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A Comparative Study of Individualized Reading Procedures for Self-Contained Classrooms

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A COMPARATIVE STUDY OF INDIVIDUALIZED READING

PROCEDURES FOR SELF-CONTAINED CLASSROOMS

(TITLE)

BY

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THESIS

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INTRODUCTION OF RESEARCH STUDY IN

INTERCLASS GROUPING

Hypothesis

The hypothesis proposed in this experiment in reading at the intermediate grade level was:

The use of interclass grouping will provide greater achievement and a higher level of motivation for reading than would be found in a conventional self-contained grouping program.

Plan of Experiment

In the interclass grouping, basal reading instruction for several rooms of children was scheduled at the same time. Children were sectioned for reading instruction in accordance with their reading levels. The high and some middle achievers went to one teacher. The remaining middle and low achievers went to another teacher for their reading instruction. This plan eliminated the need for so many groups within a class.

It also allowed the teacher to work directly with a group for a longer period of time. The main disadvantage of this approach was that the teachers were not able to follow up during other classes.

To test this hypothesis, four elementary classes were involved during the 1965 - 1966 school year.

These fifth and sixth grade classes were located within a
school district where the socio-economic background ranged from very
low class to middle class with a majority of pupils, who were in the
experimental and control groups, coming from homes with middle class
values.

One fifth grade class and one sixth grade class were used in
the experimental intergrouping. In order to differ somewhat from
the usual pattern of intergrouping, the fifth grade teacher was
assigned the more capable reading pupils of the fifth grade as well
as the more capable pupils of the sixth grade for reading instruction.
The sixth grade teacher who was working with the experimental program
was assigned the less capable reading pupils from the fifth grade
section as well as maintaining the less capable sixth grade pupils
from his own class section for reading instruction. It was theorized
that this type of interclass grouping might provide not only a better
instructional program for meeting needs, but that its break with a
conventional intergrouping pattern might prove a motivational factor
in improvement in reading.

Placement of the children in the experimental groups for
reading instruction was made on the basis of teachers' judgment of
reading achievement and the previous year's scores on the Metropolitan
Achievement Tests, Form AM. This was determined by their scores on
the sections in reading and word knowledge.

Besides the use of reading achievement scores the teachers
studied individual personality and motivational relations regarding
a special reading program. It was important especially with the

combined experimental fifth and sixth grade groups that a good working attitude within the classes was reached.

The use of intelligence quotients was also made in the placement of pupils in the experimental groups, but it was not a major factor of determination.

The control classes consisted of one fifth grade class and one sixth grade class taught in self-contained classroom situation.

Within these classes the teachers provided small group and individualized instruction.

The original sectioning of both sixth grade classes and both fifth grade classes had built heterogeneous class groups, with division of pupils based on Metropolitan Achievement Reading Test scores, classroom achievement and principal and teacher judgment.

The fifth grade control group showed a grade equivalent range on the Metropolitan Reading Test from 3.0 to 10.0, with a median of 4.3, while the fifth grade experimental group showed a grade equivalent from 3.5 to 8.7 with a median of 5.1. (See Table 1)

The sixth grade control group had a grade equivalent range on the Metropolitan Reading Test from 3.0 to 10.0 with a median of 5.7, while the sixth grade experimental group showed a range from 5.3 to 9.7 with a median of 6.0. (See Table 2)

In comparing the vocabulary development of the groups, the Word Knowledge Test of the Metropolitan Achievement Battery was used. It indicated that the fifth grade control group had a grade equivalent range from 3.7 to 10.0 with a median of 4.9 and the fifth grade experimental group had a grade equivalent range from 3.0 to 9.2 with a median of 5.3. (See Table 1)

TABLE 1

1965 METROPOLITAN ACHIEVEMENT TEST
FIFTH GRADE, GRADE EQUIVALENTS

	Metropolitan Achievement Reading - 1965		Metropolitan Achievement Word Knowledge - 1965	
	5th Grade Control Class 2	5th Graders in Experimental Classes 3, 4	5th Grade Control Class 2	5th Graders in Experimental Classes 3, 4
1.	10.0	8.7	10.0	9.2
2.	9.7	7.1	8.7	7.1
3.	6.6	7.1	8.7	6.2
4.	6.3	6.8	6.2	6.0
5.	6.1	6.6	5.8	6.0
6.	5.9	6.3	5.6	5.8
7.	5.9	5.9	5.5	5.8
8.	5.3	5.9	5.5	5.5
9.	5.3	5.7	5.5	5.5
10.	4.4	5.3	5.1	5.5
11.	4.4	5.3	4.9	5.3
12.	4.2	5.1	4.9	5.3
13.	4.0	5.1	4.9	5.3
14.	3.8	5.1	4.7	5.3
15.	3.7	5.1	4.7	4.9
16.	3.7	4.9	4.7	4.5
17.	3.5	4.4	4.7	4.5
18.	3.5	4.4	4.5	4.3
19.	3.0	4.4	4.3	4.3
20.	3.0	4.4	3.7	4.2
21.	3.0	3.7	3.7	3.3
22.	..	3.5	..	3.0
Median	4.3	5.1	4.9	5.3

TABLE 2

1965 METROPOLITAN ACHIEVEMENT TEST
SIXTH GRADE, GRADE EQUIVALENTS

	Metropolitan Achievement Reading - 1965		Metropolitan Achievement Word Knowledge - 1965	
	6th Grade Control Class 1	6th Graders in Experimental Classes 3, 4	6th Grade Control Class 1	6th Graders in Experimental Classes 3, 4
1.	10.0	9.7	10.0	10.0
2.	8.7	8.4	10.0	8.7
3.	7.1	7.7	7.4	7.6
4.	7.1	7.3	7.4	7.6
5.	6.8	7.3	7.4	7.4
6.	6.3	6.8	7.1	7.1
7.	6.3	6.8	6.4	7.1
8.	6.1	6.3	6.4	6.9
9.	6.1	6.3	6.4	6.4
10.	5.7	6.1	6.2	6.4
11.	5.7	5.9	6.2	6.2
12.	5.7	5.7	6.2	6.2
13.	5.7	5.5	6.2	6.0
14.	5.1	5.5	5.6	6.0
15.	4.4	5.5	5.6	5.8
16.	4.2	5.3	5.5	5.6
17.	3.8	5.3	3.6	5.5
18.	3.7	5.3	3.6	5.3
19.	3.7	5.3	3.0	4.2
20.	3.0	..	3.0	..
Median	5.7	6.0	6.2	6.3

The sixth grade control group showed a grade equivalent range from 3.0 to 10.0 on the Word Knowledge Test, with a median of 6.2, while the sixth grade experimental group showed a grade equivalent range from 4.2 to 10.0 with a median of 6.3. (See Table 2)

This comparison of test scores would indicate then that the original heterogeneous sectioning of the fifth and sixth grade classes, previous to inter and intra grouping for the purpose of instruction, showed a similarity of range but not exact duplications of range in the sections. It also indicates a slight variation in medians, as we can note in the following comparison:

	Grade 5		Grade 6	
	Control	Exper.	Control	Exper.
Reading	4.3	5.1	5.7	6.0
Word Knowledge	4.9	5.3	6.2	6.3
Average of Individuals' Scores	4.6	5.2	6.0	6.2

This would seem to indicate that the experimental groups had an advantage in reading achievement over the control groups initially, at least as indicated by reading achievement scores.

Objectives

In formulating this reading experiment, a primary aim was the improvement of the individual pupil's achievement in reading by increasing the efficient use of the teacher's time when children were regrouped for instructional purpose.

One teacher, in working with the more capable pupils of the fifth grade and the more capable pupils of the sixth grade, was able to work with the groups separately or together, using those techniques

and materials which seemed best suited for better achievers and
motivating them to reach toward their potential. This will be
discussed more fully in a later chapter.

In contrast, the teacher who was working with the less capable
fifth grade group and sixth grade group was able to work with them
both in an entire group setting or in smaller groups, focusing on weak
skill areas and motivating better habits and comprehension in a less
competitive atmosphere.

The specific objectives of the study involved teacher learning
and pupil learning. In this plan, the teacher had the opportunity:

1. To check the attitudes of children toward reading when they
   were placed in a program of interclass grouping as compared
   with the attitudes of children in heterogeneous groups.

2. To study effective techniques of teaching used with these
   groups.

3. To identify administrative problems in grouping and suggest
   solutions.

4. To study the extent of teacher workload and degree of
   effectiveness under the two programs.

5. To determine which form of instruction will lend itself more
   directly to the effective use of supplementary reading
   materials and instructional aids.

6. To increase the ability of less able children to understand
   and use word attack skills.

7. To identify and motivate underachievers.

The pupils in the experiment would be provided reading instruction:

1. To increase oral vocabulary.

2. To increase written vocabulary.

3. To develop greater skill in outlining, summarizing, and sequential arrangements of ideas.

4. To develop creative listening habits.

Teachers involved with the experimental groups conferred frequently throughout the year concerning the reading problems, the instructional problems and the achievement of the listed objectives.

Chapter II describes some of the various reading programs in usage. It gives special attention to the written literature published about the two types of reading programs involved in this particular experiment.

CHAPTER II

A DESCRIPTION OF THE VARIOUS READING PROGRAMS IN USAGE AND A

REVIEW OF THE RELATED LITERATURE ON THE TWO READING

PROGRAMS INVOLVED IN THIS EXPERIMENT

It is an accepted fact in our society that all people contain certain individual characteristics that are intimate only to themselves. Both physically and mentally there are no two human beings that are exactly alike in all respects. A number of individuals share many characteristics with their fellow man, but never identical compositions.

This idea is also true in the educational growth and development of a child during his learning process. The basic intelligence of children varies a great deal even in a classroom of twenty-five children. Due to the variations of intelligence and ability of children within a small group, the developmental progress of each child will also proceed at an uneven pace. Some children, because of an ideal biological composition will proceed through their educational program very smoothly and with little or no trouble. Other children who are not as fortunate will face definite obstacles in regard to their education throughout their entire school program.

Because children develop and progress at different rates of speed during their mental growth period, there are definite needs to provide programs in the classroom that will most effectively satisfy the individual needs of each child.

Educators, in order to provide this individual service, have developed various programs that will assist them in the development of their abilities to the maximum.

There have been a number of studies made regarding the problem of instituting a reading program in the classroom that will in a most proficient manner attempt to suffice the social, psychological and intellectual needs of the child through their form of reading instruction. A program should be accepted that will make accomodations for the wide range of individual differences in reading.

Programs that have been established or tried by the experts in the field of reading include:

Conventional Classroom Grouping

Russell (1949). In an effort to reduce the range of differences found in the children of a whole class many teachers divide the class for the purpose of reading into two or more groups. Probably three are the most usual number. The system of grouping should be closely related to the needs of the children involved.[1]

Bond (1957). Fixed reading groups within a class is the most common practice followed by teachers who want individualized instruction in reading. Fixed grouping within a class may have serious limitations when the groups are so separated that the class can rarely find an opportunity to work as a whole. Another disadvantage of fixed grouping is that the reading materials used in many instances are dealing with different content. Finally, this approach tends to make

[1]David H. Russell, Children Learn to Read (Boston: Ginn and Company, 1949), pp. 497 - 500.

the groups inflexible, making it difficult for the youngsters to move from group to group where solution to their needs lie.[1]

Class Grouping According to Mental Ability

Bond (1957). This method is commonly used especially in schools having several classes at any grade level. Children are placed in classes according to their intellectual capability. For example, one class would be composed of very able students; a second, of average; and a third class of children with less than average ability. The basis for grouping is usually intelligence. There is no question that such a procedure does limit to some extent the range of reading capability found within the classroom. It is suitable only to larger schools. It is probably more suitable to advanced levels of education than to the elementary school. This program does not recognize that children grow in man ways and they vary in trait differences.[2]

Interclass Grouping (Sectioning)

Aaron (1960). In interclass grouping, basal reading instruction for several rooms of children is scheduled at the same time. Children are sectioned for reading instruction in accordance with their reading levels. The low achievers go to one teacher, the middle achievers to another, and the high achievers still to another. Within these sections the teachers in turn subdivide the children into two groups, each to be taught on a different difficulty level. This plan eliminates the need for so many groups within a class. It also allows the teacher to work

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[1] Guy L. Bond and Miles A. Tinker, Reading Difficulties: Their Diagnosis and Correction (New York: Appleton-Century Crafts, Inc., 1957), pp. 58 - 59.

[2] Ibid.

directly with a group for a longer period of time. The main disadvantage of this approach is that the teachers are not able to follow up during other classes.[1]

Cluster Group Plan

Austin (1963). The cluster group plan is similar to interclass grouping except in the way the grouping is carried out. Children are divided into a given number of ability groups, depending on the total enrollment of the grade, and then assigned to teachers. For example, the third grade was divided into six groups with number one the highest and six the lowest in reading ability. Classroom assignments would be made so that one teacher would have groups one and four, a second teacher groups two and five, and a third teacher groups three and six. Thus, no teacher would have all the high achievers nor all the low achievers. This program would result in similarity to the conventional classroom grouping program, outside of a few minor deviations.[2]

The Redeployment Grouping Plan

Austin (1963). The redeployment grouping plan is another variation of interclass grouping. Under this plan, children may be regrouped at any time during the day. This plan is widely used for bringing children of fairly similar reading abilities into the same room for reading instruction. In some cases children are grouped

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[1] Ira E. Aaron, "Patterns of Classroom Organization, "Education, Vol. 80 (May, 1960), pp. 530 - 532.

