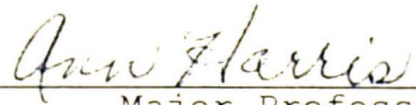


**A COMPARISON OF READING INSTRUCTION USING
MULTISENSORY APPROACH
AND TRADITIONAL METHODS**

MARTHA B. RUST

To the Graduate Council:

I am submitting herewith a Field Study written by Martha Belk Rust entitled "A Comparison of Reading Instruction Using Multisensory Approach and Traditional Methods." I have examined the final copy of this paper for the form and content, and I recommend that it be accepted in partial fulfillment of the requirements for the degree of Education Specialist, with a major in Administration and Supervision.



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AND TRADITIONAL METHODS

A Field Study
Presented to the
Graduate and Research Council of
Austin Peay State University

In Partial Fulfillment
for the Requirement for the Degree
Education Specialist

by
Martha B. Rust
August 1998

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ABSTRACT

This experimental study was conducted to examine the effects on first grade beginning reading skills taught using the traditional basal reading series and a multisensory program, Leaping into Reading with Music. This study hypothesized that there would be no significant difference in the reading achievement scores of the 112 students involved. The 2-year study examined the scale scores of second grade students who were participating in this study.

The findings from this study indicated that the students taught beginning reading skills using the basal reading series made academic gains equal to, or greater than, the academic gains of students taught using the Leaping into Reading with Music. Statistical evidence was found to support a significant difference in reading achievement scale scores of students who learned to read using the traditional basal method of instruction. However, survey data of teachers' perceptions of the two experimental groups indicated positive reactions of students involved in the Leaping into Reading with Music program.

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CHAPTER 1

INTRODUCTION

Often educators have difficulty changing traditional practices of teaching language arts, despite the fact these practices may no longer be meeting the students' needs. Many school districts have begun to give attention to providing more authentic learning experiences that integrate the language arts into a cohesive whole. This is all done while retaining traditional classroom structure of three reading groups based on the basal placements (Wiggins, 1994).

Although, as school districts move toward whole-language and other forms of literature-based reading programs, basal reading instruction is still a major influence in schools (Wiggins, 1994). A 1995 study by Anderson, Hiebert, Scott, and Wilkinson found 75% to 90% of reading instruction in the United States is based on the basal programs.

The basal reader's influence typically means dividing the class into three reading groups based on student achievement levels. This method promotes homogeneous grouping which tends to hold back the students in lower reading groups. These students proceed more slowly due to repetition of method of instruction, drill work, workbooks,

and skill practice pages. They are likely to slip farther behind as they proceed through the grades (Wiggins, 1994).

Keeping the homogeneous grouping problem as a focal point, educators are examining the basal program critically in the area of instructional integrity. A review of the underlying philosophy and assumptions about teaching and learning through the basal reading program was made by Baumann and Heubach (1996). Their in-depth study showed whether the material controlled or limited the teachers' freedom through a process called deskilling. The study found the use of the basal reading program allowed teachers to surrender control of responsibility for curricular and instructional decisions in reading to the materials provided. Thus, teachers abrogate their previously acquired teaching skills.

The problems associated with the basal reader program have school districts evaluating alternative reading programs that will liberate the teachers, allowing more freedom and excitement in reading instruction. Leaping into Reading with Music by Dr. Annette Gregory is a program presently being studied by a rural county school system in a southern state. In contrast to the basal's approach of scope and sequence of skills in a very structured manner, this program uses music, movement, manipulatives and colors in

reading instruction. The program's design is a multi-sensory interactive learning program that was created to teach important reading skills and to motivate students (Gregory, 1989).

Gregory initiated the Leaping into Learning with Music method due to her concern about the need to effectively teach heterogeneous classroom populations with diverse needs and behaviors. She asserts all students have a right to equal educational opportunities those special activities provide. Through the use of the multisensory approach, strategies and materials provide instructional assistance for an ever-changing and diverse student population (Gregory, 1989).

If it is significant to recognize the importance of educating "all" students in relationship to their unique learning needs and differences, the answer might be in the planning and implementation of such a program. This program should provide guidance of instruction. The program also needs the support of research that gives evidence to the potential effectiveness on academic achievement.

Statement of the Problem

The purpose of this research study was to make a comparison of two methods of instruction to teach basic reading skills and concepts in the first grade classrooms in

a rural county kindergarten through grade 12 school, located in a southern state. One method, Leaping into Reading with Music, provided an instructional process for introduction, reinforcement and remediation of cognitive knowledge needed to perform basic educational skills through the use of rhythm, lyrics, words, movement, spatial relationships, and manipulatives with the whole group setting (Gregory, 1989).

The second method used by the school teaches students to read by recognition of words as a whole or by sight. This is through the use of the first grade basal reading program of Silver Burdett and Ginn. The students were instructed through the method which basically used the approach of memorizing words by exposure, drill and practice exercises in reading words and phrases.

Research Questions

The following questions will be addressed in this study: To what extent do students who learn the basic reading skills and concepts through the Leaping into Reading with Music program of study show higher scores in reading achievement than the students who learned to read through the Silver Burdett and Ginn basal reading series? To what extent do the different approaches to teaching reading result in difference of achievement relating to gender and the students who were retained?

Hypothesis

First grade students who learned the basic reading skills and concepts through the Leaping into Reading with Music method of instruction will show no significant difference in their reading achievement scores than those students who learned to read through the sight word approach predominantly used by the Silver Burdett and Ginn reading program as measured by the Tennessee Comprehensive Assessment Program (TCAP) test.

Definition of Terms

1. Basal reader - The reading textbook that accompanies major reading series. The basal reader will contain a selection of stories which are presented to provide reading at an appropriate reading level.

2. Deskilling Materials - Materials that control or limit a teacher's freedom for curricular and instructional decisions in reading.

3. Leaping into Reading with Music - A reading program that teaches reading with the instructional tools of music, movement, manipulatives, and color.

4. Sight Word - A reading term used to describe recognition of a word by its configuration (shape) rather than by studying its separate parts and blending them into a whole word.

5. Silver Burdett and Ginn - A reading program consisting of a teacher's guide, reading textbook, reading workbook, charts, and teaching materials.

6. Tennessee Comprehensive Assessment Program (TCAP) - Nationally normed achievement tests which are administered statewide each year to students in grades 2-8.

