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Signature Dorothy Jane Heller
Date August 13, 1971

INDIVIDUALIZED READING IN THE LAUREL SCHOOLS

by

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TABLE OF CONTENTS

	Page
LIST OF TABLES.	vi
ABSTRACT.	vii
Chapter	
I. INTRODUCTION.	1
Statement of the Problem.	3
General Questions to be Answered.	4
Purpose of the Study.	5
General Procedure	6
Limitations and/or Delimitations.	7
Definition of Terms	8
Summary	9
II. REVIEW OF RELATED LITERATURE.	11
Introduction.	11
A Brief History of Individualized Instruction	12
Essential Aspects of the Program.	13
Disadvantages and Handicaps Encountered	16
An Experimental Program	17
Results of Other Studies.	18
Summary	21
III. PROCEDURES.	23
Introduction.	23
Population Description.	24
Investigation Procedure	26
Method of Collecting Data	28
Organization of Data.	29
Statistical Hypotheses.	30
Analysis of the Data.	31
Summary	32
IV. ANALYSIS OF THE DATA.	33
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	38

Chapter	Page
Summary	38
Conclusions	39
Observations	40
Recommendations	41
LITERATURE CITED.	43

LIST OF TABLES

Table	Page
1. Means of Measured Reading Achievement of Class B and Class C.	33
2. Means of Measured Reading Achievement of Class A and Class C.	34
3. Correlation Between Measured Aptitude and Measured Achievement.	35
4. Rank in Achievement Among Pupils of Similar Measured Aptitude	36

ABSTRACT

The purpose of this study was to determine the effectiveness of an individualized reading program which was initiated in the first grades of Laurel school system in the fall of 1969. A group of 378 first, second, and third grade students were included in the study. The third grade students were the control group, having received instruction in reading under the traditional basal program. The second and first grade students were the experimental group, having been included in the individualized program.

The investigator was involved with finding whether or not there were any significant differences in the mean reading achievement of the experimental group in comparison to the control group, whether or not there is significant correlation between measured reading aptitude and measured reading achievement, and whether or not individualized instruction may be of more benefit to one ability group--high, average, and low--than it is to the others.

The Primary Reading Profiles test, published by Houghton Mifflin, was administered to each class approximately three weeks before the end of the first grade. This test measures both aptitude for reading and reading achievement. Scores from the tests were used to compute the mean achievement for each class. An F ratio value was used to determine the variance for each class. Correlations between aptitude and achievement were computed at the Computing Center at Montana State University. Medians, in terms of percentiles, were tabulated to show a comparison of achievement of different aptitude groups within each class.

Conclusions arrived at as a result of this study were: (1) No significant statistical difference was found between the mean reading achievement of the experimental groups and the control group. (2) Significant positive correlations were found between measured aptitude and measured achievement, with a higher correlation found within the two experimental groups than that of the control group. (3) Achievement medians indicated that the high ability group tended to benefit more from the individualized program than did the other ability groups. (4) Individualized instruction results in non-measurable benefits to children of all ability levels.

Recommendations made were: (1) The individualized program should be continued with efforts on the part of all personnel to improve its effectiveness. (2) The program should be extended to other grade levels and expanded to include other areas of the curriculum. (3) Further research should be encouraged as the program continues, to determine its long-term effectiveness.

CHAPTER I

INTRODUCTION

The teaching of reading has been and is today the subject of heated debates and great concern among educators and others interested in education. Reading reform groups have been extremely vocal in their criticism of reading programs employed in the schools and are advocating their own particular methods of instruction. Book companies offer a wealth of materials, all geared toward the improvement of reading instruction in the schools. Parents add their voices to the discussions. Each group or company seems to feel that it offers the one best method which, if used properly, will ensure every child's success in the very important process of learning to read.

The classroom teacher, however, after working with children of varying abilities, backgrounds, and interests, soon realizes that there is no one method of teaching reading which will best fit every child's needs. The assumption that all children be given equal educational opportunities does not necessarily mean that all children should receive identical treatment. (Fischer, 1969) Children do not all learn in the same manner just as they do not all learn at the same rate. For some the visual approach in learning to read is the most productive. Others rely on hearing, and for them an approach which stresses the use of phonetic material is necessary. There are some children who experience difficulty when they are included in either a visual or auditory program.

The teacher may have to use the kinesthetic or touch method in the early stages of reading instruction. At times, the language experience approach may prove to be most productive, especially in working with children who have had limited experiences and for whom the stories in the traditional basic texts are meaningless. Of course, the fact that one particular approach is used for a child does not imply the exclusion for him of all materials used and skills developed by the teacher in working with other individuals. All children must receive instruction in phonics, in recognition of sight words, and in language experience activities as their needs arise. The difference lies in the approach to learning to read which will be used with each child.

To compensate in part for individual differences among children, the Laurel Elementary School system initiated in the fall of 1969 a program of individualized reading instruction beginning with the first grade. The goal of this program was to provide for every child, according to his needs, ability, and interests, the best possible learning situation in the area of reading.