[2] Mary C. Austin and Morrison Coleman, The First R: The Harvard Report on Reading in Elementary Schools (New York: Macmillan Company, 1963), pp. 72 - 73.

across grade lines. Team teaching is a variation on the redeployment theme.[1]

The Ungraded Primary

Heilman (1961). The ungraded primary usually embraces the first three years of normal instruction but does not break the period down into grades one, two, and three. They are not promoted at the end of years one and two. The children remain with the same teacher through their primary years in school. The ungraded primary starts from the premise that each child should progress at his own rate and the instructional program centers on each child's need at the moment. There is proof of few failures under this plan after three years than under the conventional one year promotional plan.[2]

Non Graded Elementary

Goodlad (1959). The non graded elementary school provides an appropriate structure for continuous pupil progress along the organizing threads of the curriculum. Since the differences among children are great and since these differences cannot be modified, school structure must facilitate the continuous educational progress of each pupil. The non graded school is designed to encourage children of varying abilities to proceed at rates appropriate to these abilities. This type of program would probably require a specially trained staff to handle the various different educational procedures.[3]

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[1]Ibid.

[2]Arthur W. Heilman, Principles and Practices of Teaching Reading (Columbus: Charles E. Merrill Books, Inc., 1961), p. 375

[3]John I. Goodlad and Robert H. Anderson, The Non Graded Elementary School (New York: Harcourt, Brace and Co., 1959), pp. 52, 90.

Individualized Reading Program

Witty (1964). The individualized reading program strives to meet the needs of the slow reader on a personal individualized basis. A single text program is not advocated. Instead, reliance may be placed for skill building on a variety of textbooks and other reading materials. Children's literature should be available in abundance when an individualized approach is emphasized.[1]

Strang (1961). Other essential features include progression at each pupil's own pace and individual conferences with the teacher. Disadvantages include the lack of orientation, failure of reading readiness for each experience and that teachers are unable to give the individual attention required.[2]

Programed Instruction

Austin (1963). This form of instruction through automated devices and printed materials provides children with an additional opportunity to learn a selected number of reading skills with only a minimal reliance on the teacher. Learning occurs as the individual either with or without a teaching machine, responds to each of the sequented steps of the program. Learners can progress through the sets at their own rate.

Unfavorable comments included the beliefs that a machine cannot do more than a good teacher and programed instruction techniques would be of little value for the teacher of children in the primary grades.[3]

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[1] Paul A. Witty, "Individualized Reading: A Postscript," Elementary English, Vol. 41 (March, 1964), pp. 211 - 217.

[2] Ruth Strang, "Controversial Programs and Procedures in Reading," The School Review, Vol. 69 (Winter, 1961), pp. 421 - 428.

[3] Austin and Coleman, pp. 87 - 88.

The two programs in this study have certain definite conflicting approaches in regard to the teaching of reading, so that the social, psychological, and intellectual needs of the reader will be most justly cared for.

The main difference in the two approaches is through the manner of grouping the individual children according to their abilities and needs in a reading program.

The plan of grouping children for reading within the regular classroom follows the heterogeneous idea of classifying the students. In a heterogeneous group, individuals of all abilities are placed together in a common classroom. During the reading period the class may be divided into sub groups according to their abilities and individual needs, but the class remains as a whole unit.

The interclass or cross class program is a modified form of ability grouping. The program of ability grouping uses the homogeneous approach of placing children with similar abilities in separate classes within a particular grade for all phases of the curriculum program, while interclass or cross class grouping classifies children according to ability in one or more curricular areas only, such as reading or arithmetic. The children participate in a heterogeneous group or class for all instruction except those where more individualized help is needed to solidify their background in a particular subject. Interclass grouping is used frequently in the reading program where the levels of development and ability may vary a great deal within a heterogeneous classroom. There have been numerous studies and experiments concentrating on such approaches of

the reading instruction in our elementary schools. Through the studies, favorable and unfavorable comments have been written in regard to the two approaches of teaching reading and its effect on the social, psychological and intellectual needs of those children with reading disabilities.

"Teaching is keyed to children of average capabilities, while the more advanced pupils are neglected."

This criticism is often heard today though a close examination of the teaching of reading in most elementary schools would not support that charge.

Actually, it is a large segment of our slow group of pupils who are being neglected. These children are often called "late bloomers", and they are expected to maintain the pace in reading achievement that is characteristic of those children who develop in most all skills very rapidly.[1]

The children with reading disabilities must be given the consideration they justly deserve. The problem is: What kind of a reading program can justifiably provide the proper instruction in reading for each individual child? This is difficult and almost impossible to answer, because the differences of individuals vary so much.

In an effort to reduce the range of differences found in children of a whole class many teachers divide the class for the purpose of reading into two or more groups. Probably three is the most usual number. Most teachers believe that with three groups they can plan work which will more nearly fit the present achievement, the

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[1] Mildred R. Epler and Owen B. Handley, "The Third Group," The Elementary School Journal, Vol. 59 (May, 1959), pp. 451 - 455.

interests, and the potential reading growth of individual pupils.
Usually reading achievement is the basis used for grouping but this
is not the only criteria for selection that should be considered.
The interests and needs of the child should be given equal
consideration.

Flexibility is important in this type of grouping. Flexibility
of methods, materials and pupil placement must be observed at all
times. Whenever a pupil's reading behavior indicates clearly that he
would make better progress in another group, he should be transferred
to it.[1]

Alvina Borrows has recommended a program that combines individual
reading with small group work during a daily period of forty to fifty
minutes duration. The children make their own book selections, or
books are assigned by the teacher. At the beginning of the period,
a few minutes are spent checking with the class to find out what each
child expects to read, and to determine who needs immediate help from
the teacher. A few children sit near the teacher for help and indi-
vidual conferences, while most of the class reads independently. Weak
readers may prepare to read a selection orally to the class. At the
end of the week children select books to take home for weekend reading.
On Friday the children also bring their reading record up to date.
During at least one reading period each week the teacher takes time
to talk about books and good reading.[2]

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[1]Russell, pp. 497 - 500.

[2]Gertrude Hildreth, Teaching Reading (New York: Henry Holt and
Company, 1958), pp. 416 - 417.

Paul McKee believes the first two weeks or more of the school term, the teacher should do a considerable amount of testing and observing in order to gather data on the reading status of each pupil in her class. Besides the standardized silent and oral reading tests, teachers should observe children in silent reading, listen carefully to their oral reading, make informal homemade tests, talk informally with each child and examine the records of each child. This pattern will most effectively help the teacher place the child in the proper reading group.

Another good plan to follow when grouping within the classroom is to divide the class into three reading groups; high, average, and low. After this has been accomplished, books of varying difficulty will be given to each group. The entire class may read together suitable selections that pertain to a certain topic, theme or central interest, even though each of the books used by each group is different from that used by either of the other groups.

The reading is then followed by an entire class discussion on what has been read, and each group makes further use of ideas gained.[1]

It is believed by many that keeping as much of the instructional program as possible within the classroom unit is in harmony with what is known today about how children learn and develop best. The whole direction of elementary education in recent years has been toward the coordination and integration of learning rather than toward the setting up of subject matter into specific compartments. There appears to be

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[1] Paul McKee, The Teaching of Reading in the Elementary School (New York: Houghton Mifflin Company, 1948), pp. 353 - 354

considerable evidence also that children learn to read best as they study related materials.[1]

Fixed reading groups within a class is the most common practice followed by teachers who want individualized instruction within a class. There are definite disadvantages in this form of grouping. The group may become so separated that the class can rarely find an opportunity to work as a whole. Also children in the lower group cannot help but develop feelings of inferiority. Another disadvantage is that the reading materials used in many instances, are dealing with different content from group to group. Fixed grouping also tends to make the reading program inflexible, causing individuals to remain in one place, where to really satisfy their needs, would be to move to another group.

The flexible grouping plan is very likely the best approach to adjusting to individual differences in reading. When grouping is made flexible, many of the difficulties are avoided and grouping becomes one of the single means of individualizing instruction in reading.[2]

The use of interclass or cross class grouping in reading has been met with mixed emotions. In most cases this type of program is still in the trial stages. Because of its close relationship to a straight form of ability grouping, many unfavorable comments have been raised in accordance to its validity.

Some teachers believe that interclass groupings give better chances of enrichment for superior pupils and make possible reading

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[1] Helen M. Heyl, "Grouping Within the Classroom," National Elementary Principal, Vol. 35 (September, 1955), pp. 83 - 86.

[2] Bond and Tinker, pp. 58 - 59

materials better adapted to different levels, but they have the equally important disadvantage of making reading too isolated from the rest of the school program, of placing with teachers pupils they do not know well, and wasting time in transferring pupils. This system of grouping has not proved a superior method of providing for individual differences in reading achievement.

It is also felt that the slow reader who was placed in a class with others possessing the same ability would possibly lack the motivation and enthusiastic drive that children with greater reading ability could provide for them in a normal classroom. The pace followed by a slow reader in such a group with others of the same ability, may be so slow that it could become a monotonous struggle after a period of time. The teacher may unconsciously become impatient with the pace being followed and possible poor teaching procedures and techniques could arise in such a group.[1]

The experimental interclass grouping program does not tend to help those individuals with acute reading problems as much as it helps the average and above average readers.

This approach has several advantages:

1. It established more difficult levels for instruction inasmuch as two or three teachers have two groups each rather than three or four groups taught by a single teacher.

2. It makes the teacher responsible for fewer preparations since she has two groups instead of three or four.

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[1] Alvin Brodia, "Grouping Classes for Reading," National Elementary Principal, Vol. 35 (September, 1955), pp. 67 - 69.

3. It allows the teacher to work directly with a group for a
   longer period of time. The main disadvantage is that it
   does not allow for follow up during other classes.

Under the interclass grouping plan the poor reader would gain
strength from a teacher who was unhurried, patient, and aware of his
needs. The slow reader would respond to a program that would
encourage greater effort and step-by-step success.[1]

The interclass grouping program provides reading materials better
adapted to the different levels. The same drill and other exercises
can be given to the entire class. Teachers can meet individual needs
and abilities more effectively. The poor readers are not discouraged
or embarrassed, and more efficient teaching conditions may result
from this program.

Interclass grouping also presents problems that will not
satisfactorily provide for the individual needs and abilities of the
slow reader. Certain parts of the program may actually disturb the
social, psychological and intellectual needs of the slow reader. It
may make reading too isolated from the other learning activities. The
teacher does not know the pupils and their interests. This can be a
serious problem if not handled in a corrective manner. The slow groups
may lack the stimulus provided by the brighter children's activities.

The serious disadvantages of the program can be overcome at
least in part by definite procedures aimed at their abolition. The

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[1] William F. Moorehouse, "Interclass Grouping for Reading
Instruction," The Elementary School Journal, Vol. 65 (February,
1964), pp. 285 - 286.

program must be regarded as an administrative procedure whose success or failure depends upon the way it is used.[1]

The same problems are evident under the program of grouping within the classroom. If the grouping procedures become so fixed in nature, little benefit will result toward the strengthening of the reading abilities of the children under consideration.

Flexibility within both programs is a necessary element required before either can provide the setting or the accomplishment of strengthening the reading abilities of the slow reader.

It should be kept in mind that the main reason for an attempt to find a suitable program for the teaching of reading is not for the purpose of making it easier for the teacher, which is too often the objective, but to create an educational climate that will best stimulate the greatest amount of growth on the part of the child's relationship to his reading developmental processes.

It has been the purpose of this chapter to discuss some of the written research materials pertaining to the theories and philosophies of various authorities in the field of reading instruction regarding the selection of a reading program that would most efficiently satisfy the student's individual needs and abilities in reading.

After the completion of analysing certain professional approaches on the selection of a reading program, it was decided to institute a comparative experimental reading program in a typical elementary classroom situation.

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[1] Aaron, Education, Vol. 80, pp. 530 - 532.

The purpose of this particular experiment was to compare the effective use of an interclass grouping approach for reading instruction with that of a conventional form of grouping for reading within the self-contained classroom.

There were four classes involved in the experiment, two experimental and two control classes. The experimental classes were grouped homogeneously according to individual reading abilities. One class was for those with a higher reading achievement level and the other class for those on a middle or lower achievement level. The control groups followed the heterogeneous form of grouping students for reading within the self-contained classroom. The control groups followed through with the school's previously instituted pattern of reading instruction. This was through the use of sub-grouping of the students within a self-contained classroom. The experimental group adopted the approach of the students having a different teacher for reading. The experimental classes utilized more of a single unit plan for reading instruction, rather than regrouping into two or more reading groups within the class, common to the plan used by the control groups.

The purpose of this experiment was to determine if an interclass grouping plan of reading instruction would most efficiently satisfy the student's individual needs and abilities in reading.

Chapters III, IV, and V give a detailed description of the plan, objectives, procedures followed, instructional techniques used, testing medias, findings, achievement, and the final evaluation of the experiment.

CHAPTER III

PROCEDURES, INSTRUCTION AND TESTING

IN EXPERIMENTAL GROUPS

Procedures

As indicated in Chapter I, pupils were divided into experimental and control groups. Four teachers participated in the year-long project. They met previously to the opening of the school year and discussed the outline of the experiment. This included the materials to be used, teaching techniques and the potential objectives to strive for.

It was the purpose of the experimental groups to initiate a greater variety of instructional aids and programs along with the basal reading series. The purpose of this plan was to stimulate a greater interest and motivational pattern for those involved in the experiment.

The control groups relied more on the basal reading series and a more traditional reading program. Of course the individual teachers of the control groups implemented their own personal creative reading techniques to promote a greater reading gain within their own individual classes.