7. Tennessee Value Added Assessment System (TVAAS) - The assessment system that uses statistical methodology applied to scale scores from the Tennessee Comprehensive Assessment Program achievement test to measure progress over a period of time.

Limitations to the Study

1. The subjects whose achievement scores were studied were limited to three specifically selected first grade classrooms for the years beginning in the fall of 1994 and 1995.

2. The students participating in this study were limited to students attending a public school system in the state of Tennessee.

3. The achievement scores were based on the Tennessee Comprehensive Assessment Program.

Relationship of the Problem

The results of this study could possibly have a significant effect on educational decisions made by the

administrators and teachers in this rural elementary school concerning the choice of methods to be used for reading instruction in the primary grades. If the study shows a positive significant difference in academic reading achievement scores of the two experimental groups, such findings could help establish a position in favor of the multi-sensory approach of reading instruction. If no significant differences are found, administrators and teachers may want to look for other options to increase the academic reading achievement scores of their students.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

Introduction

An accepted definition for reading is the meaningful interpretation of printed or written verbal symbols. Reading also includes comprehension which is the understanding of written language resulting from the interaction between the readers' perception of graphic symbols and their language skills, cognitive skills, and knowledge of the world (Harris & Sipay, 1985; Venezky, 1989).

Therefore, the ultimate goal of teachers of reading is to help students understand the printed words. Helping students achieve this goal requires a variety of instructional techniques, rather than one single technique (Jensen & Rose, 1987; Ramey, 1990). It is difficult for some teachers to choose an effective instructional technique to teach reading without research comparing the traditional approach with a newer technique. Teachers tend to select instructional reading methods which have demonstrated their effectiveness in reliable and valid research studies. Therefore, there is a need for research of other methods of

reading instruction.

The Traditional Approach

The traditional basal reading instruction employs a part-to-whole methodology. This means a direct approach to the individual letter-sound correspondence, isolation of a sound, and the association with a letter. Practice listening for the sound is provided through various oral exercises. Subsequent exercises, provided through workbook and copied page exercises, require students to either circle a picture or select the correct word. Instructional focuses are primarily upon the acquisition of letter-sound correspondence information and less upon understanding that written language actually consists of the signs and symbols of spoken language (Griffith, Klesius, & Kromrey, 1992).

Foorman, Frances, Novy, and Liberman (1991) conducted research with 80 first graders on their acquisition of letter-sound correspondence and the written word. The research indicated that emphasizing the letter-sound correspondence caused the students to produce errors when using context clues to decode some new words because basic word recognition was relatively low. Students who experienced difficulty decoding basic exception words in turn found reading to be difficult.

However, it is estimated that in America, approximately

85% of the reading instruction continues to be the traditional reading instruction approach. Besides using the part-to-whole approach to learning vocabulary words, this approach generally divides a class into three reading groups based on reading level achievement tests. This practice has the tendency to place a student in a certain group, not allowing for advancement (Baumann & Heubach, 1996; Bloome & Nieto, 1989; Goodman et al. 1988; Reutzel & Larsen, 1995; Wiggins, 1994).

The three group placement of students promotes a homogenous type setting. In this type of setting, the students in the grade level group or above advance each year in the same general placement with a few of the students moving up in reading placement level. However, those students in the lower reading placement generally remain there not only in reading, but other academic areas as well (Baumann & Heubach, 1996; Bloome & Nieto, 1989; Wiggins, 1994).

Research conducted by Good and Marshall (1984) in the homogeneous class setting, found that teachers did not encourage conceptualization. Thus, the students in the observed classrooms failed to benefit from the growth and development of reading skills from students in the higher group. Instead, the students in the lower group received

infrequent student to teacher interaction, instruction and resource materials. There was also infrequent student to student interaction in reading and use of reading skills. Placement in the lower reading group also hindered their academic growth in other areas.

Basal readers not only place restrictions on the students, but also control or limit a teacher's freedom to teach. This instructional procedure is called deskilling because the supplies, goals, means, and evaluation are all provided for the teacher. Teachers are lead through steps of instruction and not asked to help some students understand the text as it relates to their own lives. This is demonstrated through the specific questions provided and the expected responses (Baumann & Heubach, 1996; Bloome & Nieto, 1989; Koskinen, McCarthney, & Hoffman, 1995; Wiggins, 1994).

The traditional basal approach segregates the students through placement in reading groups (Bloome & Nieto, 1989). This particular pattern of instruction and placement is understood by the students. They recognize the significance of the reader and workbook they are using. They also understand the difference between the different reading groups and how they compare to the other members of their class.

Through the types of exercises provided by the basal

reading program, the student understands that the emphasis is not whether or not they are able to sound out the word, but whether or not context clues or meanings are understood (Pearson, 1989). These word activities are probably not enjoyed and provide little interest for the students.

Reading becomes a subject within itself during a specific time and is rarely emphasized as pertinent to all subject matter. The work has an established mundane pattern that will enable the students to fill out forms, yet miss the entire enjoyment and life connection of reading (Baumann & Heubach, 1996; Bloome & Nieto, 1989).

The traditional basal reading program is a mind set approach to reading instruction. It typically does not adjust the instruction, just the material. Once children are labeled below level readers, they will rarely become exposed to other grade level reading material. Unfortunately, this tends to transfer to other subjects due to the absence of the instructional part of the stories being used (Baumann & Heubach, 1996; Bloome & Nieto, 1989; Goodman et al. 1988).

The studies completed by Goodman et al. (1988) showed that the stories were lacking in conflict, character development or settings which were authentic in their situations. These stories also used language that was of low interest to the younger reader, due to the changing of the

original wording for easier decoding by the beginning reader. Their findings lead to the research by McCarthey, Hoffman, Christian, et al. (1994) of the new basal.

In research involving the new basal, Koskine (1995) found that story plots and character developments were complex. This, in turn, required more interpretation of the situation by the developing young reader. The language used was more colloquial and the use of metaphors and imagery less stilted. The vocabulary did not seem as controlled, enabling the sentences to be longer. McCarthey and Hoffman (1994) agreed with this study, indicating that story plots tended to be more complex.