The teachers met with the elementary supervisor and the principals to determine which basic texts, materials, and equipment would be needed in the implementation of the program. Before the beginning of the fall term, all of the first and second grade rooms were equipped with sets of several basic reading texts, each of which stressed a different approach to the teaching of reading. Additional reading

material, covering a wide range of topics and geared to many different reading levels, was provided for each classroom. High interest reading material usually encourages more personalized reading on the part of the children. Activity centers and listening centers were installed in all first and second year classrooms. Each child was encouraged to feel free to go to any center he chose as soon as he had finished his required assignment, provided he did not disturb the others in the room. The children quickly learned to make use of the listening centers and were usually able to operate the machines themselves with very little confusion.

To further facilitate the children's progress, each teacher remained with her class for a period of two years. It was the general consensus of opinion among the teachers and administrators that this policy would help eliminate the rather lengthy period of adjustment for second-year children, which is usually necessary in the fall.

Statement of the Problem

The problem of this study was to determine whether or not the individualized reading program which has been implemented in the three Laurel elementary schools is resulting in an improvement in reading instruction. The investigator was involved in researching, not only the reading achievement of each child, but also his interest in personal or recreational reading. The study was extended to include findings

related to reading achievement in comparison to measured reading aptitude. It is possible that an individualized program is of more value to children of one ability group than to those of another. Since there are no wide variations in the community in economic status or in race, these two areas were not considered in the study.

General Questions to be Answered

In a program designed to develop each child's individuality and to bring out his greatest potential, it is important that every teacher be convinced that the methods employed are sound. Is the teacher enthusiastic enough about the program to explore it to its fullest extent? The primary motivation for initiating this type of program is the teacher's belief that it is the most productive form of operation. (Folcarelli, 1966) Children's attitudes must be considered also. Does the child tend to operate more efficiently and with greater interest in an individualized situation? Is he happy and satisfied? Is the ability level of the child a significant factor in determining whether or not he benefits more from individualized instruction? Does this type of program encourage children to read more extensively?

In any innovative program involving children, it is important that the reactions of parents be determined. Are the parents fully aware of the mechanics and objectives of the program? Are they reluctant to accept a change or are they eager to cooperate? What kind of

meaningful reporting system will be used in order that parents are kept informed of their child's progress.

Purpose of the Study

This study was undertaken for the purpose of adding some information to that already in existence on the subject of reading instruction. There is a recognized need for improvement in the teaching of reading, and if improvement is to be made, it is necessary that new methods of instruction be initiated and evaluations of results be reported. There had been growing concern expressed by the Laurel teachers and administrators that the reading program employed in the system was inadequate. They felt that the program had been geared to the so-called "average" student and did little to challenge those of high ability or to relieve the frustrations of those with learning problems. Although ability grouping had been the common practice in the primary grades with provisions made for rate of learning, no provisions had been made for differences in manner of learning. Consequently, all had proceeded down the same path of learning to read, with some merely progressing more rapidly than others and some making very little progress at all.

Individualized instruction is certainly not a new idea; however, it has not, until recently, received much recognition from educators as a workable plan. In the past, many schools have not had the necessary

facilities or resources to make the program function as it should. Some disadvantages have been mentioned, such as lack of materials, the feeling on the part of teachers that special training is necessary, and that basic reading skills will be neglected by employing this method of teaching.

Before any definite conclusions can be drawn regarding the actual benefits, if any, of an individualized reading plan, much more extensive research and study must be done. The investigator has attempted, by evaluating the situation in the Laurel schools, to provide information which may be of some value to others, as well as to educators in the Laurel schools, as plans are made to expand and extend the program.

General Procedure

Similar studies were reviewed to provide the investigator with knowledge of the research which has been done in the field of individualized instruction.

The entire population of the first and second grades of the Laurel schools were included in the experimental group, and all of the members of the third grades were considered the control group. The Slossen Intelligence Quotient Test was administered to all pupils upon entering the first grade in the fall. The test results of second and third grade children when they entered the first grade were also available. In the spring, the Primary Profiles and Gates McGinitie

standardized reading achievement tests were given to compare the reading achievement of the experimental groups with that of the control group.

After test scores were compiled, the researcher organized data sheets to show the results of the investigation. These data include the reading achievement mean of each group, as well as the relationship between reading aptitude, as measured by the Primary Profiles test and reading achievement. The research was extended to include comparison of pupil's scores with norms of pupils of similar measured aptitude. The purpose of this comparison was to determine whether or not the program is more beneficial to children of one ability group than to those of another.

A general summary of the overall effectiveness of the program has been included in the final chapter.

Limitations and/or Delimitations

The study was limited in that the program was begun two years ago. Therefore, the research had to be confined to first-year and second-year children only, with a comparison made to the class which preceded the second-grade class. The study was further limited by the necessity of involving in the investigation only those children in the Laurel school system. Results obtained from a study of the Laurel schools may not necessarily apply to other districts or areas. The

population is made up almost entirely of white students whose parents would be considered average or slightly above average in economic, social, cultural, and educational backgrounds. Findings would probably apply to areas in which a similar type of population exists.