In order to keep the experiment as valid as possible the teachers of the experimental groups tended to discuss their techniques and classes with one another, while the teachers of the control groups also worked together with their groups with the

aim to maintain a continuity of their programs. The purpose was to provide as similar a pattern of instruction within the experimental groups and control groups as possible.

Class 3, experimental group, had twelve fifth graders with levels on the 1965 Metropolitan Achievement Battery, Reading Test ranging from 3.5 to 5.9 and levels on the Metropolitan Achievement Battery Word Knowledge Test ranging from 3.0 to 5.5. (See Table 3)

TABLE 3

FIFTH GRADE EXPERIMENTAL GROUP
1965 METROPOLITAN ACHIEVEMENT TEST SCORES
CLASS 3

	Pupil	Metropolitan Achievement Reading - 1965	Pupil	Metropolitan Achievement Word Knowledge - 1965
1.	S	5.9	J	5.5
2.	I	5.3	S	5.5
3.	N	5.3	L	5.3
4.	L	5.1	K	5.3
5.	O	5.1	O	4.9
6.	T	5.1	T	4.5
7.	K	4.4	N	4.5
8.	Q	4.4	I	4.3
9.	R	4.4	M	4.3
10.	P	3.7	Q	4.2
11.	M	3.5	R	3.8
12.	J	3.5	P	3.0

There were also in Class 3, experimental, eight sixth graders with levels on the Metropolitan Achievement Battery, Reading Test ranging from 5.3 to 7.7 and levels on the Metropolitan Achievement Battery, Word Knowledge Test ranging from 4.2 to 6.9. (See Table 4)

TABLE 4

SIXTH GRADE EXPERIMENTAL GROUP
1965 METROPOLITAN ACHIEVEMENT TEST SCORES
CLASS 3

	Pupil	Metropolitan Achievement Reading - 1965	Pupil	Metropolitan Achievement Word Knowledge - 1965
1.	G	7.7	E	6.9
2.	F	6.3	F	6.4
3.	E	6.1	H	6.2
4.	A	5.5	C	5.8
5.	B	5.5	G	5.6
6.	H	5.3	D	5.5
7.	D	5.3	A	5.5
8.	C	5.3	B	4.2

The complete range then in Class 3 was:

Reading 3.5 to 7.7

Word Knowledge 3.0 to 6.9

Class 4, experimental group had ten fifth graders with levels on the 1965 Metropolitan Achievement Battery, Reading Test ranging from 4.9 to 8.7 and levels on the Metropolitan Achievement Battery, Word Knowledge Test ranging from 5.3 to 9.2. (See Table 5)

TABLE 5
FIFTH GRADE EXPERIMENTAL GROUP
1965 METROPOLITAN ACHIEVEMENT TEST SCORES
CLASS 4

	Pupil	Metropolitan Achievement Reading - 1965	Pupil	Metropolitan Achievement Word Knowledge - 1965
1.	S	8.7	Q	9.2
2.	Q	7.1	S	7.1
3.	N	7.1	N	6.2
4.	P	6.8	L	6.0
5.	T	6.6	U	6.0
6.	U	6.5	P	5.8
7.	R	5.9	T	5.8
8.	M	5.7	R	5.5
9.	L	5.1	O	5.3
10.	O	4.9	N	5.3

There was also in Class 4, experimental group, eleven sixth graders with levels on the 1965 Metropolitan Achievement Battery, Reading Test ranging from 5.3 to 9.7 and levels on the Metropolitan Achievement Battery, Word Knowledge Test ranging from 6.0 to 10.0. (See Table 6)

TABLE 6

SIXTH GRADE EXPERIMENTAL GROUP
1965 METROPOLITAN ACHIEVEMENT TEST SCORES
CLASS 4

	Pupil	Metropolitan Achievement Reading - 1965	Pupil	Metropolitan Achievement Word Knowledge - 1965
1.	I	9.7	I	10.0
2.	H	8.4	H	8.7
3.	C	7.3	J	7.6
4.	F	7.3	A	7.6
5.	J	6.8	G	7.4
6.	G	6.8	F	7.1
7.	A	6.3	D	7.1
8.	E	5.9	C	6.4
9.	D	5.7	K	6.2
10.	B	5.5	B	6.0
11.	K	5.3	E	6.0

The complete range then in Class 4 was:

Reading 4.9 to 9.7

Word Knowledge 5.3 to 10.0

Since the division of the groups was based on principal and teacher judgment, as well as Metropolitan Test scores and classroom performances, mental ability as shown by an intelligence quotient on the Otis Quick Scoring Test was considered as one indication of possible reading ability. In the experimental groups, Class 3 showed an I. Q. range from 74 to 120 and Class 4 had an I. Q. range of 96 to 131.

In both experimental groups there were children of low socio-economic status as well as those categorized as middle class. Both groups also had children of homes broken by divorce, separation, or death.

Instructional Techniques

Both experimental groups utilized a wide assortment of special reading materials, activities and exercises to correlate with the basal reading series. The purpose of this approach was to provide the classes with special reading enrichment extended beyond the required reading program provided in the basal reading series.

The reading program in both experimental groups was centered around the Scott, Foresman and Ginn basal reading series. The fifth graders in Class 3 used the fifth grade Ginn reading series and the sixth graders used the sixth grade Ginn reading series.

The fifth graders in Class 4 used Vistas of the Scott, Foresman reading series and the sixth graders used Cavalcades of the Scott, Foresman reading series. The purpose of using these two reading series was to provide the students with the type of instruction that would best fit their individual reading needs. The Scott, Foresman series provided reading developmental skills more suitable for the reading capacities of the higher achievers, while the Ginn series provided special activities that were more suitable for the middle and lower achievers. There was not that much basic difference in the reading levels of the two series, but it was decided that the Scott, Foresman series was more suitable for the plan of teaching to be used for the higher reading achievers in Class 4, and Ginn would provide a more comprehensive program needed for those in Class 3 of the experimental group.

There was also special emphasis placed upon the teacher's own creative reading activities along with the use of special published reading materials.

An important fact that teachers considered when teaching reading, regardless of the ability level, was to try to make reading as interesting and challenging to the student as possible. Teachers felt that many students had reading problems because they were so bogged down with the repetitious drills in basic reading skills. They needed work in these areas, and special techniques to help improve vocabulary, comprehension, and word attack skills were implemented into reading instruction. These special activities promoted a greater motivational zeal on the part of the students than would have been found under the more traditional program of reading instruction. This followed the idea that people try harder and do better when they enjoy their work and gain satisfaction and accomplishment.

It was an important aim of the teachers of the experimental groups to provide the students with as many of these experiences as possible.

The special published reading supplementary materials used in the experimental groups included the V. E. C. News Filmstrips and local newspapers. The students brought the <u>Mattoon Journal Gazette</u> to class once a week. A panel of three was selected weekly to provide a news broadcast program on special current events. After the panel was completed, the entire group was divided into smaller groups and special reports were given on the different sections of the newspaper

they had in class. Weekly, the teacher would give a short quiz on the highlights in the news during that week. Also during this period the class would view the V. E. C. News Filmstrips which provided excellent experiences in word vocabulary along with a visual and verbal discussion of important news making events during the week.

The classes also used the News-Times and Young Citizen, scholastic newspapers. The News-Times was used in Class 4 and Young Citizen in Class 3. They were used mainly as supplementary aids which were tied in with their special work with other newspaper articles. They did provide the classes with good vocabulary building exercises and additonal consciousness of world affairs.

The use of the library was also an important reading resource for the students in the experimental groups. Due to wide latitude of reading activities presented in relation to the amount of time prescribed for reading, the library was used mainly as a source of interest level type of reading. The students were given an allotted amount of time each week to select a book, generally within their particular area of interest. Certain periods of time were set aside in reading class for free recreational reading, but most of the reading in this area was done outside of class or after they had completed their required assignment.

The students in the experimental groups made special bulletin boards for the purpose of creating a higher motivational interest in general pleasure reading. The theme of the boards was, "Let's Read and Reach for Outer Space." The boards were decorated with the various symbols relating to space and space travel. Each time a

student completed a book he made a small capsule and pinned it on
the board. The purpose was to read as many books as possible in order
to project their capsules to the top of the board which represented
outer space. The boards, which were approximately ten feet in height,
provided the students with a challenge to read enough books to have
enough representative capsules to reach the top. This part of the
reading program was mainly for the purpose to help stimulate an
interest in recreational reading.

The Children's Readers Digest was another series used. They
would read the selections silently and then answer written questions
that provided them with comprehension, vocabulary, and word attack
skills. After the completion of these exercises the class would
have a detailed discussion of the articles and check their written
work. The articles in the Readers Digest were of a special nature
and extensive and interesting class discussions would result. They
provided the class with special thought-motivating challenges. Often
the class would tend to digress somewhat from the main subject, but it
gave them opportunities to express themselves orally and think ob-
jectively on certain subjects.

The Webster's Dictionary Discoveries series was also used. It
is an individualized programmed series which gave the students excel-
lent dictionary usage skills and provided them with the opportunity to
work on their own and at their own pace.

The S. R. A. Reading Laboratory was another source of material
that was used extensively throughout the year. The S. R. A. Reading
Laboratory was the sole resource for the reading class for three weeks.

At the end of the three weeks the classes had become accustomed to
the pattern of study that it provided and it was then used on a
once a week basis.

The S. R. A. Reading Laboratory, as the Webster's Dictionary
Discoveries series, gave the students an opportunity for more indi-
vidualized work at their own rate of speed. It also gave the teachers
an opportunity to work with students on their individual needs in
reading. This help was closely correlated with their work in the
S. R. A. Reading Laboratory. The S. R. A. Reading Laboratory exercises
provided the students with excellent drills on comprehension, vocabulary,
and word attack skills. One very noticeable skill that was developed
through the S. R. A. Reading Laboratory was the use of the dictionary
on the part of the students. When they came across a word they did not
know, they went to their dictionaries to find the meaning, instead of
guessing. This was probably true because they wanted to score well on
the individual exercises. The short articles found throughout the
laboratory were extremely interesting and highly motivational to the
students.

The basal reading books were used on an average of two to three
times a week. First, the story was introduced and new and difficult
words were discussed. The students then read the story silently and
were to write down any of the words in the story that gave them
difficulty. The second period was used to discuss orally the vocabu-
lary and give special attention to the main thoughts or ideas in the
story. After discussing the story orally, often the class was given
a chance to write a detailed discussion on particular questions about
the story. There were usually only one or two questions to write

about. They were very broad questions in nature. The main purpose of this exercise was to give the students experiences in organizing and developing written essay types of questions.

On several occasions, depending on the story, the class was organized to discuss a particular part or the general theme presented in the story. Usually they were stories that presented the students with controversial points of view regarding an answer. The students were to plan and organize their answers so that they would be able to defend their opinion about the question being discussed. This type of an exercise gave them experiences in presenting their ideas orally and allowed them to be able to discuss their ideas about a particular subject in a manner that someone else could understand their reasoning.

It was the purpose of the teachers to correlate reading with as many of the other subjects in the curriculum as possible. This was especially true regarding the other areas of the language arts.

The teachers involved in this special project utilized as many personal special innovational reading activities in their reading classes as possible. These activities were integrated closely with the prescribed basal reading program and the other published reading materials used within the individual groups. The main purpose of these special activities was to add additional interest and to help stimulate a more motivational attitude toward reading on the part of the students in the experimental groups. These exercises were also used within the control group, but to a lesser degree of concentration. These activities were closely related to the strengthening of the students' comprehension, word knowledge, and word attack skills. Most of these

exercises were presented in a more informal and relaxed atmosphere of instruction, such as games, group projects and individualized activities.

It was evident after a year's usage of such supplemental work that the students enjoyed and looked forward to these periods of instruction.

Class 4 of the experimental group undertook a special project. It was the writing and presentation of a play titled, Josie's Home Run. The play was written from the story, "Josie's Home Run," a selection in the 1948 edition of Days and Deeds published by Scott Foresman.

Six members of the class were selected to write, produce and direct the play. The entire class participated in the final production given to a school-wide assembly and a special P. T. A. group. A great deal of the preparation for the play was handled outside of the regular reading class, so it did not interfere with the prescribed plan of reading instruction.

The written script of the play in its entirety is as follows:

Josie's Home Run

Scene I

Joe and Josie coming home after playing.

Josie: Mother, Joe won't let me play with the ball team when they are practicing.

Joe: Aw Mom, I like to play with Josie and the gang likes her, too. But, when there is a whole bunch of boys and only one girl, it makes a fellow feel kind of funny if the girl is his sister.

Mother:	Joe is right, Josie, you must come home if the whole team is playing, but when there is only two or three boys playing you can play if they want you to.

Scene II

Dinnertime

Mother:	Come to supper, Joe, it's time to eat.
Joe:	I don't want any dinner, I'm not hungry.
Josie:	Why? What's the matter?
Joe:	I'm just cold and tired. Can't a fellow rest a minute without everyone thinking something's the matter?
	(Joe goes to bed very early)

Scene III

The next morning

Mother:	Joe, it is time to get up.
Joe:	O. K. Mom, I'll be there in a minute.
	(Joe lies in bed instead of getting dressed. Mother walks in.)
Mother:	Joe, I think you had better stay in bed if you don't feel well.
Joe:	Oh, Mom, the team needs me. What shall I do?
Josie:	I'm sorry Joe, what can I do for you? Shall I go and watch the game or shall I stay with you?
Joe:	Go and cheer for the boys just as loud as you can. You know they always say that your cheering helps as much as my playing. Remember all the plays so you can tell me about them.