These combined studies found that the illustrations emphasized color and innovative design techniques to help keep the young readers' attention. This was indicated, not only through picture illustrations, but through story language which seems to contain rhyme, rhythm, and repetition. The purpose seems to be development of predictability and use of more unique words which gives evidence of relinquishing some vocabulary control and significantly reducing repetition (Koskine, 1995; McCarthy & Hoffman, 1994).

In further research of the new basal, Reutzel and Larsen (1995) found the new basal attempted to change from

the basic skill-based controlled vocabulary textbooks through the use of literature-based anthologies. Koskinen, McCarthy, and Hoffman (1995) agreed with this study and found that this approach included a higher degree of focus on skills in general which decreased the instruction of skills in isolation. The literature-based format allowed the skills to become integrated within the stories.

However, different research studies into the changes made by the new basal indicated that parts of favorite stories were still being used. The basal continued to look like a textbook, complete with a workbook, teacher guide and explicit instructions for questioning and expected answers. Thought-suggested questions to be used during the guided reading time continued to be added to the teacher's text. The vocabulary for each story continued to be introduced in the same manner with skill activities for assisting learning (Allington, 1993; Koskinen et al. 1995; Nistler, 1996; Reutzel & Larsen, 1995).

The changes made in today's basal may in fact have more insidious effect on the teachers and students than changes which were obvious in the past. The publishers are now more informed about the current changes in society and aware of new developments in the teaching of reading. However, they are reluctant to translate these changes into the

established working format of the basal program (Nistler, 1996).

Thus, a traditional basal reading approach continues to be based on phonics or whole word strategies. The focus is placed upon decoding words one by one. Letters, letter combinations, and word developments are presented in isolation. The instruction for vocabulary building is a word-by-word decoding approach. In other words, the approach is merely a word-calling system (Baumann & Heubach, 1996; Bloome & Nieto, 1989; Nistler, 1996).

The Multisensory Approach

Students have a diverse set of learning styles, brain dominance and learning needs (Gregory, 1989). The approach used for reading instruction must relate to those who are gifted as well as those who need remediation or special education. The activities need to meet the needs of "all" students. No student should be omitted from a reading activity (Chenfeld, 1989; Gregory, 1989; Thorpe, Borden, & Borden, 1985).

The multisensory approach to reading instruction is an active involvement of all the senses. This involvement results in recognition of the distinctive features of the learning task. The child approaches reading with a strong visual to manual attention approach that has been reinforced

throughout the early developmental years. The multisensory approach toward reading builds on this prior kinesthetic-tactile ability. (Gregory, 1989; Smith, 1983; Thorpe et al. 1985).

Data collected on active participation in the learning of reading by Bloom (1981) and Thorpe et al. (1985) showed that the time-on-task variables are most critical in predicting subsequent learning success. The research indicated that the increased attention given to letters, sounds, and words due to the results of active learning did increase academic achievement in reading. Their studies strongly indicated that students who participated in different approaches toward a specific goal, not only retained the knowledge, but were able to use it as well (Bloom, 1981; Gregory, 1989; Thorpe et al. 1985).

Wagner (1988) further studied the process of using the active involvement approach with reading instruction and beginning readers. His research indicated that there is evidence of a relationship between learning to read and the development of phonological processing abilities. Beginning readers that were able to actively develop a relationship between phonological process and the acquisition of word-level reading skills became the excited readers. This reinforced other studies which demonstrated that the active

approaches in instruction of reading skills were retained.

The active approach toward teaching reading is also called the multisensory instructional method. The beginning readers are taught reading skills through application and utility of phonemic awareness. This method gives the emerging readers some advantages when new words are introduced to them because they become aware of the different strategies they have learned. Then, this knowledge is transferred to the new reading automatically (Byrne & Fielding-Barnsley, 1991; Cunningham, 1990; Weiner, 1994).

In an earlier study by Brophy (1986), it was learned that there would be academic success when the learning steps were small and mastered before progressing. Mastery came when the learner was actively involved and had frequent opportunities to use the new skill. Transferring learned skills to new situations also became automatic as mastered skills began to overlap.

The multisensory approach involves "all" students through the use of musical movement and manipulatives for instruction. This approach builds on prior knowledge of skills in sequential form. Mastery comes before the new skill is introduced. Remediation can easily be added when necessary without placing a student in a lower level. Also, through this type of instruction, children are taught how to

apply this skill, which helps them understand the reason for mastery (Gregory, 1989; Thorpe et al. 1985).

Studies on a multisensory approach indicated that teachers can improve reading skills prior to formal reading instruction. The activities use fewer workbook type materials and instead use songs, games, and manipulatives to help with the acquisition of skills needed for reading. Letter sounds are taught in correspondence with a letter and how they relate to the make up of words (Adams, 1990; Griffith et al. 1992; Lundberg, Frost, & Petersen, 1988; O'Conner, Notari-Syverson, & Vadasy, 1996; Yopp, 1992).

The Leaping into Reading with Music method uses seeing, hearing, and action as a basis for reading instruction. The skills are taught in logical order, integrated and correlated in the approach to learning. A specific color code system is used to help the students understand and recognize specific letter sounds. Finally, this approach uses the senses to help the students to develop higher level thinking skills (Gregory, 1989; Malloy, 1989; Zentall, 1989).

Leaping into Reading with Music uses a collection of instructional tools for the introduction, reinforcement, and retention of the cognitive knowledge needed to perform basic reading skills. Through the use of music, lyrics, rhythm,

movement, manipulative, spatial relationships, memory cues, colors, and drama, students learn more and faster (Gregory, 1989; Malloy, 1989; Zentall, 1989).

The Leaping into Reading with Music program is objective-based with specific lesson plans, activities, and support materials. The curriculum is formatted to reflect the elements of effective teaching. The activities are specific to the learning objectives and require no materials not readily available (Gregory, 1989).

Summary of Literature Review

The review of literature indicated that a change from the traditional method of reading instruction is needed. Relying on textbooks, worksheets, workbooks, and uni-modal teaching techniques is not sufficient. Students are not retaining and applying what they are being taught. There is a serious problem in how to teach "all" students effectively and realistically in relationship to their own unique needs and differences.

A review of literature of the traditional basal approach indicated that students instructed reading using this methodology are taught letter-sound correspondence rather than understanding the written language. This method tends to separate readers into different reading groups that do not allow for growth and development from other students

due to less interaction between the students. Thus, a homogenous type setting is created which is continued year after year.