Definition of Terms

Individualized instruction. The term "individualized instruction" does not have the same connotation to everyone. In this study, the term refers to that type of instruction which includes for each child in the class a definite reading program adapted to his ability and needs. It does not necessarily imply that every child in the room will be treated individually or tutored, so to speak. Such a form of instruction would be virtually impossible in an ordinary classroom situation. Some children may need to be guided individually, but often there are several who may well fit into the same program. However, the system must be flexible enough to allow for changes within a group. At times, for a number of reasons, a child may drop behind the others in his group. If this situation arises, he must not be forced to fit into the group but rather be allowed to proceed at his own rate. The same holds true for those who forge ahead of the others. An individualized program must do as the name implies--fit the program to the individual, not the individual to the program. However, it does not exclude group instruction at times for specific reasons or for those who have similar

needs.

Reading achievement. Reading achievement, as used in this study, refers only to the achievement in reading based upon standardized reading tests which are administered during the school term. It does not imply all of the related aspects of reading which cannot be measured by tests.

Summary

Recognizing the need for improvement in reading instruction, Laurel administrators and teachers initiated in the fall of 1969 a program of individualized instruction in reading beginning at the first-grade level. Basic texts and materials, each of which employed a different approach to reading instruction, were provided for all first-grade classrooms, as well as activity and listening centers.

Upon entering the first grade, the children were given readiness tests, the results of which better enabled teachers to select for each child a reading program which would be the most beneficial to him. Although many children were treated individually, grouping was not eliminated for those with common needs. Grouping was kept flexible at all times. Instructors and administrators agreed that each teacher would remain with her class for a period of two years.

The investigator has been involved in collecting data to determine whether or not the individualized reading program which has been

used in the Laurel schools for two years has resulted in improvement in reading achievement. Comparisons have been made between the reading achievement of the two groups of first graders who have been instructed under this program with those of the previous year who were in the traditional program. The Primary Profiles test was administered in the spring to all three groups as they completed the first year of school. This test measures aptitude for reading as well as achievement.

The purpose of the study is to provide more information on the subject of individualized instruction in reading, as well as to evaluate the effectiveness of the program in Laurel as plans are made to expand and extend it to other subject areas and to other grades.

CHAPTER II

REVIEW OF RELATED LITERATURE

· Introduction

The literature reviewed has been organized to provide first a brief history of individualized instruction and reasons for its inception. Criticisms of present methods of instruction in reading in relation to the needs of the individual child have been included, as well as suggestions for improvement of methods and re-evaluation of the goals in education.

Essential aspects and the implementation of a desirable type of program as outlined by prominent educators have been reviewed. The disadvantages and handicaps encountered have been pointed out in order to provide a better overall picture of the methods which have been found to be most advantageous in schools where this program has been put into operation.

Included in the literature review is a rather detailed account of an individualized program which has been in operation for several years in a research center at the University of Pittsburgh and which is being funded by the United States Office of Education. Results of other studies done have been mentioned in cases where additional related points of information are discussed.

The literature reviewed is pertinent to this study because the

area covered in the articles researched relates directly to individualized programs in reading. The reports and research completed have been submitted by people who are authorities in the field of education. The articles reviewed deal either with opinions of the various authors regarding the best methods of implementation of the program or findings of studies done by investigators in schools where the program has been in effect. Comparisons have been made in Chapter V of this study in relation to methods used in the Laurel program and the results obtained.

A Brief History of Individualized Instruction

One of the first educators to voice opposition to the lock-step method of instruction used in the schools was Preston Search, formerly Superintendent of Schools in Pueblo, Colorado, and Los Angeles, California. He published reports making his views known during the latter part of the nineteenth century. In 1915, Frederic Burk, formerly at San Francisco State Normal School, published a report entitled "Monograph C", which was the result of two years of work on the subject of individualizing instruction. Included in Part II of the Twenty-Fourth Yearbook of the National Society for the Study of Education, published in 1924, were reports by such well-known educators as William S. Gray and Ernest Horn with recommendations for initiating programs of learning which better fit the needs of each child. They concluded that there is no group in which each individual possesses equal ability,

that no single requirement provides motivation for each one, and that it is not reasonable to set up a definite standard and expect everyone to follow it. (Stauffer, 1959)

Although a few authorities some years ago recognized the inadequacies of the accepted procedure of instruction, educators generally felt that the value of shared goals and social experiences outweighed the advantages of an individually prescribed program. Therefore, individualized instruction as an organized movement did not actually have its beginning until the early 1950's. Considerably more interest has been shown during the 1960's as teachers have begun to realize that an instructional program which forces a child to conform to a certain pattern or style of learning is not the most productive. At the present time on the basis of research which has been done, there seems to be a general agreement on the part of educators that an individualized program of reading instruction has distinct possibilities which should be explored and tested further.

Essential Aspects of the Program

Basic skills and a certain accumulation of knowledge are certainly necessary and cannot be neglected. However, today's classroom must offer a much more comprehensive program to its children than it has in the past. It is imperative that children be given the opportunity to inquire, to explore, and to learn some self-direction. They need

freedom in the classroom to be creative.

