GRADE IV

| M. A. | % | S.E.% | Diff.% | S.E.Diff.% | C. R. |
|--------------|------------------|-------|--------|------------|-------|
| 7 children | | | | | |
| 7 | Partner Work 46 | 10.0 | | | |
| | | | *.16 | 13.5 | 1.18 |
| | Individual Wk.30 | 9.2 | | | |
| | | | *.06 | 12.5 | 0.40 |
| | Group Work 24 | 8.5 | | | |
| | | | ** .22 | 13.1 | 1.67 |
| 44 children | | | | | |
| 8 | Partner Work 52 | 7.5 | | | |
| | | | *.26 | 9.9 | 2.62 |
| | Group Work 26 | 6.6 | | | |
| | | | *.04 | 9.0 | 0.44 |
| | Individual Wk.22 | 6.2 | | | |
| | | | ** .30 | 9.7 | 3.09 |
| 145 children | | | | | |
| 9 | Partner Work 45 | 4.1 | | | |
| | | | *.14 | 5.5 | 2.54 |
| | Group Work 31 | 3.8 | | | |
| | | | *.07 | 5.1 | 1.37 |
| | Individual Wk.24 | 3.5 | | | |
| | | | ** .21 | 5.3 | 3.96 |
| 162 children | | | | | |
| 10 | Partner Work 48 | 4.3 | | | |
| | | | *.08 | .06 | 1.33 |
| | Group Work 40 | 4.2 | | | |
| | | | *.28 | .05 | 5.60 |
| | Individual Wk.12 | 2.8 | | | |
| | | | ** .36 | .05 | 7.05 |
| 82 children | | | | | |
| 11 | Partner Work 52 | 5.8 | | | |
| | | | *.27 | 7.6 | 3.55 |
| | Group Work 25 | 5.0 | | | |
| | | | *.02 | 7.0 | 0.28 |
| | Individual Wk.23 | 4.9 | | | |
| | | | ** .29 | 7.5 | 3.86 |

TABLE XVI (CONTINUED)

| M. A. | % | S.E.% | Diff.% | S.E.Diff.% | C. R. |
|-----------------|----|-------|--------|------------|-------|
| 12 children | | | | | |
| 12 Partner Work | 75 | 8.7 | | | |
| | | | *.56 | 11.6 | 4.31 |
| Group Work | 19 | 7.8 | | | |
| | | | *.13 | 9.1 | 1.42 |
| Individual Wk. | 06 | 4.7 | | | |
| | | | ** .69 | 9.8 | 7.04 |
| 3 children | | | | | |
| 14 Group Work | 60 | 9.8 | | | |
| | | | *.30 | 13.4 | 2.94 |
| Partner Work | 30 | 9.2 | | | |
| | | | *.20 | 10.5 | 1.90 |
| Individual Wk. | 10 | 6.0 | | | |
| | | | ** .50 | 11.4 | 4.38 |

*Difference between each percent and the one above.

**Difference between highest and lowest percent.

TABLE XVII
TEACHER-DIRECTION VS. SELF-DIRECTION PREFERENCE
BASED ON M. A. FOR PUPILS OF GRADE IV

| M. A. | % | S.E.Diff. | Diff. % | S.E.Diff. % | C. R. |
|--------------|-----------------|-----------|---------|-------------|-------|
| 7 children | | | | | |
| 7 | Teacher-Dir. 64 | 9.6 | | | |
| | | | *.28 | 13.5 | 2.73 |
| | Self-Dir. 36 | 9.6 | | | |
| 44 children | | | | | |
| 8 | Teacher-Dir. 64 | 9.6 | | | |
| | | | *.28 | 13.9 | 2.01 |
| | Self-Dir. 36 | 9.6 | | | |
| 145 children | | | | | |
| 9 | Teacher-Dir. 19 | 3.8 | | | |
| | | | *.62 | 5.29 | 11.70 |
| | Self-Dir. 81 | 3.8 | | | |
| 162 children | | | | | |
| 10 | Teacher-Dir. 29 | 3.6 | | | |
| | | | *.42 | .05 | 8.40 |
| | Self-Dir. 71 | 3.6 | | | |
| 82 children | | | | | |
| 11 | Teacher Dir. 29 | 5.1 | | | |
| | | | *.78 | 7.2 | 5.83 |
| | Self-Dir. 71 | 5.1 | | | |
| 12 children | | | | | |
| 12 | Teacher-Dir. 71 | 9.1 | | | |
| | | | *.42 | 12.8 | 3.28 |
| | Self-Dir. 29 | 9.1 | | | |
| 3 children | | | | | |
| 14 | Teacher-Dir. 58 | 9.9 | | | |
| | | | *.16 | 14.0 | 1.14 |
| | Self-Dir. 42 | 9.9 | | | |

*Difference between each percent and the one above.