The traditional basal reading approach also limited the teacher's ability to vary instructional approaches because all guidance and answers are provided. Instruction is given step by step without allowing for checking for understanding or relating skills to other areas of the students' lives. Reading becomes a separate subject rather than becoming part of the different segments of the children's daily life.

The literature review of the new basal readers indicated that the methodology used to teach reading basically remains the same. The companies seem to realize that there is a problem reaching "all" different needs. Some change has been made through the new literature approach such as the use of colorful pictures, more complex plots, development of the character, and the use of colloquial language. However, even with these changes, the basal continues to be another text book.

Literature review of the multisensory methodology toward teaching reading indicates that it understands the diversity of learning styles found in the classroom. This method actively involves the students in the learning task resulting in an increased academic achievement. The goal is

to help the young reader to develop a relationship between reading and reading skills. The active learning enables the students to apply different strategies learned to new situations in other areas of their lives.

This approach toward reading allows teachers to provide learning in small steps that allow for mastery before progressing. The different learning activities involve the students and provide frequent opportunities to use the new skills. The musical movement and manipulatives build on prior knowledge in sequential form, which allows for remediation to be easily added, as children are taught how to apply the skill.

One such program that uses this methodology in its approach toward teaching reading is Leaping into Reading with Music. This program uses songs, games, and manipulatives to help with the acquisition of skills needed for reading, letter sounds correspond with a letter and how they relate to the make-up of words. Students become actively involved in their learning process and become excited readers, retaining skills they have learned.

This literature research regarding two different reading instructional methods for teaching reading indicates a need for a change from the traditional basal reading to a multisensory approach. The multisensory methodology for

reading instruction addresses its instruction to meet the needs of the different learning styles found in the classroom. This approach actively involves students in the learning process.

The Leaping into Reading with Music program was researched because it was developed using the multisensory approach of instruction. Literature reviews indicate that further research is needed to validate the effects of academic achievement of students. This field study has added to the literature review in that it has provided another study in which the academic achievements of students instructed using the traditional basal approach and the Leaping into Reading with Music methodology have been researched.

CHAPTER 3

METHODOLOGY AND PROCEDURES

Methodology

The purpose of this study was to determine if there was any significant difference between the scores second grade students who were taught reading skills in first grade using the Leaping into Reading with Music program on the Tennessee Comprehensive Assessment Program (TCAP) than those instructed reading using the traditional basal approach. The study also investigated the differences in reading scores as they related to gender and those students who had been retained. Data was collected to compare the academic gains of the control group and the experimental groups in second grade. The students had been randomly assigned to the classrooms to ensure heterogeneous mix of socio-economic status, readiness level, and IQ. The subjects were selected at random with this only qualifier: the students had received first grade reading instruction in either the control or the experimental classrooms. The scores were collected for total reading. According to McLean and Sanders (1984), these scale scores represent the results of a statistical mixed model methodology where factors such as

teachers' roles, attitudes, and social adaption are taken into account before the scores are measured. The primary questions for this study were: To what extent do students who learn the basic reading skills and concepts through the Leaping into Reading with Music program of study show higher scores in reading achievement than the students who learned to read through the Silver Burdett and Ginn basal reading series? To what extent do the different approaches to teaching reading affect the achievement gains of each gender and the students who were retained?

In order to answer the questions instigated by the purpose of the study, several procedures were used. The procedures of the study are described in this chapter under the following topics: (a) statement of the hypothesis, (b) description of the subjects, (c) research and procedure, and (d) analysis of the data.

Statement of the Hypothesis

First grade students who learned the basic reading skills and concepts through the Leaping into Reading with Music method of instruction will show no significant difference in their reading achievement scores than those students who learned to read through the sight word approach predominantly used by the Silver Burdett and Ginn reading program as measured by the Tennessee Comprehensive

Assessment Program (TCAP) test.

Description of the Subjects

The subjects consisted of 112 second grade students who had participated in the experimental study. The data was provided by the Tennessee Comprehensive Assessment Program for the years 1996 and 1997. The population represented a mixed racial component and financial status of students. All subjects attended a rural kindergarten through grade 12 (K-12) school, located in the middle northern section of a southern state.

Research Design and Procedures

Design

The design for this study was considered to be causal-comparative. The investigation involved the selection of three groups of second grade students. The experimental group consisted of 79 second grade students, divided into two classes, who had been assigned to the Leaping into Reading with Music program in the first grade. The control group consisted of 33 second grade students who had been assigned to the traditional basal instruction program in the first grade. The groups for the collection of the data were selected at random. The variable held constant was neither group had been taught reading using a mixture of the traditional basal instruction and the Leaping into Reading

with Music program in first grade. The first grade TCAP scale scores from the experimental groups were used as the pretest. The scale scores from the second grade were collected and functioned as the posttests for calculating the mean year gain.

Procedure

Permission to collect the data for the study was obtained from the appropriate school official (see Appendix A-1). Since the study involved data from elementary students in the same school, only permission from the participating school was necessary.

A random composite of the TCAP test results, which represents the scale scores, was taken from the cumulative files located in the school's vault. The results of the scale scores were calculated to determine the academic mean year gains which were based upon the Tennessee Value Added Assessment System (TVAAS). The TVAAS uses scale scores to indicate a student's current level of attainment. Scale scores are designed to increase from year to year as the student progresses, forming a profile of academic growth.

Student learning rates can be obtained even when extreme differences exist in students' environments and assignments to various teachers. This is made possible because the TVAAS is based on a statistical mixed model

methodology developed by McLean and Sanders (1984) that has been confirmed through the use of computer simulations to evaluate worst case scenarios.

The academic achievements in this study were determined by listing all the students in each group who met the criteria as a member of either the control or experimental groups. The students' scale scores from 1996 and 1997 were averaged. One year's academic gains were obtained by subtracting the first grade scale score from the second grade scale score for reading vocabulary, reading comprehension, and total reading. The student's academic gains were then compared to the expected national norm gain determined by the Sander's Model.

Qualitative data was collected through the means of interviews and questionnaires given to the teachers involved in the first grade reading project. The interviews and questionnaires were completed within a short period to prevent teachers comparing notes, thus contaminating the project (see Appendix A-2).