The principal goal of education is to create men who are capable of doing new things, not simply of repeating what other generations have done--men who are creative, inventive, and discoverers . . . (Piaget, 1968:829)

A teacher cannot teach originality or creativity, but he can arrange his classroom to provide opportunities and experiences where creativity and originality can develop. Society today is more than ever committed to the significance of individual rather than group categorization of performance. (Bolvin, 1968)

Jasik (1968) states that the "key to success" of a reading program based on individual needs is the "teacher who cares". A program which allows a child to progress at his own rate and according to his own style of learning takes much planning, understanding, time, and patience on the part of the teacher. A teacher must be adaptable and eager for a change of routine. He must be willing to take the time to observe the behavior of a child and to listen to his conversation, thus gaining more insight into the child's needs and interests. He must make use of knowledge obtained from tests indicating a child's abilities, background, and aptitudes. Previous knowledge and past experiences can be drawn upon also. By making use of these guidelines, a teacher is better able to tailor a design for learning which will more adequately fit each child in his classroom.

Another important consideration in establishing a sound program

is the attitude of the administration in the school system. Support and leadership must come from the administration. A program cannot function successfully without an adequate supply of materials, resource centers within the classroom which provide a choice of activities, and especially a wide variety of reading materials appropriate to the interest and the reading levels of the children. There must be cooperation among the teachers and the administrators in setting up goals or objectives of the program, in selecting the appropriate kinds of materials which will provide for different approaches used, and in finding methods of evaluation of the program. Satisfactory methods of reporting progress to students and parents must be formulated. Unless administrators have a vital interest in the project and provide the necessary support and leadership, little can be accomplished.

According to Deep (1970), pupil participation to a certain extent in the formulation of goals is desirable. Children should learn responsibility and initiative, sensitivity to others, and adaptability to necessary regulations. They should learn to perform without undue dependence upon the teacher. They must be made aware of the necessity of acquiring certain basic skills, the ability to express themselves, some experience in logical thinking, and to be able to apply what they have learned to new problems. In an individualized situation, children tend to learn more self-reliance.

Individualizing does not imply the exclusion of grouping. At

times it is practical to form groups for the purpose of exploring an area of common interest or attaining basic skills. However, the fact remains that consideration be given to each child in the group. "No group ever learned anything--only individuals learn." (Allen, 1968:200) Allen also states that the ability to answer factual questions is not the purpose of education. Asking valid questions and having a knowledge of how to use a variety of resources, including human resources, is the true purpose of education.

Disadvantages and Handicaps Encountered

"The monolithic structure of American schools restricts teachers seeking to provide for individual differences among learners." (Goodland, 1966:167) Certain expectations or standards are set and everyone must conform to those standards within a specified period of time or face non-promotion. It is very difficult to re-structure the entire organization of the school systems. Teachers are usually forced to continue using one set of textbooks for the entire class, to give tests stressing an accumulation of knowledge of basic facts, and to conduct evaluation based on norms rather than on progress. Too often it is necessary to resort merely to keeping an able child busy for fear of interfering with material designed for the next grade. The schools are too grade-bound, and there is a general reluctance to abandon this system.

Teachers are further handicapped by large class loads and lack of time. Many feel that they do not have sufficient training, and others are not convinced the program is an improvement over present methods, since the teaching of skills may be neglected. Although the majority agree that the reaction of children to this type of program is favorable, there is little research to show significant improvement in achievement. The desirable results noted are not measurable by present methods of evaluation.

An Experimental Program

The Learning Research and Development Center at the University of Pittsburgh, funded as an experimental program by the United States Office of Education, is devoting major attention to the problem of individual instruction. The three areas being studied are reading, mathematics, and science. The project was begun because of the importance of the problem and because problems of this nature demand rather a long-term commitment. The program is organized so that each student proceeds through a carefully sequenced set of objectives for a particular area. He is allowed some self-direction, self-evaluation, and initiative. A sequence of learning experiences with necessary flexibility is planned by the teachers, staff members, psychologists, and subject specialists. Objectives are established and diagnostic instruments are designed to measure achievements in tasks specifically outlined.

A child may skip particular skills if he has mastered them. He is also given the opportunity to use what he learns to explore further on his own. Materials are developed for self-study, such as tape and disc recordings, programmed materials, individual readers, and manipulative devices. New ideas are presented either to individuals, small groups, or large groups. Alternative sets of materials are used to provide a variety of approaches. Prescriptions for each child are provided with the following factors in mind: ability level, maturity, learning characteristics, and his reaction to the program. A continuous evaluation process, both of child achievement and the program itself, is considered imperative.

The Regional Laboratory in Philadelphia, sponsored by the United States Office of Education, is field testing the project in twenty-three elementary schools to determine if the program could be used in various settings. Consideration is being given the cost factors involved, types of teacher training needed, and variables related to implementation and monitoring of the program. Those in charge of the project are convinced that some degree of individualizing is possible in each of the types of schools tested. (Bolvin, 1968)

Results of Other Studies

Jenkins (1957) conducted an experiment in the Whittier Elementary School in Los Angeles, California. The research was carried on

for a period of one year and involved approximately 160 boys and girls selected from eight second-grade classes. The control group, using a basal series of readers, achieved a total reading gain of 1.14 years and the experimental group, under an individualized program, gained 1.41 years. In the area of vocabulary growth, the control group gained 1.09 years, while the gain for the experimental group was 1.96 years. Comprehension was tested, with 24 percent of the control group gaining two years or more and 59 percent of the experimental group in this range. The conclusion was reached that there is enough merit in the individualized program to warrant further study.