COMMENTS ON DATA

PREFERENCES OF CHILDREN IN GRADE IV WITH MENTAL AGES
RANGING FROM SEVEN YEARS TO FOURTEEN YEARS

All children except those with the lowest mental age prefer multiple-text assignments. These children, M.A.7, were divided in their opinion, -50% choosing each type. It is interesting to note that the higher the M.A., the greater is the proportion choosing many books.

As to how to work, few fourth graders desire an individual assignment; most want companionship in their academic activities. The most significant findings from this set of charts are that only the highest mental ages had a majority favoring group work. All the others favor partner activities.

Grade IV shows an interesting divergence of opinion about direction. The two lowest and the two highest M.A. groups want the teacher to do the planning; the middle M.A. groups desire to do their own directing. It is obvious, then, that the teacher must help the lowest group and direct the highest. The reasons are obvious: slow children recognize their dependence; bright children have a healthy respect for adult superiority and probably feel that they will gain more if the teacher does the planning.

SUMMARY OF FINDINGS ON PREFERENCES BASED ON MENTAL ABILITY

All ages show a decided preference for multiple texts. The result for all groups are significant.

For ages 8, 11, and 12, group work is preferred to partner work. The 14-year-olds indicate they are satisfied with either. All groups show individual work to be the least desired preference.

All ages except the nine-year-olds, prefer self-directed assignments. The table shows a most decided preference for teacher-directed assignments by the nine-year-olds. The critical ratio of 9.19 is significant. This might suggest insecurity at this age, and a greater dependence on the teacher.

TABLE XVIII
SINGLE TEXT VS. MULTIPLE TEXT
PREFERENCES BY CHRONOLOGICAL AGES

| Age | % | S.E.% | Diff.% | S.E.Diff.% | C. R. |
|----------------|----|-------|--------|------------|-------|
| 14 children | | | | | |
| 8 Single Text | 16 | 7.3 | | | |
| Mult. Text | 84 | 7.3 | *.68 | 10.30 | 6.60 |
| 313 children | | | | | |
| 9 Single Text | 15 | 2.0 | | | |
| Mult. Text | 85 | 2.0 | *.70 | 2.80 | 24.75 |
| 574 children | | | | | |
| 10 Single Text | 14 | 1.4 | | | |
| Mult. Text | 86 | 1.4 | *.72 | 1.98 | 36.00 |
| 438 children | | | | | |
| 11 Single Text | 11 | 1.5 | | | |
| Mult. Text | 89 | 1.5 | *.78 | 2.12 | 36.65 |
| 234 children | | | | | |
| 12 Single Text | 11 | 2.0 | | | |
| Mult. Text | 89 | 2.0 | *.78 | 2.80 | 27.85 |
| 25 children | | | | | |
| 13 Single Text | 26 | 3.9 | | | |
| Mult. Text | 74 | 3.9 | *.48 | 5.48 | 8.92 |
| 2 children | | | | | |
| 14 Single Text | 10 | 6.0 | | | |
| Mult. Text | 90 | 6.0 | *.80 | 8.49 | 9.40 |

* Difference between each percent and the one above.