CHAPTER 4

SUMMARY, FINDINGS AND CONCLUSIONS, AND RECOMMENDATIONS

Summary

This chapter contains a summary and analysis of data collected to test the stated hypothesis. The data was analyzed according to the procedures outlined in Chapter 3.

The stated hypothesis for this study was: First grade students who learned the basic reading skills and concepts through the Leaping into Reading with Music method of instruction will show no significant difference in their reading achievement scores than those students who learned to read through the sight word approach predominantly used by the Silver Burdett and Ginn reading program as measured by the Tennessee Comprehensive Assessment Program (TCAP) test.

The data consisted of pretest and posttest scores for each student in the reading academic area. The pretest scores were the scale scores the students received from the TCAP test in first grade and the posttest scores were the scale scores from the TCAP test taken in the second grade. Calculations of the scores were based on the Sanders Model. These scale scores determined the academic gain, per

student, for one year period based on academic progress achieved between the first and second grade. The mean gain scores for the control group and the experimental groups were then compared to the expected national norm gain. The national norm gain for reading was derived and reported by Dr. William Sanders (Sanders & Horn, 1996).

Scale scores were collected for the academic area in total reading. According to the TVAAS, the national norm average of +80 reflected an expected one year's gain. The student gains were not related to the ability or achievement levels of students when they entered the classroom. Instead, the average of the previous year's scale score and the tested year's scale score indicated the current level of attainment in reading.

Control Group

The reading scores for the Control Group reflected 24 of the 33 students achieved a year gain of +80 or above. The mean gain average for the total group was +91. This showed the control group scored 11 points above the national average (see Table 1).

Experimental Groups

Only eleven of the 42 students in the Experimental Group 1 made a year gain of +80 or more. The mean for the entire group was +55, scoring 25 points below the

national norm gain (see Table 2). Also, only 11 students of the total 37 in Experimental Group 2 made one year growth of +80 or more. The average mean for the entire group was +61, scoring 19 points below the national norm gain. The mean gains for the control and the experimental groups are contrasted dramatically (see Table 3).

Findings

The first set of findings was based on the mean year's gain in the academic area of reading between the control group and the 2 experimental groups. The mean year's gain for each group was evaluated in categories by total group, gender, and retained status. The results of the findings in each of the areas are discussed.

The second set of findings were based on the 7 sections of the teachers questionnaires (see A-2). The 7 sections contained in the questionnaire are summarized as follows: (a) selected method of instruction, (b) background and experience, (c) benefits of instruction, (d) program clarity, (e) feelings toward using this program, (f) affective reaction of students, and (g) identification of responders. Each teacher involved in the two year study completed the questionnaire. The results of the findings are discussed, categorized by control group, and experimental groups.

As shown in Table 1, the average mean gain for the Control Group was +91 compared to the national gain average of +80. The +11 is a gain for the entire group. The average mean gain for Experimental Group 1 was +55, scoring 25 points below the national average for the entire group (see Table 2). The average mean gain for the second experimental group was +61, scoring 19 points below the national average for the entire group (see Table 3). A comparison of the gains showed a significant difference in the 3 groups. The t-test for independent samples was applied to determine if the mean scores on the posttests of the experimental groups were significantly different from the mean scores on the posttests of the control group at the 0.05 level of significance. Table 4 displays a comparison of the three scores. A t-value of .444 was calculated for the mean differences between Experimental Group 1 and Experimental Group 2, but in order to obtain a significance at the .05 level of significance, a t-value of 2.00 or greater would have been necessary. A t-value of 3.087 was calculated for the mean differences between Experimental Group 1 and the Control Group which was greater than the t-value of 2.00 at the .05 level of significance. Finally, a t-value of 2.0384 was calculated for the mean differences between Experimental

Group 2 and the Control Group. This t -value was greater than the t -value of 2.00 at the .05 significance.

TABLE 4
Mean Posttest Score Differences Between
Experimental and Control Groups
 t -Tests for Significance
of Difference

Group	Mean	t -Value	Means Difference
Experimental Group 1	25926	.444	2970.5
Experimental Group 2	22955.5		
Experimental Group 1	25926	3.087	6292.5
Control Group	19633.5		
Experimental Group 2	22955.5	2.0384	3322
Control Group	19633.5		

(t) > critical t , p > .05, (p > 2.00)

Gender Achievement Differences

Control group. As shown in Table 5, the average mean gains are separated by gender. The mean gain for the girls in the control group was +98, compared to the national gain average of +80. A +18 was the gain for the entire female group. There were 14 girls to score above the national

average and 2 scoring below.

Included in Table 5, the average mean gain for the boys in the Control Group was +82 compared to the national average of +80. The +2 is a gain for the entire male group. There were 10 boys to score above the national average and 7 to score below.

Experimental group 1. The scores shown on Table 6, reflect the average mean gains by gender. The average mean gain for the girls in the first experimental group was +58 compared to the national average of +80. The mean gain was 22 points below the national average. A comparison of the gains showed 6 girls had scored above the average, 17 girls scored below the expected average gain of +80, and 1 scored a negative gain for the year, according to the national average.

Table 6 also reflects the average mean gain for the boys was +51 compared to the national average of +80. The mean gain was 29 points below the national average. A comparison of the gains showed 5 boys scored above the expected average of +80, 11 boys scored below, and 2 boys scored a negative gain for the year, according to the national average expectancy.

Experimental group 2. The average mean scores on Table 7 separate the scores by gender. The average mean gain for

the girls was +53 compared to the national gain average of +80. The gain was 27 points below the expected national average. A comparison of the gains showed 4 girls scored above the expected average of +80, 11 scored below, and 1 girl received a negative score for the year according to the national average.

Table 7 also reflects the average mean gain for the boys was +68 compared to the national gain average of +80. The gain was 12 points below the expected national average. A comparison of the gains showed 6 scored above the expected average, 14 boys scored below the average, and 1 boy received a negative score.

Retained Status

Control group. Table 8 shows the average mean gains for students who had not been retained in first grade and the students who had repeated first grade one time. The average mean gain for those students not retained was +91 compared to the national average of +80. The +11 was the gain for the entire group. The average mean gain for those students who had been retained one year was +95 with +15 as the gain for the group.