Vite (1968) found that in a number of studies done four showed significant results favoring individualized instruction and three favored ability grouping. One found negative results on test scores, but it was felt that other factors resulted in favoring the individualized approach.

Schwartzberg (1967) interviewed two groups of children privately to discover their attitudes toward individualized reading instruction. One was a group of 39 fifth grade children with intelligence quotients ranging from 120 to 164. Each child expressed complete satisfaction with the program. Upon interviewing the other group, composed of 22 sixth grade children with intelligence quotients of 72 to 105, he found that all but one favored the individualized approach. Each child had read at least 30, and some as many as 80, books during the year.

Recently, Brody (1970) conducted a research project involving 362 first- and second-year boys and girls in graded and individualized classrooms. The children were divided into two categories--those of high ability and those of lower ability. He found that during the first year those of lower ability benefited more from individualized methods in comparison to those in the graded rooms. During the second year, the reverse was true, with pupils in the higher ability category benefiting more than those in the graded rooms. The investigator reports that results should be accepted with caution since it is not known whether or not the teachers were all equally effective or whether the curriculum material in one case may have been superior to that of the other. However, the results were encouraging enough to suggest additional experimentation.

Sartain (1961) concluded that the program can be somewhat successful under certain circumstances, but that it requires especially competent teachers. Further conclusions resulting from this study point out the opinion that although children read more books and benefit from the personal conferences with the teacher, disadvantages can occur if a carefully sequenced plan of teaching, including basic skills, is not carried out.

Programs are not easily evaluated because of the variety of approaches, procedures, and materials used. The consensus of opinion is summed up by one well known educator and author:

Undoubtedly individual reading brings new elements to the reading program which will contribute the fresh vigor and vitality so badly needed. The closer working relationship between teacher and pupil fostered by the individual conference, the marked effects upon interest in reading, the elimination of failure and competition, and the stimulation of reading materials closely related to individual needs will help to lift current reading programs from the doldrums into which they have fallen. (Spache, 1964:178)

Summary

Although the idea of individually prescribed instruction in reading was considered many years ago, it has not come into general acceptance until the past decade. Educators are becoming more aware of the inadequacies of present methods of reading instruction in terms of fitting the needs of the child. Children today begin school with a wide variety of backgrounds, abilities, and interests. It has become apparent to teachers in general that much time is wasted in forcing all students into the same pattern of learning. Some are merely marking time waiting for the remainder of the class to catch up while others know only frustration and failure because they are unable to keep up. There is also a wide range of interests which should be considered.

Research studies, some of them being funded by the United States Office of Education, are being carried on in schools throughout the nation today in an attempt to evaluate the worth of a program of individualized reading instruction. In some instances, there are no significant results in terms of measurable improvement in achievement.

However, the majority of investigators tend to feel that there is improvement in instruction, that children usually express satisfaction with the program, and that there are benefits which are not measurable. The conclusion of the studies reviewed points to the general opinion that the process of individualized instruction in reading has enough merit to warrant further study and research.

CHAPTER III

PROCEDURES

Introduction

The problem of this study was to investigate the effectiveness of an individualized program of reading instruction which has been initiated in the primary department of the Laurel Elementary School system. Reading achievement, based on standardized tests, of all children who entered the first grade in the fall of 1968 and were instructed under the traditional basal reading program was recorded. These reading scores were compared with those of the first grade classes of 1969-70 and 1970-71, who have been included in the individualized program. The investigator was concerned with finding whether or not reading achievement of children in an individualized situation exceeds that of those instructed under the traditional basal program.

Included in the findings was the extent of correlation between measured aptitude for reading, or natural ability, and measured achievement in reading. Comparisons also were made between children of different ability groups. Scores of the high aptitude group were compared with national norms of children of similar aptitude, as were the scores of children of average aptitude and low aptitude. The purpose of this comparison was to find whether or not an individualized program is of more value to one ability group than it is to another.

In this chapter, the population is defined with an explanation of the characteristics of each class which was included in the study. Since the population includes all first, second, and third grade students in the system, no sampling procedures were necessary.

The method of collecting data is explained, with the names and descriptions of the tests used. The validity and reliability of the tests used is reported.

A section of the chapter has been devoted to the questions to be answered, with a hypothesis listed for each question which can be subjected to a test. In each case, the null form of the hypothesis, as well as an alternative hypothesis, is stated. The methods used in analyzing the data are explained. A summary of the procedures used concludes the chapter.

Population Description

The population which has been the subject of this study includes the entire class of children in the third grade, second grade, and first grade in the Laurel School system. There are six groups of students in each grade, with N for grade three equal to 141, N for grade two equal to 125, and N for grade one equal to 112. These N's refer to the enrollment of each class when that group was in the first grade, the time when the tests were administered and the scores tabulated.