Mother:	Yea, Josie, you had better go. But you must hurry to the barber's before the game. Remember you can't go to Judy Ann's party this afternoon unless you have your hair trimmed. Tony knows the way I like it.
Josie:	All right Mother, and I'll go straight to the game from the shop. Oh! I wish you could play, Joe, but I'll remember everything and tell you about the game.
Joe:	Go by and tell the fellows I won't be able to play, will you?

Scene IV

Josie meets Roy on the street.

Roy:	Say, Josie, have you heard about our bad luck? Bill hurt his knee last night and won't be able to play. He and Joe are our best players. We need them both to win the game. It's a good thing that we still have Joe. But, even with him we may not win, now that Bill is hurt.
Josie:	I'm sorry to hear about Bill. You needn't stop by for Joe. He can't come now. I'll see you, Roy. I'll be at the field at 10:00 sharp to cheer for you guys.

Scene V

Josie at the barber shop.

Josie:	Tony, please cut my hair like Joe's. For once I'm going to have it the way I like it.
Tony:	I like it short also, Miss Josie, but your mother always seems to want your curls to show.

Josie: If Mother knew I was doing this for Joe and the team,

            she wouldn't care. Oh, I'll look so much like Joe, no

            one will know me.

Scene VI

At home getting ready for the game.

Josie: I'll have to make it go. If I don't, and the boys find

            out who it is, they'll tease me forever.

Scene VII

Josie arrives at the game dressed as Joe

The team cheers Joe's arrival.

Umpire: Batter up!

Josie: They think that Joe hasn't been playing his best. The

            game is tied and this is the last inning. We must not

            lose this game.

Umpire: Strike one. Ball one. Ball two. Strike two.

            Ball three.

            SMACK!

Spectators: Run, Joe, beat the ball!

Team: Hurrah for Joe, hurrah for Joe. He made things go!

            He made things go!

Team Captain: Oh! Mr. Darwin, you ought to have seen Joe. He won

            the game for us. He just hit a home run.

Father: Joe made a home run? What do you mean? Joe is home in

            bed. Josie! What does this mean?

Josie: I wanted the team to win. I can play as well as Joe,

            even if he is one of their best players. When he got

sick I thought I would take his place and not let
anybody know. I was going to tell Joe of course.

Father: Oh, Josie, Josie, Josie, what will you do next? Do you
think that your brother will take credit for something
you did?

Everyone: Josie! Josie! Josie! Ring around the rosy.

. . .

Another popular activity used in the reading classes was work
with simple creative dramatics. The students were to illustrate with
words or pantomine a simple situation. Usually from one to three
students participated in each dramatization. It was up to the rest of
the class to determine the particular act that was being dramatized.
It was important that those dramatizing a statement should be
realistic, use good dialogue, be original, and have a good beginning
and ending.

The materials used were a number of cards with simple statements
on them that the students were to read and then dramatize. It was the
purpose for the students participating on each dramatization to do this
on as much of an impromptu basis as possible. Some of the simple
statements to be dramatized were:

1. You are an astronaut at the moment of blast off.

2. You are a waitress just after spilling a tray of food on
   a customer.

3. You are a big bass being caught by a fisherman.

4. You are caught doing what you shouldn't be doing when
   the teacher steps back into the room.

5. You are a snowman in the warm bright sunlight.

6. You are taking your first driving lesson.

Many of the activities used during these periods of instruction were games or activities that concentrated on the proper use of the dictionary. The dictionary, a very important aid to a reader, was used whenever necessary. The purpose of such activities was to get the students to use their dictionaries whenever they needed help on the meaning or pronounciation of a word, rather than skipping over it without fully understanding it. Through the use of various dictionary games and other activities the students became more relaxed with their dictionaries and began to turn to it for help more than previously. In some cases the exercises were of a more competitive nature and this added to more of a motivational use of the dictionary. A great deal of the work done on word attack skills in the experimental groups was accomplished through the various activities using dictionaries. Of course, these were correlated with the skills also developed in the workbooks and the S. R. A. Reading Laboratory.

Several of the dictionary exercises used will be described in detail and examples given as follows:

Guess What?

This exercise is to encourage children to be curious about words and to make better use of the dictionary. The teacher asks a question about an unfamiliar word and the students look up the word in the dictionary and answer the question. This activity can be performed on either a team or individual basis. When the students become accustomed to looking up words in a dictionary they will have fun making up

questions for each other. The chief thing is to use this game and its adaptations to create interest in words and in dictionary use. Some examples of this activity are:

1. If you went to a _haberdashery_ would you find a fur coat for your mother?

2. Could you see something that is _intangible_?

3. If you had some _pumice_ could you eat it?

4. If someone was _dowdy_ looking, how would they be dressed?

5. If you were an _optician_ would you make and sell hearing aids?

Dictionary Demons

The purpose of this type of activity is to develop vocabulary and to use the dictionary in order to classify words correctly. The teacher writes several words on the board and the students are to classify the words as either an animal, vegetable, or a mineral. Special emphasis should also be placed on the use of unfamiliar words for vocabulary building purposes.

Question Box

The purpose of this activity is to give practice in the use of the dictionary in order to develop word power. Questions are written on cards and placed in a box and a pupil leader then draws and reads it. The members of the team or class then look up the word in question as rapidly as possible in order to answer it. Examples of the questions are:

1. The month of July is named after what famous person?

2. What is a fuselage?

3. What would you do in a dirigible?

4. Is a huckster a fish, a machine, a person, or food?

5. For what do the initials C. P. A. stand?

Discovering Word Pictures

The purpose of this activity is to emphasize how pictures in dictionaries add to the meaning of words. The teacher asks or writes a question and the students are to look up the word and answer the description being asked. Examples of the questions are:

1. What shape is a clarinet?

2. How many sides does a heptagon have?

3. What shaped leaves does a morning glory have?

4. What is the color of an agate?

5. An amphitheater is what shape?

6. Does a goblet have a handle?

Diacritical Detectives

The purpose of this activity is to provide drill in the recognition of words in phonetic spelling and having diacritical marking. Often students have difficulty in the pronunciation of a word and if the dictionary is used many pronunciation difficulties will be eliminated. The teacher writes a number of words on the board using their phonetic spelling. The students then write on their paper the phonetic spelling, the word and the page number where it was found in the dictionary.

One of the most popular dictionary activities used in the classes of this program was through the uses of races in order to see who could locate a given word from the dictionary the fastest. This activity stressed the importance of using the guide words in

a dictionary when locating a word. Two students were sent to the
board with their dictionaries. The teacher wrote the word to be
located on the board and then gave the signal to start. The first
person to locate the word wrote the page number on the board and was
the winner. The winner remained at the board and was challenged by
another member of the class. The student who located the word given
first remained at the board until defeated by a challenger.

Besides the various dictionary activities used, several other
exercises to strengthen word knowledge and word attack skills were
used. One such example was the use of sentence mixers. The
teacher wrote a sentence on the board with the words out of their
proper order. The purpose of this exercise was to help the students
visually recognize the important words in the sentence and rearrange
the words so that it made a complete and understandable sentence. An
example of this type of exercise is:

craft the landed made a backyard my wierd craft from it as in
space sound outer space.

Also, drills on visual word recognition was used by writing a
word on the board with the letters out of their proper order. The
students were to unscramble the letters and write the correct spelling
for the word. This exercise gave practice in both visual perception
and spelling.

The teachers in the program also used filmstrips with word
phrases. The purpose of these was to help strengthen the reading
speed of the students. The word phrases were first flashed slowly
on the screen and were read orally. Then they were flashed at a

more rapid pace. This work helped to train the students to focus on phrases, not individual words. After such exercises were completed these techniques were placed into use during their reading classes with the basal readers or other written materials that they read. The filmstrips also provided an excellent opportunity for drill in word knowledge, because many phrases contained new words. The word phrases were also used for the purpose of developing and building sentences from the phrases flashed on the screen.

There were forty filmstrips in the series and the vocabulary in the phrases became more difficult through each level.

This concludes a composite description of the reading materials, teacher innovations, and other techniques used during the reading instruction periods of the experimental groups during this research study on interclass grouping.

Testing

The testing program utilized during this study included the Metropolitan Achievement Tests Forms AM and AM, and the Gates Reading Survey, Forms 1 and 2.

The sections on reading and word knowledge were used from the Metropolitan Achievement Tests.

The Gates Reading Survey provided tests on speed and accuracy, reading vocabulary and level of comprehension.

Both the experimental and control groups used the same program of testing during the study.

The Metropolitan Achievement Tests were given in October of 1965, before the project started and in October, 1966, after the completion.

The Gates Reading Survey Form 1 was also given in October, 1965, prior to the start of the study. Form 2 was administered in May of 1966.

The results of the May, 1966, Gates Reading Survey and the October, 1966, Metropolitan Achievement Test were for the purpose of studying the rate of the reading growth patterns developed through this special research program. The purpose was to compare the use of interclass grouping for reading, used in the experimental groups, with that of the conventional grouping for reading within the self-contained classroom used in the control groups. The comparative results of the Metropolitan Achievement Tests and the Gates Reading Survey Test for the experimental groups, Classes 3 and 4 are on Tables 7 and 8.

Through this study of interclass grouping it was the objective to provide the experimental groups with a greater latitude of instruction through the combined use of standardized reading programs, special teacher innovated techniques and student motivated projects related to reading. It was the aim to provide the students with a greater opportunity to strengthen their reading abilities both vertically and horizontally.

The program was initiated in a manner in which the core of instruction centered around the basal reading series that had been adopted, although special emphasis was developed to provide for greater creativity on the part of both the teacher and the student.

It was the objective in this experiment to give the students the opportunity to work on and develop their reading skills through the use of individualized or group motivated activities or projects.

TABLE 7

1965 AND 1966 METROPOLITAN ACHIEVEMENT TEST RESULTS
TABLE OF GROWTH FOR EXPERIMENTAL GROUPS

| | Class 3 | | | | | | | | Class 4 | | | | | | |
| | Word Knowledge | | | Reading | | | | Word Knowledge | | | Reading | | | |
*	1965	1966	Gain	*	1965	1966	Gain	*	1965	1966	Gain	*	1965	1966	Gain
E	6.9	7.0	7.0	G	7.7	4.7	-3.0	I	10.0	10.0	.0	I	9.7	8.0	-1.7
F	6.4	9.5	3.1	F	6.3	7.3	1.0	Q	9.2	10.0	.8	S	8.7	10.0	1.3
H	6.2	6.1	- .1	E	6.1	8.0	1.9	H	8.7	9.5	.8	H	8.4	8.5	.1
C	5.8	5.2	- .6	S	5.9	3.5	-2.4	J	7.6	7.8	.2	C	7.3	10.0	2.7
G	5.6	6.7	1.1	A	5.5	6.3	.8	A	7.6	7.8	.2	F	7.3	8.7	1.4
J	5.5	7.9	2.4	B	5.5	5.3	- .2	G	7.4	8.3	.9	Q	7.1	9.2	2.1
S	5.5	6.0	.5	H	5.3	7.1	1.8	S	7.1	10.0	2.9	N	7.1	6.8	- .3
D	5.5	5.1	- .4	D	5.3	5.7	.4	F	7.1	9.9	2.8	P	6.8	8.0	1.2
A	5.3	6.4	1.1	C	5.3	4.7	- .6	D	7.1	6.4	- .7	J	6.8	7.7	.9
L	5.3	5.8	.5	I	5.3	4.7	- .6	C	6.4	9.5	3.1	G	6.8	6.0	- .8
K	5.3	5.5	.2	N	5.3	3.8	-1.5	M	6.2	6.9	.7	T	6.6	7.3	.7
O	4.9	4.9	.0	L	5.1	6.8	1.7	K	6.2	6.7	.5	U	6.3	8.4	2.1
T	4.5	5.1	.6	O	5.1	5.1	.0	L	6.0	7.4	1.4	A	6.3	8.3	2.0
N	4.5	4.9	.4	T	5.1	4.9	- .2	B	6.0	6.1	.1	R	5.9	6.1	.2
I	4.3	5.3	1.0	K	4.4	4.0	- .4	E	6.0	6.0	.0	E	5.9	5.1	- .8
M	4.3	5.1	.8	Q	4.4	4.7	.3	U	6.0	5.8	- .2	M	5.7	8.4	2.7
B	4.2	4.6	.4	R	4.4	5.5	1.1	P	5.8	9.8	4.0	D	5.7	5.7	.0
Q	4.2	4.3	.1	P	3.7	3.3	- .4	T	5.8	7.9	2.1	B	5.5	6.6	1.1
R	3.8	4.9	1.1	M	3.5	3.1	- .4	R	5.5	7.6	2.1	K	5.3	6.6	1.3
P	3.0	5.3	2.3	J	3.5	8.0	4.5	O	5.3	7.4	2.1	L	5.1	7.7	2.6
								N	5.3	6.2	.9	O	4.9	6.3	1.4

Medians

| | 5.3 | 5.3 | | | 5.3 | 4.9 | | | 6.2 | 7.7 | | | 6.5 | 7.7 | |

*Letter assigned to each pupil.