TABLE XIX.
GROUP WORK VS. PARTNER WORK VS. INDIVIDUAL WORK
PREFERENCE BY CHRONOLOGICAL AGES

| Age | % | S.E.% | Diff.% | S.E. Diff.% | C. R. |
|-----------------|----|-------|--------|-------------|-------|
| 14 children | | | | | |
| 8 Group Work | 41 | 9.8 | | | |
| | | | *.03 | 13.78 | 0.21 |
| Partner Work | 38 | 9.7 | | | |
| | | | *.17 | 12.61 | 1.34 |
| Indiv. Work | 21 | 8.1 | | | |
| | | | ** .20 | 12.73 | 1.57 |
| 313 children | | | | | |
| 9 Partner Work | 45 | 2.8 | | | |
| | | | *.14 | 3.87 | 3.62 |
| Group Work | 31 | 2.6 | | | |
| | | | *.07 | 3.50 | 2.00 |
| Indiv. Work | 24 | 2.4 | | | |
| | | | ** .21 | 3.70 | 5.68 |
| 574 children | | | | | |
| 10 Partner Work | 45 | 2.1 | | | |
| | | | *.12 | 2.8 | 4.28 |
| Group Work | 33 | 2.0 | | | |
| | | | *.11 | 2.6 | 4.23 |
| Indiv. Work | 22 | 1.7 | | | |
| | | | ** .23 | 2.7 | 8.51 |
| 438 children | | | | | |
| 11 Group Work | 44 | 2.4 | | | |
| | | | *.08 | 3.32 | 2.41 |
| Partner Work | 36 | 2.5 | | | |
| | | | *.16 | 2.98 | 5.37 |
| Indiv. Work | 20 | 1.9 | | | |
| | | | ** .24 | 3.05 | 7.86 |
| 234 children | | | | | |
| 12 Group Work | 45 | 3.3 | | | |
| | | | *.11 | 1.43 | 7.69 |
| Partner Work | 34 | 3.1 | | | |
| | | | *.13 | 4.12 | 9.15 |
| Indiv. Work | 21 | 2.7 | | | |
| | | | ** .24 | 4.24 | 5.66 |
| 25 children | | | | | |
| 13 Partner Work | 44 | 9.9 | | | |
| | | | *.03 | 14.00 | 0.21 |
| Group Work | 41 | 9.9 | | | |
| | | | *.26 | 12.17 | 2.14 |
| Indiv. Work | 15 | 7.1 | | | |
| | | | ** .29 | 12.17 | 2.14 |

TABLE XIX. (CONTINUED)

| Age | % | S.E.% | DIFF.% | S.E. DIFF.% | G. R. |
|---------------|----|-------|--------|-------------|-------|
| 2 children | | | | | |
| 14 Group Work | 44 | 9.9 | -- | -- | -- |
| Indiv. Work | 44 | 9.9 | -- | -- | -- |
| Partner Work | 12 | 6.5 | ** .32 | 11.83 | 2.17 |

* Difference between each percent and the one above.

** Difference between highest and lowest percent.

TABLE XX.
TEACHER-DIRECTION VS. SELF-DIRECTION
PREFERENCE BY CHRONOLOGICAL AGES

| Age | % | S.E.% | DIFF.% | S.E. DIFF. % | C.R. |
|--------------------|-----|-------|--------|--------------|-------|
| 14 children | | | | | |
| 8 Teacher Direct. | 29 | 8.1 | | | |
| | | | *.42 | 11.45 | 3.49 |
| Self-Direct. | 71 | 8.1 | | | |
| 313 children | | | | | |
| 9 Teacher Direct. | 67 | 2.9 | | | |
| | | | *.34 | 3.70 | 9.18 |
| Self-Direct. | 33 | 2.9 | | | |
| 574 children | | | | | |
| 10 Teacher Direct. | 21 | 1.7 | | | |
| | | | *.58 | 2.40 | 24.16 |
| Self-Direct. | 79 | 1.7 | | | |
| 438 children | | | | | |
| 11 Teacher Direct. | 20 | 1.9 | | | |
| | | | *.60 | 2.68 | 23.50 |
| Self-Direct. | 80 | 1.9 | | | |
| 234 children | | | | | |
| 12 Teacher-Direct. | 21 | 2.7 | | | |
| | | | *.58 | 3.74 | 15.50 |
| Self-Direct. | 79 | 2.7 | | | |
| 25 children | | | | | |
| 13 Teacher-Direct. | 39 | 9.8 | | | |
| | | | *.22 | 13.86 | 1.60 |
| Self-Direct. | 61 | 9.8 | | | |
| 2 children | | | | | |
| 14 Teacher Direct. | 0 | -- | | | |
| | 100 | -- | -- | -- | -- |

* Difference between each percent and the one above.