All third grade classes have been instructed under a traditional basal reading program, with no provision made for varying abilities other than grouping according to rate of progress. This group is referred to in the study as Class C.

The individualized approach has been employed with both the first and second grade groups, referred to as Class A and Class B, respectively. The classes are divided among three elementary schools in the system, with one class of each grade in one school, two in another, and three in another. The majority of children in all grades have received no kindergarten training. Socio-economic backgrounds are comparable among children of all three grade levels and all groups.

The reading achievement of both Class A and Class B at the end of the first year of school has been compared with that of Class C at the same level. A correlation has been computed between measured reading aptitude and measured achievement in reading for each child in each grade. The achievement of high, average, and low aptitude groups within each class has been compared with norms of similar aptitude groups to learn whether or not the program may benefit one group more than another.

The assumption is made that Class C is representative of all preceding classes which were instructed under the traditional basal reading program. Other classes cannot be compared since a different series of tests was used.

Investigation Procedure

Upon entering the first grade, each group has had certain tests, which will be described later, to give the teacher an indication of each child's aptitude, intelligence quotient, and general readiness for learning to read. The children in the basal program were then all given the same type of instruction, except that they proceeded at different rates according to their various levels of proficiency. Children were put into groups, usually on the basis of results of readiness tests and teacher observations, and the groups remained fairly constant during the entire school year.

The children in the individualized program were screened through testing and by teacher observations and judgment to determine which approach would best fit each one's needs. The four approaches used were the visual, for those who learn best by sight; auditory, for those who learn best by hearing; kinesthetic, for those who need to use the touch method; and language experience, for those who had more limited backgrounds and needed to be involved in more experiences before beginning to learn to read. Of course, the fact that a particular approach was used with a child did not imply exclusion for him of materials used and experiences gained in another type of approach. Teachers realize that very few children learn in one manner only, but must make use of all of the senses. However, many do have a dominant pattern of learning and teachers decided which approach seemed most appropriate for

each child's style of learning. If for some reason a particular approach did not seem to be resulting in satisfactory progress for a child, another approach would be substituted. There was a great degree of flexibility in the program, thus allowing each child to progress at his own rate or to be included in a group, depending upon common needs.

Identical reading achievement tests were administered to each of the three classes near the end of the school term. Data from these tests and the aptitude tests were used in compiling information to be included in the findings of the study.

Variables in relation to qualifications and experience of the teachers involved and the types of materials used were negligible. During the past three years, there have been no changes in the faculty within the first and second grades of the school system. The exception was that the first and second grade teachers exchanged positions during the term of 1970-71. However, the teachers are all experienced in the primary department and possess similar qualifications in training. The elementary supervisor and principals met frequently with the teachers to discuss objectives, approaches used, materials, and evaluation practices, so that there would be some consistency among the classes at all levels. Each room was equipped with basically the same types of materials as those used in the other rooms.

Method of Collecting Data

All children, upon entering the first grade in the Laurel School system, are given the Slossen Intelligence Quotient test. This testing program was begun with the first grade class in the fall of 1969. The test is administered individually in the three schools by the principal or by a teacher who has had training in administering it. The reliability coefficient of the Slossen test is .97 in a test-retest interval of two months, and the validity coefficient is .95 in correlation with the Stanford Binet.

In addition to the intelligence quotient test, the Metropolitan Readiness Test is given to all first grade children at the beginning of the school term. This test is administered by each classroom teacher and is used to give the teacher an indication of the maturity and the general readiness for reading of each child. The total validity score on the Metropolitan Readiness Test correlates at .80 with the total score on the Murphy-Durrell, indicating that the two tests agree quite closely on the readiness ranking of pupils. The reliability coefficient for the total test is .90.

During the last month of the school term, the first grade children are given two reading achievement tests. The Primary Reading Profiles, published by Houghton Mifflin Company, and the Gates McGin-tie Reading Test report reliability coefficients of .91 and .93, respectively.

The children in Class A and Class B have been given the four tests mentioned in the preceding paragraphs. However, those in Class C have been given only the Metropolitan Readiness Test and the Primary Reading Profiles. With Class A and Class B, the Slossen Intelligence Quotient test was used as a measure of aptitude and the Gates McGinitie test was used as a measure of reading achievement. In addition, the Primary Reading Profiles was used to measure both aptitude and achievement. Results of both sets of tests were compared by qualified personnel in the school system, and the correlation was found to be in the low 80's. Therefore, somewhat reliable comparisons can be made on the basis of results from the Primary Reading Profiles test. All test scores have been obtained from the permanent records.

Organization of Data

The test scores of each class are tabulated and recorded by the elementary supervisor and the principals. These scores have been used in constructing tables to show the mean reading achievement of each class and the extent of the correlation between reading aptitude and reading achievement. The Primary Reading Profiles test contains a section at the beginning which measures general reading aptitude, with the remainder of the test measuring actual reading achievement. This test gives a good indication of whether or not a child is achieving at, above, or below his level of ability. From the scores obtained from

this test, the mean reading achievement of Class A, Class B, and Class C has been computed and transferred to tables, with the test of the hypotheses included in the tables.