TABLE 8

1965 AND 1966 GATES READING SURVEY TEST RESULTS
TABLE OF GROWTH FOR EXPERIMENTAL GROUPS

	Class 3				Class 4		
Pupil	Form I Oct. 1965	Form II May 1966	Gain	Pupil	Form I Oct. 1965	Form II May 1966	Gain
E	6.5	8.0	1.5	J	8.2	8.4	.2
F	6.4	7.4	1.0	S	7.8	8.6	.8
J	6.4	6.2	- .2	I	7.8	8.3	.5
A	6.4	5.7	- .7	Q	7.5	7.0	- .5
L	6.1	5.7	- .4	A	7.4	7.7	.3
S	6.0	5.5	- .5	C	7.2	7.6	.4
O	5.7	4.5	-1.2	H	7.2	7.5	.3
G	5.6	5.2	- .4	P	7.1	7.6	.5
K	5.5	5.5	.0	K	7.0	7.1	.1
C	5.2	5.4	.2	E	7.0	6.5	- .5
B	5.1	5.4	.3	F	6.8	7.9	1.1
N	5.1	4.8	- .3	B	6.5	6.5	.0
I	5.0	4.6	- .4	M	6.4	7.2	.8
D	4.9	5.7	.8	G	6.4	5.4	-1.0
Q	4.9	5.5	.6	D	6.3	6.8	.5
T	4.9	4.2	- .7	U	6.3	6.7	.4
H	4.7	5.6	.9	R	6.3	6.3	.0
P	4.4	5.1	.7	L	6.2	6.9	.7
M	4.2	5.1	.9	O	6.1	6.6	.5
R	3.7	5.4	1.7	T	6.1	6.6	.5
				N	6.0	6.6	.6

Medians

	Class 3				Class 4		
	5.1	5.4			6.7	7.0	

The only time that the fifth and sixth graders were grouped separately was when they were working with the basal reading series. This was done because it was felt that the reading interest and skill levels of the two basal reading programs best fit the needs in reading of the two contrasting age groups.

The class was always brought back into a single unit when individualized instruction or group projects and activities were being concentrated on. This was true when teacher-led or group-led games and other skill building activities were a part of the program.

The two grade level groups participated simultaneously as a single unit when working on the individualized instruction such as the S. R. A. Reading Laboratory, Webster's Dictionary Discoveries, or when other teachers initiated dictionary skill building activities. The class always worked together when they were writing and practicing for the play or other student initiated projects.

It was the teacher's purpose to provide the students with as many materials, ideas, and techniques as possible with the emphasis that they would grasp these aids and develop them as much as possible in order to gain the highest level of learning from their reading program.

CHAPTER IV

PROCEDURES, INSTRUCTION AND
TESTING IN CONTROL CLASSES

Procedures

The control classes were taught by two teachers who worked together as did the teachers of the experimental groups. However, they attempted to do only the same amount of cross-planning and discussion of pupil needs which they would have done ordinarily. The main importance of their working together was to be sure that the manner of instruction and techniques correlated with the prescribed manner of the project. A closer planning procedure and pattern of instructional techniques were carried out by the two teachers of the experimental groups.

In the case of the teachers of the control groups, each teacher had previously had some pupils from the other class, so they shared perceptions about the reading progress of pupils both in regard to the formal reading instruction period and in regard to reading in the content areas.

Each teacher in the control group subdivided his class into two or more reading groups. This varied with the individual progress of the students. Again division of pupils into groups within the class was made according to test scores, teacher and principal judgment, and classroom performance.

Class 1 of the control group was composed of twenty sixth graders with levels on the 1965 Metropolitan Achievement AM Battery, Word Knowledge Test, ranging from 3.0 to 10.0 and levels on the Metropolitan Achievement Battery, Reading Test ranging from 3.0 to 10.0. The median on reading achievement was 5.7 and the median on word knowledge was 6.2. (See Table 9)

TABLE 9

SIXTH GRADE CONTROL GROUP
1965 METROPOLITAN ACHIEVEMENT TEST SCORES
CLASS 1

	Pupil	Metropolitan Achievement Reading - 1965	Pupil	Metropolitan Achievement Word Knowledge - 1965
1.	S	10.0	S	10.0
2.	F	8.7	F	10.0
3.	L	7.1	B	7.4
4.	J	7.1	H	7.4
5.	Q	7.1	Q	7.4
6.	R	6.8	J	7.1
7.	B	6.3	D	6.4
8.	R	6.3	R	6.4
9.	T	6.1	E	6.4
10.	K	5.7	K	6.2
11.	E	5.7	G	6.2
12.	A	5.7	N	6.2
13.	N	5.7	O	6.2
14.	D	5.1	L	5.6
15.	G	4.4	A	5.6
16.	O	4.2	T	5.5
17.	I	3.8	C	3.6
18.	P	3.7	P	3.6
19.	C	3.7	I	3.0
20.	M	3.0	M	3.0

Class 2 of the control group was composed of twenty-one fifth graders with levels on the 1965 Metropolitan Achievement Battery,

Word Knowledge Test ranging from 3.7 to 10.0 and levels on the
Metropolitan Achievement Battery, Reading Test ranging from 3.0
to 10.0. The median on reading achievement was 4.3 and the median
on word knowledge was 4.9. (See Table 10)

TABLE 10

FIFTH GRADE CONTROL GROUP
1965 METROPOLITAN ACHIEVEMENT TEST SCORES
CLASS 2

	Pupil	Metropolitan Achievement Reading - 1965	Pupil	Metropolitan Achievement Word Knowledge - 1965
1.	H	10.0	H	10.0
2.	K	9.7	K	8.7
3.	D	6.6	D	8.7
4.	C	6.3	O	6.2
5.	O	6.1	C	5.8
6.	N	5.9	N	5.6
7.	M	5.9	S	5.5
8.	G	5.3	P	5.5
9.	P	5.3	R	5.5
10.	R	4.4	A	5.1
11.	F	4.4	E	4.9
12.	S	4.2	M	4.9
13.	I	4.0	I	4.9
14.	L	3.8	T	4.7
15.	U	3.7	G	4.7
16.	J	3.7	B	4.7
17.	A	3.5	L	4.7
18.	B	3.5	U	4.5
19.	T	3.0	Q	4.3
20.	E	3.0	J	3.7
21.	Q	3.0	F	3.7

The mental ability of these groups, according to the Otis Quick
Survey Test was also checked: Class 1 showed an I. Q. range from
85 - 119, whereas Class 2 had an I. Q. range from 69 - 130.

In the control groups, as has been indicated in the experimental groups, children were from both low social economic families and middle class families and complete and broken family units.

Instructional Techniques

The instruction in the control groups was carried out more in a traditional manner compared to the approach used by the experimental groups in this study. The control groups patterned their instructional approach more around the basal reading series which had been previously used.

They also used special motivational techniques to stimulate the reading program, but not to the extent as that adopted by the experimental groups. More about the special supplementary activities used by the control groups will be discussed later.

As mentioned earlier, the control groups subdivided their classes in two or more reading groups and this varied according to individual progress. In the main, two groups were used in both the fifth and sixth grade control classes. The Scott, Foresman basal reading series was used by the higher achievers, and the Ginn basal reading series was used by the middle and lower achievers in both the fifth and sixth grade groups.

The teachers centered their programs in the Scott, Foresman series around the textbook, Vistas for the fifth grade and the Cavalcades textbook for the sixth graders. They also utilized Open Highways, another book in the Scott, Foresman series. This textbook was provided to give the underachievers a greater resource of comprehensive and skill building activities. This series provided a high interest

level type of reading experiences, but it contained a vocabulary and comprehension level that was within the grasp of those who were using it.

The Ginn basal reading series provided the middle and lower achievers a wealth of exercises and experiences in which they needed in the areas of word attack skills and special instruction in comprehensive learning. In the Ginn series, the fifth graders used the textbook, Trails to Treasure and the sixth graders used the textbook, Wings to Adventure.

The workbook activities were very closely correlated with the selections read in each of the three basal reading series.

The control groups used a more uniformed pattern of approach to the teaching of reading, but it did not include many of the special motivational experiences that were introduced to challenge the students in the experimental groups.

The high achievers in the control groups were presented with special projects to expand their reading abilities. Another useful technique was the use of the high achievers in the class to help those with certain reading difficulties. (Students often gain a great deal from those within their own peer group. It is important for teachers to utilize this instructional aid whenever the correct situation presents itself.)

Throughout the entire experiment it was stressed with all teachers of the four groups to try to present an atmosphere where students were working and helping one another as much as possible.

The control groups also took advantage of the individualized reading program provided by the S. R. A. Reading Laboratory. They used this media in much the same manner as was discussed in the teaching techniques of the experimental groups. Students of all levels of achievement worked with the S. R. A., but the high achievers were encouraged to expand their work in this area to a greater degree, especially when the teachers were working with individuals with specific reading problems.

The control groups also used the scholastic newspapers, News-Times and Young Citizen. The News-Times was used by the higher achievers because of its more advanced reading vocabulary. The Young Citizen was used by the middle and lower achievers because of its content and vocabulary which best fitted their particular reading needs. This was in conjunctionwith the newspapers used with the experimental groups.

There was a major difference regarding the amount of attention given to the scholastic newspapers in the control groups compared to the experimental groups. The control groups concentrated on the content of the newspaper more thoroughly than the experimental groups, because they did not include daily newspapers and other printed news medias in their plan of instruction. The scholastic newspaper was their sole connection with this form of reading.

The control groups also took advantage of the wealth of reading materials provided by the library. They also provided their classes with a certain amount of time each week to select a book. Class periods were set aside for free recreational reading, but as was true

with the experimental groups, much of this reading was done outside of class or after assignments were completed.

The teachers of the control groups did promote the presentation of written and oral book reports periodically. They provided the students time in class to organize and write their reports, or to make notes when oral reports were to be given.

This technique did give the students an opportunity to develop their skills in formal speaking and writing. It also gave them a chance to share their opinions about certain books with the rest of the class. It made it possible for others to hear a brief summary about a particular book and would possibly encourage them to want to read the selection.

The teachers in the control groups scheduled their classes so that an average of three days each week was given to the reading and work on related oral and written activities presented in the basal reading textbooks. One day was set aside for individualized work in the S. R. A. Reading Laboratory. The control groups, like the experimental groups, devoted three weeks of reading instruction solely to the S. R. A. program for the purpose of indoctrinating and studying the student's individual progress. This period was also used to give individualized help to students in the areas of reading where they were having the greatest amount of difficulty. After the completion of the three-week period the students worked on the S. R. A. once a week or dealt with other related activities.

One day a week was provided for reading instruction related to the scholastic newspaper and free recreational reading. Special

projects such as the oral or written book reports were integrated into the program when the time for such specific activities arose.

As discussed earlier, the core of the program within the control groups was developed in relationship to the basal reading series. A story was introduced and the vocabulary was discussed briefly. After the initial introduction to the story and its vocabulary was discussed, the students read the story silently. With some groups, occasionally a selection was read orally. During the next period the class discussed the selection or wrote on certain exercises related to the story. New words introduced in the vocabulary were also discussed more thoroughly during this period. The third period was devoted to special exercises and activities to enrich or build upon needed reading skills. The type of exercises varied according to the reading levels of the groups. The high achievers worked on more specialized skills, such as working on written or oral reports to supplement the selection that had been read. They also were given time to develop their oral or written book reports in more detail. Some of these students were even used to provide the teacher with assistance in helping members of other groups who were having difficulty with certain skills.

The higher achievers were also provided with exercises and activities that would help to improve their vocabularies, comprehension and other reading structural skills.

An important phase regarding the reading instruction of the high achievers in both the control and experimental reading groups in this experiment was to work on the development of increasing the

speed of their reading, while maintaining a high level of comprehension. Special exercises such as the use of filmstrips and other medias were used to help increase the students' reading speeds.

The groups that consisted of the middle or lower achievers in reading were provided with more individualized instruction on the basics of comprehension study skills, vocabulary, and word attack skills. Special mimeographed exercises were given to them so they could work independently or in small groups.

The Ginn reading series provided the students with a wide range of special exercises and activities that helped to strengthen certain reading deficiencies that were detouring their normal rates or reading progress. These exercises concentrated heavily on the fundamentals of the important reading skills such as comprehension study skills including story sequences, drawing conclusions, and context clues. Important word attack skills were stressed, such as phonetic analysis, syllabication, prefixes and suffixes, vowel sounds and vowel digraphs, and dictionary usage for word pronunciation. Word study skills and structural analysis involving vocabulary, multiple meanings, including synonyms, antonyms, homonyms and homographs, were worked on. Exercises were also provided on forms of figurative language and analogous words.

Some examples of a few of these exercises used by the teachers of the control groups for the middle and low achievers were:

Word-Study Skills[1]

Word meaning exercises give practice in discriminating between

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[1]David H. Russell and Constance M. McCullough, Trails to Treasure (Teacher's Edition; Revised Edition; The Ginn Basic Readers; Boston: Ginn and Company, 1964), p. 82.

words similar in configuration by considering their use in a sentence.

1. Water began to _____ from the pipe.

   prop <u>drip</u> proud drop

2. The clothes were _____ with water.

   <u>soaked</u> sold soared sank

Structural Analysis[1]

Structural analysis exercises were used to check the children's ability to recognize the root word in an inflectional form and to recall the rule governing the changes in spelling.

1. reporting   <u>report</u> reported reports

2. scolding   scolds <u>soold</u> scolded

Phonetic Analysis[2]

Phonetic analysis exercises were used to check the ability to recognize initial consonant blends.

1. street: sp <u>st</u> sk   3. blame: <u>bl</u> br pl

2. twice: <u>tw</u> th ter   4. small: sn <u>sm</u> cr

Other exercises in phonetic analysis were used to determine the children's ability to recognize and use in word attack such phonetic elements as consonant blends, phonograms, and consonant and vowel digraphs.