GENERAL CONCLUSIONS

1. The majority of children overwhelmingly favor the use of multiple texts. Only a few prefer a single text.
2. In almost all cases the difference between partner participation and group participation is slight. Most of the groups prefer partner participation.
3. Individual participation is chosen least of all by all the groups.
4. Self-direction is preferred by the majority. The very young or those in the lower mental range prefer teacher-direction rather than self-direction.
5. The sixth grades show more definite preferences, a result, doubtless, of maturity and training.
6. The groups with below average Mental Age and high Mental Age of each grade show variations. Children with a low Mental Age prefer guidance rather than independence. Children with high Mental Ages for a grade prefer to work independently or in larger groups. In groups, they are, without a doubt, chosen as leaders.
7. The nine-year-old group, or the average fourth grader prefers teacher-directed assignments. Ages do not significantly affect any of the other choices.
8. Sex does not significantly affect any preferences. The girls' tables, however, do show more definite opinions than those of the boys.

CHAPTER V

EDUCATIONAL IMPLICATIONS

CHAPTER V

EDUCATIONAL IMPLICATIONS

The writers conducted this study to gain further information about children's preferences. Such a study was suggested by Stewart's thesis. ^{1/} The writers considered the effects of grade placement, sex, intelligence, and age on children's preferences of assignments.

1. The 1632 children studied overwhelmingly selected multiple texts rather than a single text. There were only a few children choosing single texts. In preparing units or lessons, it is well to remember to have as many different books as possible to meet the needs of all children of all abilities.

2. The graphs show that the majority of children prefer to work with partners, but some are content with group work. Very few show a preference for individual work.

The higher the Mental Age and the older the child, the greater his preference for group participation. Perhaps this shows a desire for sociability or for leadership. The younger the child and the lower the Mental Age, the more dependent on others he will be, but this child still prefers to work with a partner.

3. In almost every group, self-direction is favored over teacher-direction. The nine-year-old group definitely

^{1/} D. H. Stewart, "Children's Preferences in Types of Assignments", (Unpublished Master's Thesis, Boston University), Boston, 1945

prefers teacher-direction. Judging from this data, one would assume that this group needs more guidance to work efficiently and to become more self-reliant.

4. Stewart found that self-direction grew more pronounced in the fourth grade than in the sixth grade. The present writers did not find this to be so. ^{1/}

5. From the results of the study, the readers will probably assume that to obtain the best from all the children, the teacher must make available as many different texts as possible. The children should work with partners or in groups.

6. Before using self-directed assignments, the teacher must determine whether or not the pupil is ready for independent study. If the pupil is unprepared for work alone, he should be given training in self-reliance by careful guidance until he is ready to continue by himself.

7. Because no significant difference is indicated for partner work or group work, probably all children, irrespective of mental ability, would accept either type of assignment. Again, mental age apparently matters little in the lack of interest in individual activity.

^{1/} D. H. Stewart, "Children's Preferences in Types of Assignments", (unpublished Master's Thesis, Boston University) Boston, 1945

CHAPTER VI

SUGGESTIONS FOR FURTHER STUDY

SUGGESTIONS FOR FURTHER STUDY

1. Conduct a similar study in other parts of the United States in the same grade levels to compare results.
2. Make a similar questionnaire for use by all teachers to determine the preferences of pupils each year so that the teacher might plan accordingly.
3. Give this same survey to all third grades in this area to see whether their immaturity would affect their preferences.
4. Conduct a study on teacher-directed and self-directed assignments in another locality to see whether school system practices would affect the results.
5. Conduct a study to determine why self-direction in the fourth and sixth grades was entirely different statistically from Stewart's thesis.^{1/}
6. Conduct a study in a different locality on just fourth grades for comparison of results.
7. Conduct a study to see why children prefer to work with a partner or in a group rather than by themselves.

^{1/} D. H. Stewart, "Children's Preferences in Types of Assignments", (unpublished Master's Thesis, Boston University) Boston, 1945.

APPENDIX

Name..... I.Q.....
 School.....Grade.....M.A.....
 Boy or girl.....Date.....C.A.....

We want to find out how you like to work. Everyone likes to do things in different ways. Check the way you would like best to work if you could have your choice.

Sample: The class is going to study about pioneers. Which would you like to do?

- () Have everyone in the class read the same story to find out about pioneers, how they lived, the dangers they met.
 - () Have everyone read out of different books to find out about pioneers, how they lived, the dangers they met.
-

1. You have invited your parents to hear you tell about Mexico. Which would you like to do?

- () Have everyone in the class read the same story to find out about Mexican children and Mexican customs.
- () Have each child read out of different books to find out about Mexican children and Mexican customs.