In addition, the aptitude for reading and reading achievement of each child have been paired and a correlation computed to learn what relationship exists between aptitude and achievement. These data are also included in the findings to be presented in Chapter IV.

A separate table has been constructed which shows a comparison of scores of pupils in each of the aptitude groups--high, average, and low--with national norms of children of similar measured aptitude. The data shown on this table are expressed in terms of percentiles, with the medians of each aptitude group of each class given. These data were obtained from the permanent record files.

Statistical Hypotheses

There are two questions to be answered which can be stated in hypotheses. Does the measured reading achievement of Class B exceed that of Class C? Does the measured reading achievement of Class A exceed that of Class C? Comparisons have been made between the achievement of Class B and Class C at the end of the first year of school, and between the achievement of Class A and Class C at the end of the first year of school.

In the null form, the hypothesis states that the mean of Class B

is equal to the mean of Class C at the end of one year of school. The alternative hypothesis states that the mean of Class B is greater than the mean of Class C after one year of school.

$$H_0 \quad M_B = M_C$$

$$H_1 \quad M_B > M_C$$

Comparisons of scores of Class A and Class C after one year of school are stated as follows:

$$H_0 \quad M_A = M_C$$

$$H_1 \quad M_A > M_C$$

Analysis of the Data

The statistic employed to test the differences among the means of the achievement of the three classes was the analysis of variance. An F ratio has been computed with a level of significance fixed at .05. The Scheffe test was used to test the difference between individual pairs of means, that is, the difference between Class A and Class C, also Class B and Class C.

A correlation between aptitude and achievement of each of the three classes has been computed with a level of significance fixed at .05.

The medians in terms of percentiles have been computed for each

aptitude group of each class and have been tabulated.

Summary

In this chapter, a restatement of the problem which has been investigated is given, with an explanation of the particular areas to be researched. The study includes 378 first, second, and third grade students in the Laurel School system, or the entire population of the primary department. In general, there are no variables among classes other than chance variables. Teacher training and experience, approaches used, materials available, and socio-economic backgrounds of children involved are comparable.

Data used in testing hypotheses has been obtained from aptitude and intelligence tests and from reading achievement tests. These data have been used in comparing achievement in relation to aptitude of children included in the individualized program with those in the traditional program. The hypotheses have been tested by the use of F ratio tests.

CHAPTER IV
ANALYSIS OF THE DATA

The data analyzed were obtained from the results of the Primary Reading Profiles test, which is administered to all children in the Laurel School system approximately three weeks before they complete the first grade. The data include the aptitude scores and the achievement scores, both of which are measured by the test. The mean achievement scores of each class were computed and tests of the hypotheses made on the basis of these scores. Class C was considered the control group, which was included in the traditional basal reading program. Class A and Class B were considered the experimental groups, which were included in the individualized reading program.

F ratio values for each of the following tables were computed as described in the data analysis of Chapter III.

TABLE 1
MEANS OF MEASURED READING ACHIEVEMENT OF CLASS B AND CLASS C

Class B	Class C
Mean 92.27	Mean 87.71
F = 3.04	

An F ratio value of 5.6036 must be computed in order to reject the null hypothesis of significant difference between the means of the two classes. Therefore, the null hypothesis cannot be rejected at the .05 level of significance, and it can be assumed that there is no significant difference in the mean reading achievement of the control group and the experimental group.

TABLE 2
MEANS OF MEASURED READING ACHIEVEMENT OF CLASS A AND CLASS C

Class A	Class C
Mean 83.03	Mean 87.71
F = 3.03	

In the case of the above table, the mean of the experimental group was lower than that of the control group, but not significantly so. Again, the null hypothesis cannot be rejected at the .05 level of significance. The differences between the means of the three classes are not enough to be significant; and, therefore, it must be assumed that the differences could be due to chance.

A correlation was made between measured aptitude and measured achievement of each individual and the results are tabulated for each of the three classes. The correlation computation was done by the

Sigma VII at the Computing Center, Montana State University.

TABLE 3
CORRELATION BETWEEN MEASURED APTITUDE AND MEASURED ACHIEVEMENT

Class	r
A	.63
B	.45
C	.38

The results of the tests of correlation between measured aptitude and measured achievement of each class are significant at .05 and show a positive relationship. Therefore, it can be assumed that there is a positive relationship between measured aptitude and measured achievement and that the two experimental classes, A and B, show a higher correlation than the control group, Class C.

Scores are listed in the test manual in raw score form, grade equivalent form, and percentile form. The percentile form was used in finding the achievement median for each aptitude group--high, average, and low--for each class. These percentile scores indicate the rank in achievement of each aptitude group in comparison to national norms of children of similar aptitude.

TABLE 4

RANK IN ACHIEVEMENT AMONG PUPILS OF SIMILAR MEASURED APTITUDE

	Aptitude groups		
	Low	Average	High
Class	Median	Median	Median
A	20th percentile	47th percentile	71st percentile
B	47th percentile	56th percentile	41st percentile
C	50th percentile	53rd percentile	29th percentile

The class achievement medians computed and tabulated above indicate that the children in the high aptitude group benefited to a great extent from the individualized program. The average and low aptitude groups did not tend to differ to any degree with the exception of the low group of Class A. However, this class showed a very great extreme between the high and the low aptitude groups.