Experimental group 1. Shown on Table 9 are the average mean gains separated into 2 groups: those not retained in first grade, and those who had been retained one year. The

average mean gain for those students not retained in the first experimental group was +53 compared to the national average of +80. The group was 27 points below the national expected average. The average mean gain for those students in Experimental Group 1 who had been retained was +60 compared to the national average of +80. However, these students, though receiving a higher gain score than the students not retained, still were 20 points below the national expected average.

Experimental group 2. Table 10 contains the average mean gains for both those students who had not been retained in first grade and the students who had repeated first grade one time. The average mean gain for those students not retained was +61 compared to the national average of +80. The group was 19 points below the expected national average. The average mean gain for those students retained one year was +67 compared to the national average of +80. These students were 13 points below the national average.

Summary of differences. From the data analyzed, both boys and girls appear to have a somewhat higher achievement in the traditional basal reading classroom. Additionally, students who were retained one year also experienced a somewhat higher academic achievement in the traditional basal reading classroom.

Teacher Questionnaire

Selection of Method of Instruction

Control group teacher. The Control Group teacher used the traditional approach to beginning reading instruction, the Silver Burdett & Ginn program.

Experimental group teachers. The teachers of the 2 experimental groups used the Leaping into Reading with Music approach to beginning reading.

Background and Experience

Control group teacher. This teacher had been teaching more than 20 years. During all her teaching experience, she had used the traditional reading instructional approach. Through this approach to beginning reading, her stated goal was to improve learning.

Experimental group teachers. These teachers had taught between 5 and 10 years of teaching experience. The teachers had been using the experimental program for 2 years after attending a summer training session. Prior to this, they had used the traditional basal reading program. Their stated instructional goals were to improve student learning, increase attention span, improve behavior, and increase expressed enjoyment of reading.

Benefits of Instruction

Control group teacher. The Control Group teacher

indicated the traditional basal approach was only beneficial to some of the students. This process was believed to have little effect on increasing the attention of the students or improve student behavior. However, the teacher indicated that this method did have some influence on increasing the students' enjoyment of reading as evident in the students sharing their reading experiences with other students.

Experimental group teachers. These teachers differed in their opinion how beneficial the experimental program was in this section of the questionnaire. One teacher expressed that the program was somewhat beneficial to her students while the other teacher responded the program was very beneficial. Regarding increasing the attention span of the students, one teacher indicated the attention was somewhat increased and the other marked attention was very much increased. However, both teachers responded they believed students' enjoyment was very much increased as demonstrated by the extra stories the students were reading with their peers.

Program Clarity

Control group teacher. The Control Group teacher expressed that this method was very easy to integrate into her current teaching style.

Experimental group teachers. The experimental teachers

differed in their opinion on the ability to integrate the experimental program with the adopted basal series. One teacher marked that integration of the program was easy and the other teacher responded that it was only a little difficult.

Feelings Toward Using this Program

Control group teacher. The Control Group teacher responded that she enjoyed teaching reading, but felt that the traditional method of reading instruction allowed her to be only effective to some of her students.

Experimental group teachers. The teachers responded that they enjoyed teaching reading using the newer method. Each marked that they felt more effective with their teaching of beginning reading skills.

Affective Reaction of Students

Control group teacher. The Control Group teacher compared the 2 classes involved in the study to previous classes. Her responses indicated that these students were about the same in these attributes: learning, misbehaving, self-confidence, trying harder, cooperating, being motivated, engaging in activities, remembering facts, paying attention, fussing/fighting, and remaining on task. However, the teacher marked that the students showed less creativity, ability to problem-solve, and use organizational skills.

Experimental group teachers. These teachers compared the students involved in the experimental program to previous classes that were instructed using the traditional basal approach. Their responses indicated that they felt their students were learning more as demonstrated through application of skills. The behavior problems lessened due to the active involvement and students' self-confidence, the desire to try harder was evident in the students' desire to attempt challenging exercises. The teachers indicated through their responses that overall cooperation and motivation remained the same as previous groups. They also remarked that student involvement, participation, creativity ability to remember facts, problem-solving, fussing/fighting, and remaining on task were just about the same as previous classes. Yet, they responded they felt the use of organizational skills had improved.

Identification of Responders

Control group teacher. The control teacher's response to this portion of the questionnaire was she believed this type of instruction benefited the students who were well behaved and would recommend this method to new teachers to use in teaching beginning reading skills.

Experimental group teachers. The experimental teachers expressed that they would recommend this method to teach

beginning reading skills. They differed in their response to which students benefited from this different approach. One teacher marked that the average students benefited while the other teacher's response was the students who were distractible/inattentive benefited the most.

Conclusions

The problem investigated in this study was whether the academic achievement of students instructed in beginning reading skills and concepts using the traditional basal approach would show significant difference from the students instructed using the Leaping into Reading with Music program. The conclusions based upon the analysis of the data, however, show that the control group had 11 points above the expected national norm in reading in contrast to the experimental groups which showed 25 points and 19 points, respectively, below the national norm.

However, the teachers of the experimental groups, though mean gains below the expected average, indicated a positive personal affective response to the Leaping into Reading with Music program. The two teachers indicated that the program's varied instructional methods were beneficial to the beginning readers. This was due to their perception, all students were actively involved in learning the basic skills and concepts. The teachers indicated they enjoyed the

multiple approach to reading instruction, but the integration of the program with the adopted basal series presented some difficulty in sequencing.

The Leaping into Reading with Music program does not follow the progressive developmental sequence of the basal series. In correlating the experimental program and the basal series, a major difficulty was having to regress to the format of the basal in order to keep up with the district's predetermined goals for reading.

The teacher of the control group indicated that the traditional method was easily adapted to the learning styles of the students. However, the teacher's 20+ years of experience may have been a factor in the ability to make the transitions necessary to meet the different learning styles found in the classroom.

The findings of this study indicates the control group was not adversely affected by being taught the beginning reading skills and concepts through the traditional basal reading program. Moreover, the academic achievements of this population showed no decrease in measuring a year's gain; instead, they were above the national norm. In contrast, the two experimental groups showed academic gains falling below the expected national norm. Contributing factors to the lesser achievement of the experimental group may be:

(a) length of teaching experience of both teachers, (b) the failure to continue the program for a more extended period of time, (c) the influence of the basal program upon the Leaping into Reading with Music, (d) lack of joint planning time for implementation of the program, and (e) insufficient training time of the two experimental teachers.