2. The class is going to prepare a program on the life of Washington. Which would you like to do?

- () Have all the children read the same story to find out about Washington as a boy and Washington as a leader of his country.
- () Have every child read different stories to find out about Washington as a boy and Washington as a leader of his country.

3. Your class wants to learn about lumbering in New England. Which would you like to do?
- () Have all the children read the same story to find out about the ways of lumbering and the kinds of lumber found in New England.
 - () Have everyone read out of many different books to find out about the ways of lumbering and the kinds of lumber found in New England.
4. The class is preparing a science program for the P. T. A. Which would you rather do?
- () Have each child use as many books as possible to find out about magnets, uses of magnets, how to make a magnet.
 - () Have everyone in the class read the same book to find out about magnets, uses of magnets, how to make a magnet.
5. We have decided to learn as much as we can about Canada. Which would you rather do?
- () Have every child read by himself to see what he can find about the Canadian Rockies, the rivers of Canada, the forests of Canada.
 - () Have everyone in the class read the same story to find out about the Canadian Rockies, the rivers of Canada, the forests of Canada.
6. The class is planning to do experiments on air pressure. Which would you like to do?
- () Make the class into small groups and see what you can find out about air pressure.
 - () Choose a partner to work with you to see what you can find out about air pressure.
 - () Work all by yourself to see what you can find out about air pressure.

7. We are going to give a health program for the school. Which would you rather do?
- () Work by yourself to see what you can find out about the basic foods and why they are good for us.
 - () Have everyone in the class choose a partner to find out about the basic foods and why they are good for us.
 - () Divide the class into small groups to find out about the basic foods and why they are good for us.
8. We want to find out all we can about Mozart's childhood. Which would you like to do?
- () Choose partners to see what you can learn about Mozart's childhood.
 - () Divide the class into small groups to see what they can learn about Mozart's childhood.
 - () Work by yourself to see what you can learn about Mozart's childhood.
9. We are interested in learning about cattleraising in our West. Which would you rather do?
- () Study all by yourself to learn about the work of a cowboy and life on a ranch.
 - () Work with your chum and read about the work of a cowboy and life on a ranch.
 - () Work with a small group of children to learn about the work of a cowboy and life on a ranch.
10. A man is coming to talk to the class about asbestos mining in Canada. Which way would you choose to get information before he comes?
- () Choose a friend to look up information about asbestos mining in Canada.
 - () Work by yourself to look up information about asbestos mining in Canada.
 - () Work with a small group to look up information about asbestos mining in Canada.

11. We are planning an assembly program on Memorial Day for the school. How would you choose to work?
- () Have the teacher find books and give them to you to read about the first Memorial Day and ways of observing Memorial Day.
 - () Look in different places yourself to find what you can about the first Memorial Day and ways of observing Memorial Day.
12. If you were going to give a talk about tobacco, how would you choose to go about finding information you needed?
- () Find the materials you needed in encyclopedias, geography books, and reading books about where tobacco is raised, when it is planted, the of tobacco after it is picked.
 - () Have your teacher tell you where to look to find where tobacco is raised, when it is planted, the treatment of tobacco after it is picked.
13. You want to invite another grade to hear about deep-sea fishing. Which would you rather do?
- () Use materials which the teacher has chosen to find out about the importance of fishing to New England, the kinds of fish caught, the methods of catching fish.
 - () Be responsible yourself for finding about the importance of fishing to New England, the kinds of fish caught, the methods of catching fish.
14. We are studying about the ancient Incas of Peru. Which would you rather do?
- () Look in several places yourself to find out about their culture and their treatment by the Spaniards.
 - () Let the teacher find books that will tell you about their culture and their treatment by the Spaniards.

15. If you want to be able to tell about the climate of Mexico to a friend who is going there, would you rather do?

- () Use books which the teacher has chosen to tell you about the climate of Mexico and its influence?
- () Search through as many materials as you can find by yourself to learn about the climate of Mexico and its influence?