1. He began to spl _____ the wood with his ax. <u>it</u> od ut

2. The dog went to dig up a b_____. art ore <u>one</u>

3. Some people gr_____ their teeth. at <u>it</u> iok

Syllabication[3]

Syllabication included exercises where the students were to

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[1]Ibid., p. 105   [2]Ibid., II, p. 96   [3]Ibid., III, p. 130

write the number of syllables in a word and to draw a line under each
vowel heard.

1. n<u>o</u>t<u>i</u>ced   <u>2</u>   3. dec<u>o</u>r<u>a</u>ted   <u>4</u>

2. l<u>a</u>nd<u>e</u>d   <u>2</u>   4. b<u>o</u>red   <u>1</u>

Prefixes and Suffixes[1]

Prefix and suffix exercises were to check the children's
recognition of prefixes and suffixes as syllabic units. They were
to place the prefix or suffix after each word.

1. exhibit   <u>ex</u>   4. homeward   <u>ward</u>

2. firmly   <u>ly</u>   5. helpless   <u>less</u>

3. disappoint <u>dis</u>   6. movement   <u>ment</u>

Vowel Digraphs[2]

Vowel digraphs exercises were given to check the children's
ability to recognize the sound of vowel diagraphs.

1. sea: thread heard <u>heat</u>

2. tail: <u>praised</u> hair airport

3. goose: woods took <u>moon</u>

Dictionary Usage[3]

Dictionary usage exercises were given to check the ability of
the group in alphabetizing to the fourth letter as an aid to locating
words in a glossary, dictionary, index, or encyclopedia.

Vocabulary[4]

Vocabulary exercises were given to check the children's under-
standing of the meanings of new words.

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[1]Ibid., IV, p. 181   [2]Ibid., V, p. 242   [3]Ibid., VI, p. 224

[4]Ibid., VII, p. 128

1. show   excuse <u>exhibit</u> control

2. to wind up   foul event <u>crank</u>

3. half-wild horse <u>bronco</u> Nutmeg bunt

4. puzzling   <u>mysterious</u> dining dripping

Multiple Meaning[1]

Multiple meaning exercises were given to provide additional
practice in recognizing words which have more than one meaning,
(homographs). Exercises in recognizing synonyms, antonyms and
homonyms were also given.

Figurative Language[2]

Figurative language exercises provided practice in recognizing
synonyms, words or phrases with similar meanings.

1. His feet were <u>like lead.</u>   <u>very heavy</u>

2. The child was the <u>apple of his eye.</u>   <u>his favorite</u>

3. His heart was <u>heavy.</u>   <u>sad</u>

Analogous Words[3]

Analogous word exercises were used to develop an understanding
of analogous words. When someone reads a story and says, "This reminds
me of something," he sees a likeness or analogy between the story and
the thing he knows.

bullet   dangerous   water   state   knots

1. bow   arrow   gun   <u>bullet</u>

2. sidewalk   safe   street   <u>dangerous</u>

3. cars   miles   ship   <u>knots</u>

---

[1]Ibid., VIII, p. 104   [2]Ibid., IX, p. 162   [3]Ibid., X, p. 346

4. St. Louis   oity   Missouri   **state**

5. cars   land   boats   **water**

The building of essential habits and skills in comprehension is the most vital part of a student's reading instruction. The other skills must be mastered first, but it is only when a reader comprehends the material that he has read that a true and meaningful reading experience has been fulfilled. A few of the comprehensive study skills included in the program were context and experience clues, details and sequence, and story sequence.

Details and Sequence[1]

Details and sequence exercises were used to provide practice in recalling story details and noting their proper sequence. A list of statements were listed and the student was asked to number them in the numerical order in which they took place in the story. This same type of exercise was given for the purpose of organizing historical or other events in their proper order.

Context and Experience Clues[2]

Context and experience clues exercises were used to develop comprehension through the review of new words in a story and to provide experiences with context clues that use the child's knowledge of his world.

An example of this exercise is as follows:

sipping   sobbed   dangerous   muscles

1. He is **sipping** lemonade through a straw.

2. He **sobbed** as though his heart would break.

---

[1]Ibid. XI, pp. 195, 225   [2]Ibid. XII, p. 337

3. It is <u>dangerous</u> to cross the street without first looking
   both ways.

4. Chopping wood makes your <u>muscles</u> strong.

Besides the use of these exercises to strengthen the compre-
hensive skills of the students, they had oral discussions relating to
selections read. This gave the students a chance to express their
ideas and feelings about a particular subject in an open group type
of atmosphere. The teachers also provided them with the opportunity
to do some formal writing on direct or related subjects in which the
story suggested. These writing experiences were often correlated
closely with the oral class discussions that were developed first after
the reading of a particular story. The written exercises dealt with
direct factual matter related to sections of a particular story. The
teachers also provided the students periodically with an opportunity
to develop their own creative reactions, directly or indirectly,
related to a particular sequence in a story.

The testing program for the control groups was the same as that
used for the experimental groups. The detailed plan of testing for
all four groups is included under testing in Chapter III.

The comparative results of the Metropolitan Achievement Tests,
Form Am on reading and word knowledge and the Gates Reading Survey
for the control groups, Classes 1 and 2 are on Tables 11 and 12.

The aim of this study was that the control groups follow
through with the more traditional form of reading instruction that
had been instituted in the school's reading program prior to the
beginning of this experiment. As has been discussed earlier, the

TABLE 11

1965 AND 1966 METROPOLITAN ACHIEVEMENT TEST RESULTS
TABLE OF GROWTH FOR CONTROL GROUPS

	Class 1								Class 2						
	Word Knowledge				Reading				Word Knowledge				Reading		
*	1965	1966	Gain	*	1965	1966	Gain	*	1965	1966	Gain	*	1965	1966	Gain
S	10.0	10.0	.0	S	10.0	10.0	.0	H	10.0	10.0	.0	H	10.0	10.0	.0
F	10.0	10.0	.0	F	8.7	9.7	1.0	K	8.7	9.8	1.1	K	9.7	8.4	-1.3
B	7.4	10.0	2.6	L	7.1	8.5	1.4	D	8.7	7.4	-1.3	D	6.6	10.0	3.4
H	7.4	10.0	2.6	J	7.1	7.3	.2	O	6.2	7.1	.9	C	6.3	7.7	1.4
Q	7.4	9.1	1.7	Q	6.8	8.7	1.9	C	5.8	6.9	1.1	O	6.1	7.1	1.0
J	7.1	7.8	.7	H	6.3	10.0	3.7	N	5.6	6.2	.6	N	5.9	8.7	1.8
D	6.4	7.8	1.4	B	6.3	8.5	2.2	S	5.5	7.9	2.4	M	5.9	7.3	1.4
R	6.4	7.8	1.4	R	6.1	8.5	2.4	P	5.5	5.8	.3	G	5.3	5.7	.4
E	6.4	5.0	-1.4	T	6.1	6.0	- .1	R	5.5	5.5	.0	P	5.3	5.5	.2
K	6.2	10.0	3.8	K	5.7	7.1	1.4	A	5.1	6.3	1.2	R	4.4	5.9	1.5
G	6.2	6.4	.2	E	5.7	6.0	.3	E	4.9	5.8	.9	F	4.4	3.8	- .6
N	6.2	6.4	.2	A	5.7	5.5	- .2	M	4.9	5.6	.7	S	4.2	6.1	1.9
O	6.2	5.8	- .4	N	5.7	5.5	- .2	I	4.9	4.9	.0	I	4.0	4.2	.2
L	5.6	10.0	4.4	D	5.1	8.3	3.2	T	4.7	5.8	1.1	L	3.8	4.4	.6
A	5.6	5.6	.0	G	4.4	8.3	3.9	G	4.7	5.5	.8	U	3.7	4.9	1.2
T	5.5	7.0	1.5	O	4.2	5.5	1.3	B	4.7	5.1	.4	J	3.7	4.2	.5
C	3.6	5.4	1.8	I	3.8	4.0	.2	L	4.7	4.7	.0	A	3.5	3.9	.4
P	3.6	4.7	1.1	P	3.7	4.0	.3	U	4.5	5.3	.8	B	3.5	3.0	- .5
I	3.0	4.6	1.6	C	3.7	3.3	- .4	Q	4.3	4.7	.4	T	3.0	5.5	2.5
M	3.0	4.3	1.3	M	3.0	3.5	.5	J	3.7	5.1	1.4	E	3.0	5.3	2.3
								F	3.7	3.6	- .1	Q	3.0	4.7	1.7

Medians

6.2	7.0			5.7	7.1			4.9	5.7			4.4	5.5

*Letter assigned to each pupil.

TABLE 12

1965 AND 1966 GATES READING SURVEY TEST RESULTS
TABLE OF GROWTH FOR CONTROL GROUPS

	Class 1				Class 2		
Pupil	Form I Oct. 1965	Form II May 1966	Gain	Pupil	Form I Oct. 1965	Form II May 1966	Gain
S	9.8	10.0	.2	H	9.8	10.4	.6
F	9.5	8.6	- .9	K	7.9	8.0	.1
H	9.1	8.0	-1.1	N	6.8	6.8	.0
B	9.0	7.7	-1.3	D	6.5	6.6	.1
J	7.8	6.9	- .9	M	6.4	7.0	.6
Q	7.7	7.6	- .1	O	6.3	6.6	.3
N	7.1	6.0	-1.1	C	6.1	6.0	- .1
O	7.0	6.9	- .1	R	6.0	5.4	- .6
D	7.0	6.4	- .6	S	5.5	6.0	.5
L	6.6	7.4	.8	T	5.5	5.7	.2
R	6.5	6.4	- .1	P	5.4	6.1	.7
X	6.4	7.0	.6	G	5.4	5.2	- .2
T	6.2	8.1	1.9	U	5.0	5.0	.0
O	5.8	5.7	- .1	Q	4.7	5.1	.4
E	5.5	5.4	- .1	J	4.7	4.3	- .4
A	5.0	5.8	.8	I	4.6	5.0	.4
C	4.7	4.9	.2	E	4.5	5.6	1.1
P	4.2	4.8	.6	A	4.5	4.9	.4
M	4.0	4.6	.6	B	4.3	5.8	1.5
I	3.8	3.9	.1	L	4.3	3.6	- .7
				F	3.5	2.9	- .6

Medians

	Class 1				Class 2		
	6.5	6.4			5.4	5.9	

students in the control groups were subdivided into separate reading groups within their classroom, compared to the single group approach to the teaching of reading in the experimental groups.

The high achievers in both the control and experimental groups were provided with activities that would provide a stimulation to challenge both their interest and productive levels in reading.

The middle and low achievers were given a program that would give them more individualized reading instruction. Class 3 of the experimental group had many of the same type of reading skill building activities that was discussed in Chapter IV under instructional techniques for the middle and low achievers in the control groups. The Scott Foresman series provided them with a similar pattern of growth program.

The main difference between the control and experimental groups was the approach to the instruction of reading. It was the intent in the experimental groups to try to create a higher interest level in reading. More will be discussed about this in Chapter V.

It has been the purpose of Chapters III and IV to describe in detail the actual reading programs that were carried on throughout the year of this experiment. A strong emphasis has been placed upon the contrasting methods of approach and techniques used in the control and experimental groups regarding the instruction of reading by the teachers and the learning patterns followed by the students.

CHAPTER V

ACHIEVEMENTS OF OBJECTIVES (TESTING), FINDINGS,
AND EVALUATION OF THE PROGRAM

The purpose of this chapter is the re-examination of the original hypothesis stated in Chapter I, and the correlation of those findings and achievements of the objectives obtained during the course of this experimental program on the instruction of reading at the intermediate grade level.

The hypothesis stated prior to the start of this experiment, was that the use of interclass grouping would provide greater achievement and a higher level of motivation for reading than would be found in a conventional self-contained grouping program.

The achievement of objectives gained after any experiment reflects directly on the final validity of any hypothesis stated.

There were numerous findings discovered as a result of this experiment that will help to support the original hypothesis stated prior to the beginning of this reading program. However, many of these findings are intangible, not providing actual proof of the validity of a theory or idea posed in an experiment such as this one. Such findings will be discussed later in this chapter.

The most accurate device that can be used in determining the true value of an educational experiment, such as the one that has been performed, is through the use of achievement gains in reading

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obtained on the part of those students who participated in this particular reading program.

Achievement of Objectives

Through the use of the Metropolitan Achievement Tests and the Gates Reading Survey, a realistic scholastic growth in reading on the part of individual students can be visualized. It must be remembered that tests cannot provide all of the answers needed in such a study as this. There are many other factors that must be weighed with definite consideration. A test does provide a more tangible result and can be weighed more objectively than other particular measuring devices.

As has been discussed in Chapters III and IV, the Metropolitan Achievement Tests on reading and word knowledge were given in September of 1965, before the start of the experiment and again in September of 1966, after the experiment's conclusion. The Gates Reading Survey was administered in September, 1965, and again in May of 1966, immediately following the termination of the study.

The results of these tests for the experimental and control groups were shown on Table 7, Chapter III, page 46; Table 8, Chapter III, page 47; Table 11, Chapter IV, page 63; and Table 12, Chapter IV, page 64. These tables illustrate the total grade equivalent ranges and gains on the 1965 and 1966 Metropolitan Achievement Tests, Reading and Word Knowledge. Also included are the grade equivalent ranges on the Gates Reading Survey Tests for the control and experimental classes.