Recommendations

An analysis of the data supported the use of the traditional basal approach as more successful to beginning reading instruction. However, the following recommendations are being made as a result of the study:

1. It is recommended that implementation of this study be administered with other populations.
2. It is recommended that replication of this study be administered comparing the Leaping into Music with Reading program to a variety of reading programs other than Silver Burdett & Ginn.
3. It is recommended that a longitudinal study be administered in order to evaluate long term results of learning to read through the Leaping into Reading with Music program.
4. It is recommended that the implications of this study be made available to teacher institutions for research.

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APPENDICES

APPENDIX A-1
Letter of Permission

103 Woodruff Road
Adams, TN 37010
November 24, 1997

Ms. Kathy Maynard, Assistant Principal
Jo Byrns School
7025 Highway 41 North
Cedar Hill, TN 37032

Dear Ms. Maynard,

I am a graduate student at Austin Peay State University and preparing to begin my field study research program during the spring semester. The research I am planning to conduct involves evaluating two methods of instruction in beginning reading, the Leaping into Reading with Music and the traditional, basal reader approach.

The evaluation process will be to review the TCAP scores found in the cumulative records of students in the first grade during the school years of 1994, 1995, and 1996. Before I begin this research project, I need your permission to view these particular records. All the data that will be collected will be held in the strictest confidence. No student names will be used in this study. All data will be number coded to further protect the information.

This research study should be beneficial to the school regarding a better method for beginning reading instruction. The results of the study will be provided for your further evaluation.

Sincerely,

Martha B. Rust

Appendix A-2
Teachers' Questionnaire

Teacher's Questionnaire

Directions: Read each section. Mark a X in the [] before the appropriate answer.

I am completing this questionnaire for:

☐ Leaping into Reading with Music approach to beginning reading

☐ Traditional approach to beginning reading instruction, Silver Burdett & Ginn program

Background and Experience

1. How long have you been teaching?

☐ 1 year ☐ 2-4 years ☐ 5-10 years ☐ 11-15 years
☐ 16-20 years ☐ Over 20 years

2. How long have you been using this approach to teaching beginning reading?

☐ 1 year ☐ 2 years ☐ 3-4 years ☐ 5 years +

3. How did you hope this approach to beginning reading would benefit you/your class? {Choose 1}

☐ Improve Learning ☐ Increase Attention

☐ Improve behavior ☐ Increase Enjoyment & Participation

☐ All the possibilities stated

In your experience or perception, how beneficial is this method?

4. Improves Learning ☐ None ☐ Little ☐ Some

☐ Very Much ☐ Extremely Beneficial

5. Increases Attention ☐ None ☐ Little ☐ Some
☐ Very Much ☐ Extremely Beneficial

6. Improves Behavior ☐ None ☐ Little ☐ Some
☐ Very Much ☐ Extremely Beneficial

7. Increases Enjoyment ☐ None ☐ Little ☐ Some
☐ Very Much ☐ Extremely Beneficial & Participation

Program Clarity

8. How easy is it to integrate this program into your
current teaching style? (Choose 1)

☐ very easy ☐ easy ☐ with little difficulty
☐ difficult ☐ very difficult

When I teach using this method...

9. I enjoy teaching more. ☐ Not Very ☐ Some ☐ Very
☐ Extremely

10. I am more effective. ☐ Not Very ☐ Some ☐ Very
☐ Extremely

Compared to previous classes, my students were:

11. Learning ☐ Less ☐ More ☐ About the Same

12. Misbehaving ☐ Less ☐ More ☐ About the Same

13. Self-Confident ☐ Less ☐ More ☐ About the Same

14. Trying Harder ☐ Less ☐ More ☐ About the Same

15. Cooperative ☐ Less ☐ More ☐ About the Same

16. Motivated ☐ Less ☐ More ☐ About the Same

17. Involved/ Participation ☐ Less ☐ More ☐ About the Same

18. Creative ☐ Less ☐ More ☐ About the Same
19. Remembering facts ☐ Less ☐ More ☐ About the Same
20. Problem- Solving ☐ Less ☐ More ☐ About the Same
21. Better Organized ☐ Less ☐ More ☐ About the Same
22. Paying Attention ☐ Less ☐ More ☐ About the Same
23. Fussing/Fighting ☐ Less ☐ More ☐ About the Same
24. On Task ☐ Less ☐ More ☐ About the Same

Identify Responders

25. Which students benefited the most from this method to teach beginning reading?

☐ Bright/Gifted ☐ Attentive ☐ Well Behaved

☐ Average ☐ Distractible/Inattentive

26. I would recommend this method to teach beginning reading skills.

☐ Yes ☐ No ☐ Somewhat ☐ Not Very ☐ No

Opinion

List of Tables

Total Reading Scale Scores—Control Group

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain	Mean Squ.
1	F	0	544	647	595.5	103	354620.25
2	M	0	629	711	670	82	448900
3	M	0	612	669	640.5	57	410240.25
4	M	0	582	666	624	84	389376
5	F	0	569	700	634.5	131	402590.25
6	M	0	631	694	662.5	63	438906.25
7	F	0	541	626	583.5	85	340472.25
8	F	1	483	591	537	108	288369
9	F	0	498	589	543.5	91	295392.25
10	M	0	581	632	606.5	51	367842.25
11	F	0	576	688	632	112	399424
12	M	0	522	632	577	110	332929
13	F	0	524	614	569	90	323761
14	F	0	448	551	499.5	103	249500.25
15	M	0	494	594	544	100	295936
16	F	1	407	489	448	82	200704
17	M	0	595	709	652	114	425104
18	M	0	528	640	584	112	341056
19	F	0	569	685	627	116	393129
20	F	0	600	658	629	58	395641
21	F	0	622	720	671	98	450241
22	F	0	640	751	695.5	111	483720.25
23	M	0	555	661	608	106	369664
24	F	0	566	729	647.5	163	419256.25
25	M	0	531	545	538	14	289444
26	M	0	588	680	634	92	401956
27	F	0	564	650	607	86	368449
28	M	0	516	569	542.5	53	294306.25
29	M	0	534	570	552	36	304704
30	M	0	532	560	546	28	298116
31	M	0	469	621	545	152	297025
32	M	0	520	713	616.5	193	380072.25
33	F	0	553	590	571.5	37	11450847
					19633.5	91.5454545	11777459
					yr. gain		

Note. A score of +80 or more represents a mean year gain.