Class C and Class B compared quite closely, with the exception of the children in the high aptitude group. The group median for the children in the traditional reading program, Class C, indicates that they were not achieving very near their potential.

There were some differences among the three classes in the population of ability groups. In Class C, the control class, 31 percent of the class was included in the high group, 43 percent in the average

group, and 26 percent in the low group. In Class B, an experimental class, 23 percent was included in the high group, 62 percent in the average group, and 15 percent in the low group. In Class A, an experimental class, 41 percent was included in the high group, 35 percent in the average group, and 24 percent in the low group.

The analysis of the data indicates that there are no significant differences in the mean achievement of the control class compared to the two experimental classes, but there are significant differences in the achievement of the high ability groups and that these significant differences favor the experimental classes included in the individualized program. There are also significant positive correlation relationships between measured aptitude and measured achievement and that again the higher correlations are found in the two classes included in the individualized program. Therefore, it can be assumed that individualized instruction has some measurable advantages over the traditional approach to reading instruction.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was conducted to find whether or not an individualized program of reading instruction results in improvement in reading achievement. The population investigated included all of the children in the first, second, and third grades in the Laurel School system, a population of 112, 125, and 141, respectively. The third grade students were considered the control group, having received instruction in the first grade under the traditional basal reading program.

The first grade and the second grade students were included in the individualized reading program in which four different approaches to reading were used. Children were screened through a testing program and by teacher observation and judgment to determine as nearly as possible which type of program would best fit each child's needs. The teaching of basic skills and fundamentals in reading were included in each approach but by different methods and at different times, depending upon the child's readiness for the material. Grouping was not eliminated, but groups were kept small and flexible to provide for common objectives.

The Primary Profiles Reading test, which measures both aptitude for and achievement in reading, was administered to each class

approximately three weeks before completion of the first grade. The results of the tests were used to compute the mean reading achievement of each class, the correlation between reading aptitude and reading achievement, and a comparison of the achievement of each aptitude group--high, average, and low--with national norms of children of similar aptitude.

Conclusions

Although there is no statistical significance in the mean reading achievement of the three classes, there is a significant difference in the achievement of the high aptitude groups of both classes included in the individualized program in comparison with the high aptitude group of the class included in the traditional program. The medians of the high aptitude groups in Class A and Class B were at the 71st percentile and the 41st percentile, respectively, while the median of the high aptitude group of Class C was at the 29th percentile. The achievement of the average and low aptitude groups in comparison with national norms tended to be similar in all three classes, with the exception of the low group of Class A, which ranked at the 20th percentile.

Results of the study conducted indicate that the advantage in measured reading achievement of the individualized program tends to lie with the high aptitude group. In a traditional reading program, the more able children are often held back to keep step with the others

in the class. Such practice can result in a loss of interest and initiative on the part of these children. They are inclined to achieve only enough to get by, and little opportunity is available to them to pursue areas of study on their own or to explore topics of interest which are classed as material to be used at a higher grade level.

The study also shows a significant positive correlation between aptitude as measured by the Primary Reading Profiles test and reading achievement. A higher degree of correlation exists in Class A and Class B than in Class C, indicating that the children in an individualized situation are achieving more closely to their potential.

Observations

In evaluating any new program, factors other than those which can be measured should be mentioned. Some conclusions based upon observations of the program which has been in effect for two years in the Laurel School system and also upon the review of research done in other school systems follow:

1. Teachers generally have expressed satisfaction with the program in spite of the handicaps of lack of time and space in which to provide the best possible learning situation.

2. Children tend to be more interested and happier when given more freedom to choose their own spare-time activities and reading materials instead of being given some routine tasks which often are

neither interesting nor challenging to them.

3. Slower children tend to feel less frustrated, and more able children less bored when they can operate at their own rates and within their own learning patterns, using reading materials which have not been presented previously to other groups.

4. During parent teacher conferences, parents have expressed enthusiasm for the program and feel it should be continued.

5. From the majority of observations and studies conducted, the consensus of opinion is that in an individualized program, children tend to participate much more enthusiastically in personalized or recreational type reading.

Recommendations

The investigator feels, on the basis of the study, that individualized instruction results in some degree of improvement in measured reading achievement and has non-measurable value to all children. The following recommendations are made:

1. Teachers and administrators should work together toward increasing the effectiveness of the program so that each child can more nearly reach his potential of learning.

2. The individualized program should be continued with each incoming class of first grade children and extended to the following grades.

3. Individualized instruction could well be expanded into other areas of the curriculum.

4. Every effort should be made to insure each child of continuous progress and some measure of success so that he can develop a positive self-image.

5. Further research should be encouraged as the program continues, to evaluate the overall effectiveness of individually prescribed instruction on children of all grade levels and ability groups.

6. Other schools should be encouraged to adopt an individualized program and to include the policy of allowing the first grade teacher to remain with her class for a period of two years, a policy which has proved to be quite effective in the Laurel School system.

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