Tables 13 and 14 are included to show the combined net gains

TABLE 13

A COMBINED DISTRIBUTION OF GAINS AND LOSSES ON THE METROPOLITAN ACHIEVEMENT AND GATES READING SURVEY TESTS - CONTROL GROUPS, CLASSES 1 AND 2

Met. Ach. Word Knowledge Range	Met. Ach. Reading Range	Gates Reading Survey Range
4.4	3.9	1.9
3.8	3.7	1.5
2.6	3.4	1.1
2.6	3.2	.8
2.4	2.5	.8
1.8	2.4	.7
1.7	2.3	.6
1.6	2.2	.6
1.5	1.9	.6
1.4	1.9	.6
1.4	1.8	.6
1.4	1.7	.5
1.3	1.5	.4
1.2	1.4	.4
1.1	1.4	.4
1.1	1.4	.3
1.1	1.4	.2
1.1	1.3	.2
.9	1.2	.2
.9	1.0	.1
.8	1.0	.1
.8	.6	.1
.7	.5	.0
.7	.5	.0
.5	.4	- .1
.4	.4	- .1
.4	.3	- .1
.3	.3	- .1
.2	.2	- .1
.2	.2	- .1
.0	.2	- .2
.0	.2	- .4
.0	.0	- .6
.0	.0	- .6
.0	- .1	- .6
.0	- .2	- .7
.0	- .2	- .9
- .1	- .4	- .9
- .4	- .5	-1.1
-1.0	- .6	-1.1
-1.3	-1.3	-1.3

TABLE 14

A COMBINED DISTRIBUTION OF GAINS AND LOSSES ON THE
METROPOLITAN ACHIEVEMENT AND GATES READING SURVEY
TESTS - EXPERIMENTAL GROUPS, CLASSES 3 AND 4

Met. Ach. Word Knowledge Range	Met. Ach. Reading Range	Gates Reading Survey Range
4.0	4.5	1.7
3.1	2.7	1.5
3.1	2.7	1.1
2.9	2.6	1.0
2.8	2.1	.9
2.4	2.1	.9
2.3	2.0	.8
2.1	1.9	.8
2.1	1.8	.8
2.1	1.7	.7
1.4	1.7	.7
1.1	1.4	.6
1.1	1.4	.6
1.1	1.3	.5
1.0	1.3	.5
.9	1.2	.5
.9	1.1	.5
.8	1.1	.5
.8	1.0	.4
.8	.9	.4
.7	.8	.3
.6	.7	.3
.5	.4	.3
.5	.3	.2
.5	.2	.2
.4	.1	.1
.4	.0	.0
.2	.0	.0
.2	- .2	.0
.2	- .2	- .2
.1	- .3	- .3
.1	- .4	- .4
.1	- .4	- .4
.0	- .4	- .4
.0	- .6	- .5
.0	- .6	- .5
- .1	- .8	- .5
- .2	- .8	- .7
- .4	-1.5	- .7
- .6	-2.4	-1.0
- .7	-3.0	-1.2

and losses of both control and experimental groups on the word
knowledge and reading tests of the Metropolitan Achievement Tests,
Forms AM and Am. The tables also show the combined results of the
control and experimental groups on the Gates Reading Survey. This
data has been compiled to compare the gains and losses, both on a
group and individual basis.

The results reveal the following gain and loss statistics for
both control and experimental groups on the three sets of tests given.

TABLE 15

TOTAL GAINS, NO GAINS, AND LOSSES MADE BY
THE TWO CONTROL GROUPS (41 STUDENTS)

Test	Gain	No Gain	Loss
Metropolitan Achievement Word Knowledge	30	7	4
Metropolitan Achievement Reading	32	2	7
Gates Reading Survey	22	2	17

TABLE 16

TOTAL GAINS, NO GAINS, AND LOSSES MADE BY
THE TWO EXPERIMENTAL GROUPS (41 STUDENTS)

Test	Gain	No Gain	Loss
Metropolitan Achievement Word Knowledge	33	3	5
Metropolitan Achievement Reading	26	2	13
Gates Reading Survey	26	3	12

The results of this comparison on only the gains and losses of the
two groups under study indicate a very close relationship in their total
reading growth.

There were eighty-five gains achieved by the students in the two experimental groups, compared to eighty-four by those in the control groups. Eleven in the experimental groups showed no gain, compared to eight in the control. Thirty in the experimental showed losses, compared to twenty-eight in the control.

Another comparison was made regarding the average gain made by the two combined groups on the three tests used. The experimental classes showed the following average gains on the tests:

Word Knowledge, 9.1 months;

Reading, 6.7 months; and

Gates Reading Survey, 2.4 months.

The control classes showed the following average gains:

Word Knowledge, 8.4 months;

Reading, 9.9 months; and

Gates Reading Survey, .9 of 1 month.

To prove how close the complete reading achievement on all three tests was, is indicated by the fact that the average gain by both groups was 6.7 months.

It should be noted, however, that the control groups showed a higher achievement gain on the Metropolitan Reading Test. Their gain was 3.2 months over that of the experimental groups.

The preceding comparisons were made on the average gains made by the combined experimental and control groups.

The following table shows the average gain or loss achieved by each individual experimental and control group on the three tests included in the study. The average is on a yearly basis.

TABLE 17

AVERAGE GAINS OR LOSSES MADE BY CLASSES 1, 2, 3, 4,
ON THE METROPOLITAN ACHIEVEMENT WORD KNOWLEDGE
AND READING TESTS, AND THE GATES READING SURVEY

	Word Knowledge	Reading	Gates Reading Survey
Class 1	1.2	1.1	- .03
Class 2	.6	.95	.2
Class 3	.7	.19	.19
Class 4	1.2	1.1	.3

A comparison of the class medians arrived upon through the three tests given, will also provide additional insights to the pattern of reading growth achieved by the two groups studied in this particular experiment. These medians were given on Table 7, Chapter III, page 46, and Table 11, Chapter IV, page 63, but should be repeated in order to provide a better appraisal of the achievements gained by the groups under study in this chapter. The addition of the class medians along with the average class and overall group gains on the tests given will provide a more analytical approach to the evaluation of the reading achievement level obtained through the course of this experiment.

Table 18 shows the median ranges based upon the grade level achievements on the 1965 and 1966 Metropolitan Achievement Test, Word Knowledge and Reading. Also included are the September, 1965, and May, 1966, Gates Reading Survey results.

TABLE 18

CLASS MEDIANS OF 1965 AND 1966 METROPOLITAN
ACHIEVEMENT WORD KNOWLEDGE AND READING TESTS
AND SEPTEMBER, 1965, AND MAY, 1966 GATES
READING SURVEY

Class*	Word Knowledge 1965	Word Knowledge 1966	Reading 1965	Reading 1966	Gates Reading Survey	
					Sept. 1965	May 1966
1	6.2	7.0	5.7	7.1	6.5	6.4
2	4.9	5.7	4.3	5.5	5.4	5.9
3	5.3	5.3	5.3	4.9	5.1	5.4
4	6.2	7.7	6.5	7.7	6.7	7.0

*Classes 1 and 2 - Control
 Classes 3 and 4 - Experimental

The average medians for each class on the 1965-1966 Metropolitan
Achievement Tests, word knowledge and reading, and the Gates Reading
Survey are as follows:

TABLE 19

AVERAGE MEDIANS 1965-1966 METROPOLITAN ACHIEVEMENT
WORD KNOWLEDGE AND READING TESTS
AND GATES READING SURVEY

	Word Knowledge	Reading	Gates Reading Survey
Class 1	6.6	6.4	6.45
Class 2	5.3	5.45	5.65
Class 3	5.3	5.1	5.25
Class 4	6.95	7.1	6.85

The combined control groups had an average median on word knowledge of 5.95; reading 5.925; and Gates Reading Survey, 6.05.

The combined experimental groups had an average median on word knowledge of 6.15; reading 6.1; and Gates Reading Survey, 6.05.

A comparative study was also made after the completion of this experiment to show the grade equivalent ranges for the fifth and sixth graders participating in both the control and experimental groups. This comparison on the grade equivalent ranges after the experiment's completion corresponds with the ranges and class medians made prior to the start of the experiment, discussed in Chapter I, pages 3, 4, and 5.

Upon completion of the experiment, the fifth grade control group showed a grade equivalent range on the 1966 Metropolitan Reading Test from 3.0 to 10.0, with a median of 5.5, while the fifth grade experimental group showed a grade equivalent from 3.1 to 10.0 with a median of 6.1. (See Table 20)

The sixth grade control had a grade equivalent range on the Metropolitan Reading Test from 3.3 to 10.0 with a median of 7.1, while the sixth grade experimental group showed a range from 4.7 to 10.0 with a median of 6.6. (See Table 21)

In comparing the vocabulary development of the groups, the word knowledge test of the 1966 Metropolitan Achievement Battery was used. It indicated that the fifth grade control had a grade equivalent range from 3.6 to 10.0 with a median of 5.7 and the fifth grade experimental group had a grade equivalent range from 4.3 to 10.0 with a median of 5.8. (See Table 20)

TABLE 20

1966 METROPOLITAN ACHIEVEMENT TEST
FIFTH GRADE, GRADE EQUIVALENTS

	Metropolitan Achievement Reading - 1966		Metropolitan Achievement Word Knowledge - 1966	
	5th Grade Control Class 2	5th Graders in Experimental Classes 3, 4	5th Grade Control Class 2	5th Graders in Experimental Classes 3, 4
1.	10.0	10.0	10.0	10.0
2.	10.0	9.2	9.8	10.0
3.	8.7	8.4	7.9	9.8
4.	8.4	8.4	7.4	7.9
5.	7.7	8.0	7.1	7.9
6.	7.3	8.0	6.9	7.6
7.	7.1	7.7	6.3	7.4
8.	6.1	7.3	6.2	7.4
9.	5.9	6.8	5.8	6.9
10.	5.7	6.8	5.8	6.2
11.	5.5	6.3	5.8	6.0
12.	5.5	6.1	5.6	5.8
13.	5.3	5.5	5.5	5.8
14.	4.9	5.1	5.5	5.5
15.	4.7	4.9	5.3	5.3
16.	4.4	4.7	5.1	5.3
17.	4.2	4.7	5.1	5.1
18.	4.2	4.0	4.9	5.1
19.	3.9	3.8	4.7	4.9
20.	3.8	3.5	4.7	4.9
21.	3.0	3.3	3.6	4.9
22.	..	3.1	..	4.3
Median	5.5	6.1	5.7	5.8

TABLE 21

1966 METROPOLITAN ACHIEVEMENT TEST
SIXTH GRADE, GRADE EQUIVALENTS

	Metropolitan Achievement Reading - 1966		Metropolitan Achievement Word Knowledge - 1966	
	6th Grade Control Class 1	6th Graders in Experimental Classes 3, 4	6th Grade Control Class 1	6th Graders in Experimental Classes 3, 4
1.	10.0	10.0	10.0	10.0
2.	10.0	8.7	10.0	9.9
3.	9.7	8.5	10.0	9.5
4.	8.7	8.3	10.0	9.5
5.	8.5	8.0	10.0	9.5
6.	8.5	8.0	10.0	8.3
7.	8.5	7.7	9.1	7.8
8.	8.3	7.3	7.8	7.8
9.	8.3	7.1	7.8	7.0
10.	7.3	6.6	7.8	6.?
11.	7.1	6.6	7.0	6.7
12.	6.0	6.3	6.4	6.4
13.	6.0	6.0	6.4	6.4
14.	5.5	5.7	5.8	6.1
15.	5.5	5.7	5.6	6.1
16.	5.5	5.3	5.4	6.0
17.	4.0	5.1	5.0	5.2
18.	4.0	4.7	4.7	5.1
19.	3.5	4.7	4.6	4.6
20.	3.3	..	4.3	..
Median	7.1	6.6	7.0	6.7

The sixth grade control group showed a grade equivalent range from 4.3 to 10.0 on the word knowledge test with a median of 7.0, while the sixth grade experimental group showed a grade equivalent range from 4.6 to 10.0 with a median of 6.7. (See Table 21)

After analyzing the composite scholastic reading achievement growths scored by the experimental and control groups participating in this experiment, it is evident that the total reading achievement gains compiled by both groups were very closely related in the final comparative summation.

The control groups did show a slight advancement over the experimental groups, according to the grade equivalent ranges and medians achieved on the reading and word knowledge batteries of the Metropolitan Achievement Tests.

A further comparative analysis of the class medians achieved by both groups in this experiment will be discussed in the section on the final evaluation of the program.

There are other evaluative approaches that can be used to help judge the final validity of the hypothesis stated prior to the beginning of this experiment. Some of these will be discussed later in this chapter under the findings gained and the final evaluation of the program.

Even with the addition of other materials to help support the objectives of the experiment, it must be emphasized again that a detailed and well planned testing program, prior to the start, during the course, and again after the completion of such an experiment, will provide the most objective results in order to appraise the final evaluation of the program's true validity. Of course, there are so

many variables to consider before reaching a final conclusion, that it is almost impossible to reach a total and final conclusion on an experiment as complex as this one.

Findings

There were certain definite objectives that were reached in this study. The use of highly motivational techniques and presentations seemed to be very beneficial to the total reading growth of the middle and high achievers in the experimental groups. Of course, in contrast, was the disappointing growth pattern of the middle and low achievers in the experimental group. This may in part be due to the stronger emphasis on grouping and procedures used than was prevalent in the composition of the control groups. Students are quite aware of grouping with their own peers and this can be either beneficial or detrimental to the individual, depending on their personalities. There were some occasions during this study when students were placed in another group depending on their progress and individual needs. It was emphasized throughout the program that teachers be as casual and objective as possible regarding the re-grouping of certain students. It is impossible to detect and realize how these changes will affect the students personally. No matter how understandably a teacher may try to handle a particular situation, he may not gain the understanding in return from his students in regard to their performance and progress.