BIBLIOGRAPHY

Bibliography

- Betts, Emmett A., "Developmental Activities and Materials", Foundations of Reading Instruction, New York: American Book Company, 1946 Pg. 65, 263.
- Betts, Emmett A., "Social and Emotional Readiness for Reading", Educational Administration and Supervision 30:145, March, 1944, pg. 139 - 161.
- Betzner, J. and Lyman, R. L., "The Development of Reading Interests and Tastes", The Teaching of Reading: A Second Report, N. 36, Washington: N.S.S.E., 1937 p. 186.
- Brueckner, L. J. and Melby, E. O., Diagnostic and Remedial Teaching, Boston: Houghton Mifflin Co., 1931, p. 295.
- Burton, William H., The Nature and Direction of Learning, D. Appleton-Century Company, 1939.
- Cole, Luella, The Elementary School Subjects, New York: Rinehart and Company, Inc., 1946
- Dean, Stuart E., "A Study to Determine the Relationships Between Preferences and Achievement", B. U. School of Education, Ed. Thesis - Ed. D. 1949, pg. 12, 13.
- Dewey, John, Interest and Effort in Education, Boston: Houghton Mifflin Company, 1913, pg. 1.
- Dolch, Edward W., The Psychology and Teaching of Reading, Boston: Ginn and Company, 1931, pg. 3.
- Douglas, Aubrey A., The American School System, New York: Rinehart and Company, Inc., pg. 194.
- Earley, William L., "An Analysis of Influences of Intelligence and Age Differences Upon Fifth-Grade Children's Preferences for School Subjects", Unpublished Master's Thesis, B. U. School of Education, 1948.
- Frederick, O. I., "Pupil Interests and Needs as a Basis for Curriculum Development", Curriculum Journal 9: 321-322, November, 1938.
- Gates, Arthur I., The Improvement of Reading, New York: MacMillan, 1937, pg. 33.
- Gray, William S., "A Decade of Progress", The Teaching of Reading: A Second Report, V. 36, pg. 5-21, Washington, N.S.S.E. 1937, p. 8.

- Hoesen, Ralph Van, "Pupil-Teacher Planning in the Social Studies and Its Psychological Aspects". School Review 58: 29-37
- Horn, Ernest, Methods of Instruction in the Social Studies. New York: Charles Scribners Sons, 1937, pp. 504-505.
- Jenkins, Ethel M., "Characteristics of Reading Programs That Appeal to Children", Unpublished Master's Thesis, B. U. School of Ed., 1948, p.7.
- Klugman, Samuel F., "Co-operative versus Individual Sufficiency in Problem Solving", Journal of Educational Psychology 35: 91-100: February, 1944.
- Lazar, May, "Reading Interests, Activities, and Opportunities of Bright, Average and Dull Children", New York: Bureau of Publications, Teachers College, Columbia University, 1937.
- Lyons, Catherine L., "An Evaluation of the Relative Appeal of Reading Interests", Unpublished Master's Thesis, B. U. School of Education, 1943.
- Mitchell, S. Ellen, "Construction and Evaluation of a Measure of Reading Preferences", Unpublished Master's Thesis, B. U. Sch. of Ed., 1944.
- Mort, Paul R. and Vincent, William S., A Look at our Schools, Cattell and Company, Inc., 1946.
- Otto, Henry J., "Curriculum Issues in Elementary Education", Educational Leadership, Volume 7, p. 23, October, 1949
- Reed, Homer B., Psychology of Elementary School Subjects, Boston: Ginn and Company, 1938, p. 115.
- Sandin, Adolph A., "Social and Emotional Adjustment of Regularly Promoted and Non-Promoted Pupils", New York: Bureau of Publications, Teachers College, Columbia University, 1944, p. 142.
- Spack, Benjamin, M. D. "What We Know About the Development of Healthy Personalities in Children", Understanding the Child. No. 1, Vol. XX, January, 1951.
- Spears, Harold, Some Principles of Teaching, Prentice-Hall, Inc. 1949.
- Stewart, Dorothy H., "Childrens Preferences in Types of Assignments", Unpublished Master's Thesis, B. U. School of Ed., 1945.

Viglione, Julie C., "An Evaluation of Written Composition, Interests Suggested by Five Language Series in Grades Five and Six", Unpublished Master's Thesis, B. U. School of Ed., 1948.

Wilson, H. B., and Wilson, G. M. Motivation of School Work, Houghton Mifflin Co., 1933.

Witty, Paul, Reading in Modern Education, Boston: D. C. Heath and Company, 1949, pg. 22, 23, 49, 50, 132, 136.