An example of this situation was noticeable when two students were placed in Class 3 from Class 4 of the experimental group, approximately a month after the program was initiated. They were

students G and S of Class 3 of the experimental group. The results
of their Metropolitan Achievement Test in reading indicated a drop
of 3.0 and 2.4 years respectively.

These students, who had been very closely associated with a
particular clique, both socially and academically, seemed to show a
marked change in overall attitude, resulting in a decreased motivation
to perform at a high level of achievement or over-achievement. This
is a factor that must be given consideration when evaluating the
achievements and workability of a program.

Further study of other areas of the program in the experimental
and the control classes seems to indicate that such changes in grouping,
i.e., moving students from one group to another, may or may not be
advantageous to students and/or a program.

The grouping of students according to their reading ability in
the experimental groups may also have had a tendency for the somewhat
disappointing results on the reading growths of those students in
Class 3 of the experimental group.

The general reading ability of the student was not the sole
factor used in the determination of grouping students for reading in
the experimental groups. It is true that the high achievers in reading
were placed in Class 4 and the low achievers in Class 3. It was em-
phasized prior to the beginning of the program, that there would be
as close as possible, an equal distribution of middle achievers in
both classes. Changes were made in the groups after the start
of the experiment to help strengthen the reading level of Class 3.
This action should probably have been done at the beginning because,

as was discussed in the case of the two students who were changed,
it tended to have had a reverse effect on their total reading growth.
The use of more high achievers in Class 3 may have helped to solidify
the reading achievement level of the whole group since students have
a great influence on one another, both socially and scholastically.
With the use of some of the class leaders who were also high achievers,
it may have helped to create a better atmosphere in the reading program
of Class 3. Their addition may have created a motivational stimulus
for the low achievers that could have had an indirect influence on
their total reading growth. As stated earlier, students can help one
another, often at a time when the teacher is busy with others or when
they are unable to reach a student's level of understanding. This
influence may have been a helpful factor regarding the total achieve-
ment gains in word knowledge and reading achieved by Class 1 of the
control group.

Another interesting finding that should be given consideration
regarding the validity of this experiment was shown through the use of
a reading attitude survey.

Upon the conclusion of the experimental reading program, a
reading attitude survey was presented to all of the students in both
the experimental and control groups.

The students were encouraged to answer objectively questions
regarding:

1. Their personal reading habits and interests.

2. The type of grouping used in the program.

3. The quality of reading instruction on the part of the
   teachers participating in the study.

The validity of the response on the survey cannot have a great deal of effect on the total evaluation of such a program, but it did provide some interesting and concrete insights regarding the personal reading habits, instructional needs, and desires on the part of the students.

Questions 11, 12, and 13 on the survey were directly related to the plan of interclass grouping for reading, and the results showed that more students were in favor of this type of a program over the more conventional plan of grouping within the self-contained classroom.

The survey results below show the reactions of the total composite of eighty-two students who participated in the experiment.

Reading Attitude Survey

1. Do you like to read?

   76 yes   6 no

2. Do you read at home?

   80 yes   2 no

   If yes, how often?

   59 everyday   23 seldom   0 never

3. What do you read at home?

   53 newspaper   26 magazine   30 comics   41 fiction books

   35 non-fiction books

4. How often do you visit the public library?

   20 once a week   15 once a month   15 more than once a month

   29 seldom   3 never

5. What types of books do you enjoy reading most?

   26 sports   45 mystery   38 adventure   28 biography   10 factual

6. Which type of book do you enjoy the most?

   47 fiction   35 non-fiction

7. Do you usually finish a book you start?

   75 yes   7 no

8. What sections of the newspaper do you read the most?

   47 front page   31 sports   50 comics   19 local news

9. Do you like to be read to?

   35 yes   47 no

10. Do you enjoy reading class?

    69 yes   3 no   10 no opinion

11. Do you like changing rooms for reading?

    42 yes   20 no   20 no opinion

12. Do you like having a different teacher for reading?

    40 yes   20 no   22 no opinion

13. Do you like being with a different group of children for reading class?

    53 yes   18 no   11 no opinion

14. Do you feel that your teacher gives enough attention to your group?

    75 yes   7 no

15. Do you think that more time should be given to help your personal reading problems?

    38 yes   44 no

16. Do you think that more time should be given during your reading class for special group projects in reading?

    50 yes   32 no

17. What are your opinions about reading workbooks?

35 favorable   26 unfavorable   21 no opinion

18. Would you like more time for recreational reading?

57 yes   15 no   10 no opinion

19. In which grade did you like reading the best?

8 fourth grade   52 fifth grade   22 sixth grade

20. In which grade did you like reading the least?

66 fourth grade   12 fifth grade   4 sixth grade

Evaluation

It has been the ultimate objective of this experimental program
in reading to attempt to prove that the use of a form of interclass
grouping for reading would provide the students with a higher level
of motivation and greater academic achievement in reading than would
be obtained in a more conventional self-contained form of a grouping
program.

This experiment has emphasized strongly on the procedures,
materials, and instructional techniques used by the teachers working
with the experimental and control groups involved in this study.

As has been stated earlier both groups were given the same
tests prior to and after the completion of the program. The tests
used by the teachers during the course of the study varied according
to the definition of the individual needs of the students, decided
upon by each individual teacher.

The uniformly administered achievement tests given to both the
control and experimental groups did approach as closely as possible
the most valid results in which an experiment such as this can be

evaluated. Again it must be stressed that there are other variables that must be given consideration before attempting to develop an authentic and valid evaluation of such an experiment.

A great deal has been written in an attempt to discover the precise academic growths in reading achieved by the students partici- pating in this particular experiment. Several approaches have been discussed earlier in this chapter to illustrate the reading growths achieved.

Through the use of comparing the medians of the grade equivalent ranges on the 1965 and 1966 Metropolitan Achievement Tests in reading and word knowledge for the control and experimental groups, the most objective evaluation of the testing program of this experiment can probably be achieved.

Table 22 shows a comparison between the 1965 and 1966 medians achieved by the grade levels of the control and experimental groups on the Metropolitan Achievement Tests on reading and word knowledge. The 1965 medians include all of the fifth and sixth grade students who were to participate in the experiment prior to its beginning. The 1966 medians include all of those fifth and sixth graders according to grade level, after the experiment's conclusion.

According to the comparative medians between 1965 and 1966, the control groups made the most significant gains throughout the experi- ment, even though the medians at the conclusion of the study were closely related. As mentioned earlier in Chapter V, the average median gain for each group was 6.7 months. The significant con- clusion to make is that the control groups had lower class medians

than the fifth and sixth graders of the experimental groups and they

caught up in their median gains in most cases. The control classes

showed a greater median gain from 1965 to 1966 in both reading and

word knowledge.

TABLE 22

COMPARISON OF 1965 AND 1966 MEDIANS ON THE METROPOLITAN
ACHIEVEMENT TEST, READING AND WORD KNOWLEDGE
GRADE LEVEL

	1965 Reading	1966 Reading	1965 Word Knowledge	1966 Word Knowledge
5th Grade Control Group Class 2	4.3	5.5	4.9	5.7
5th Graders in Experimental Group Classes 3 and 4	5.1	6.1	5.3	5.8
6th Grade Control Group Class 1	5.7	7.1	6.2	7.0
6th Graders in Experimental Group Classes 3 and 4	6.0	6.6	6.3	6.7

The fifth grade control gained 1 year, 2 months, in reading

compared to a gain of 1.0 years by the fifth graders in the experi-

mental groups. The control also gained 8 months in word knowledge,

compared to a gain of 5 months by the experimental fifth graders.

The sixth grade control gained 1 year, 4 months, in reading

compared to a gain of 6 months by the sixth graders in the

experimental groups. The control also gained 8 months in word knowledge, compared to a gain of 4 months by the experimental sixth graders.

The most obvious observation that can be made through the comparison of the grade level medians is that the sixth grade control group achieved definite grade equivalent range median gains over those achieved by the sixth graders in the experimental groups. There was an overall 8-month median gain in reading and a 4-month median gain in word knowledge over the experimental sixth graders.

The fifth grade control groups achieved an overall 2-month median gain in reading and a 3-month median gain in word knowledge over the experimental fifth graders.

Table 23 shows the statistical procedure used to determine the T-Ratio for the experimental and control groups in reading, upon the conclusion of the study.

The statistical procedure employed to analyze the data was the T-Ratio. The .05 level of significance was the one established for acceptance and rejection of the hypothesis.

Hypothesis I. There is no significant difference in the academic achievement between the control group and the experimental group.

The statistical analysis of the data indicates no significant difference because a t score of .09 was found to exist. The null hypothesis is accepted.

TABLE 23

THE T-RATIO STATISTICAL ANALYSIS ON THE
1966 METROPOLITAN READING TEST FOR
THE CONTROL AND EXPERIMENTAL GROUPS

	Control		Experimental	
	X	X^2	Y	Y^2
1.	10.0	100.00	4.7	22.09
2.	9.7	94.09	7.3	53.29
3.	8.5	72.25	8.0	64.00
4.	7.3	53.29	3.5	12.25
5.	8.7	75.69	6.3	39.69
6.	10.0	100.00	5.3	28.09
7.	8.5	72.25	7.1	50.41
8.	8.5	72.25	5.7	32.49
9.	6.0	36.00	4.7	22.09
10.	7.1	50.41	4.7	22.09
11.	6.0	36.00	3.8	14.44
12.	5.5	30.25	6.8	46.24
13.	5.5	30.25	5.1	26.01
14.	8.3	68.89	4.9	24.01
15.	8.3	68.89	4.0	16.00
16.	5.5	30.25	4.7	22.09
17.	4.0	16.00	5.5	30.25
18.	4.0	16.00	3.3	10.89
19.	3.3	10.89	3.1	9.61
20.	3.5	12.25	8.0	64.00
21.	10.0	100.00	8.0	64.00
22.	8.4	70.56	10.0	100.00
23.	10.0	100.00	8.5	72.25
24.	7.7	59.29	10.0	100.00
25.	7.1	50.41	8.7	75.69
26.	8.7	75.69	9.2	84.64
27.	7.3	53.29	6.8	46.24
28.	5.7	32.49	8.0	64.00
29.	5.5	30.25	7.7	59.29
30.	5.9	34.81	6.0	36.00
31.	3.8	14.44	7.3	53.29
32.	6.1	37.21	8.4	70.56
33.	4.2	17.64	8.3	68.89
34.	4.4	19.36	6.1	37.21
35.	4.9	24.01	5.1	26.01

TABLE 23 - Continued

	Control		Experimental	
	X	X^2	Y	Y^2
36.	4.2	17.64	8.4	70.56
37.	3.9	15.21	5.7	32.49
38.	3.0	9.00	6.6	43.56
39.	5.5	30.25	6.6	43.56
40.	5.3	28.09	7.7	59.29
41.	4.7	22.09	6.3	39.69
Grade Point Sum	264.5		265.9	
Grade Point Average	6.45		6.49	
Squared Sum of Grade Point		1,887.63		1,857.25
Average of Squared Sum		46.04		45.30

t = .09* not significant

Another means by which an experiment of this nature can be evaluated is through the use of the procedures and techniques used by the two contrasting forms of grouping for reading instruction.

A very important aim of the teachers working with the experimental groups was to plan and provide a somewhat unique and different form of reading program for those students participating in the experimental classes. The main core of the basal reading program was followed, but it was the purpose in this experiment to offer the students with as much of a variety of new experiences as time would

permit. A detailed description of the procedures and techniques used was discussed in Chapter III.

The students in the experimental classes were offered certain challenging activities and exercises in reading that would help to create a greater motivational desire on their part toward reading, than they had witnessed in their previous reading classes.

Possibly the format used for their instruction in reading was such a change from their previous form of study that they found themselves somewhat unaccustomed and not fully prepared for such a change.

The students in the experimental classes were very much in favor of, and thoroughly enjoyed their reading classes, as was indicated on the student reading attitude survey. There were a number of students, especially sixth graders in the control groups who desired to participate in this form of interclass grouping for reading instruction.

In conclusion it is very evident that this program should have been carried out for several years before the final validity of its success or failure could be fully decided.

Another factor that should be mentioned in conclusion is that probably a study such as this should have been carried out within one grade level rather than combining two grade levels, as was the case in the experimental groups. In this particular experiment it was physically impossible to use just one grade level, because there were only two sections of each grade in the school, and at least three sections were necessary for such an experiment.

It seemed that the experimental groups were under somewhat of a handicap, due to individual personality and physical differences found between fifth and sixth graders in an elementary school situation. Undoubtedly a more realistic test of the hypothesis of this experiment would have been achieved if the experiment could have centered solely around fifth or sixth grade sections in reading. There are definite changes of attitudes and associations with children in these two age groups and this could have affected substantially the final results of the experiment.

This study presented a definite challenge for the teachers as well as the students. It created a closer atmosphere between the teachers participating in the study, and gave them a better opportunity to study and evaluate their own personal procedures and techniques which would satisfy most efficiently the students' individual needs and abilities in reading.

This type of experiment made the teachers more aware of the importance of reading in the curriculum. It also motivated them to attempt to do a better job of teaching reading. It gave them the opportunity to implement certain creative techniques and strengthen their conventional procedures in order to present a better reading program for the students in their classes.

It is of the utmost importance for a teacher to remember always that the best education humanly possible must be provided for the students under their leadership.

If studies and programs such as this one are initiated with the focus on the students' individual needs and abilities, there

will be gratifying educational growth gained by both the students
and the teachers.

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APPENDIX

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