Table 2

Total Reading--Experimental Group 1

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain	Mean Squ.
1	F	0	726	751	738.5	25	545382.3
2	F	0	603	684	643.5	81	414092.3
3	F	0	618	661	639.5	43	408960.3
4	F	0	608	693	650.5	85	423150.3
5	F	0	561	630	595.5	69	354620.3
6	M	0	601	623	612	22	374544
7	F	0	566	635	600.5	69	360600.3
8	M	0	565	597	581	32	337561
9	F	0	589	644	616.5	55	380072.3
10	F	0	577	650	613.5	73	376382.3
11	M	0	599	678	638.5	79	407682.3
12	F	0	626	656	641	30	410881
13	M	0	569	539	554	-30	306916
14	M	0	657	659	658	2	432964
15	M	0	587	624	605.5	37	366630.3
16	F	0	578	625	601.5	47	361802.3
17	M	1	571	649	610	78	372100
18	M	0	583	718	650.5	135	423150.3
19	M	0	595	676	635.5	81	403860.3
20	F	0	500	587	543.5	87	295392.3
21	F	0	589	620	604.5	31	365420.3
22	M	0	581	669	625	88	390625
23	F	0	585	729	657	144	431649
24	F	0	519	516	517.5	-3	267806.3
25	M	0	558	643	600.5	85	360600.3
26	M	0	635	712	673.5	77	453602.3
27	M	0	566	611	588.5	45	346332.3
28	M	0	667	698	682.5	31	465806.3
29	M	0	542	526	534	-16	285156
30	M	0	580	676	628	96	394384
31	F	0	675	706	690.5	31	476790.3
32	M	0	613	669	641	56	410881
33	F	0	534	553	543.5	19	295392.3
34	F	0	586	602	584	36	341056
35	M	0	600	632	616	32	379456
36	F	0	597	639	618	42	381924
37	F	0	498	554	526	56	276676
38	F	0	584	656	620	72	384400
39	F	0	593	735	664	142	440896
40	F	0	608	708	658	100	432964
41	F	0	594	631	612.5	37	375156.3
42	F	1	591	634	612.5	43	375156.3
					25926	55.80952	16088873
					yr. gain		

Note. A score of +80 or more represents a mean year gain.

Table 3

Total Reading-Experimental Group 2

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain	Mean Squ.
1	M	0	626	716	671	90	450241
2	M	0	670	790	730	120	532900
3	M	0	638	751	694.5	113	482330.25
4	M	0	655	702	678.5	47	460362.25
5	M	0	634	651	642.5	17	412806.25
6	F	0	498	596	547	98	299209
7	F	0	575	577	576	2	331776
8	F	0	741	690	715.5	-51	511940.25
9	M	0	592	660	626	68	391876
10	F	0	602	683	642.5	81	412806.25
11	F	0	630	707	668.5	77	446892.25
12	M	0	563	632	597.5	69	357006.25
13	M	0	558	623	590.5	65	348690.25
14	F	0	556	663	609.5	107	371490.25
15	M	0	684	754	719	70	516961
16	M	0	681	759	720	78	518400
17	F	0	656	694	675	38	455625
18	F	0	572	651	611.5	79	373932.25
19	M	0	498	644	571	146	326041
20	M	0	491	550	520.5	59	270920.25
21	M	0	609	689	649	80	421201
22	F	0	451	531	491	80	241081
23	F	0	679	717	698	38	487204
24	M	0	486	520	503	34	253009
25	M	0	496	447	471.5	-49	222312.25
26	F	0	574	644	609	70	370881
27	F	0	571	624	597.5	53	357006.25
28	M	0	661	674	667.5	13	445556.25
29	M	0	536	569	552.5	33	305256.25
30	F	0	647	668	657.5	21	432306.25
31	F	0	658	702	680	44	462400
32	M	0	563	716	639.5	153	408960.25
33	M	0	550	597	573.5	47	328902.25
34	F	0	600	660	630	60	396900
35	M	0	518	622	570	104	324900
36	F	1	521	578	549.5	57	301950.25
37	M	1	571	649	610	78	372100
					22955.5	61.4857	14404131.8
					yr. Gain		

Note. A score of +80 or more represents a mean year gain.

Table 5

Total Reading—Control—GenderFemale

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain
1	F	0	544	647	595.5	103
5	F	0	569	700	634.5	131
7	F	0	541	626	583.5	85
8	F	1	483	591	537	108
9	F	0	498	589	543.5	91
11	F	0	576	688	632	112
13	F	0	524	614	569	90
14	F	0	448	551	499.5	103
16	F	1	407	489	448	82
19	F	0	569	685	627	116
20	F	0	600	658	629	58
21	F	0	622	720	671	98
22	F	0	640	751	695.5	111
24	F	0	566	729	647.5	163
27	F	0	564	650	607	86
33	F	0	553	590	571.5	37
mean yr. gain						98.375

Male

2	M	0	629	711	670	82
3	M	0	612	669	640.5	57
4	M	0	582	666	624	84
6	M	0	631	694	662.5	63
10	M	0	581	632	606.5	51
12	M	0	522	632	577	110
15	M	0	494	594	544	100
17	M	0	595	709	652	114
18	M	0	528	640	584	112
23	M	0	555	661	608	106
25	M	0	531	545	538	14
26	M	0	588	680	634	92
28	M	0	516	569	542.5	53
29	M	0	534	570	552	36
30	M	0	532	560	546	28
31	M	0	469	621	545	152
32	M	0	520	713	616.5	193
mean yr. gain						82.625

Table 6

Total Reading--Experimental Group 1--Gender

Female

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain
1	F	0	726	751	738.5	25
2	F	0	603	684	643.5	81
3	F	0	618	661	639.5	43
4	F	0	608	693	650.5	85
5	F	0	561	630	595.5	69
7	F	0	566	635	600.5	69
9	F	0	589	644	616.5	55
10	F	0	577	650	613.5	73
12	F	0	626	656	641	30
16	F	0	578	625	601.5	47
20	F	0	500	587	543.5	87
21	F	0	589	620	604.5	31
23	F	0	585	729	657	144
24	F	0	519	516	517.5	-3
31	F	0	675	706	690.5	31
33	F	0	534	553	543.5	19
34	F	0	566	602	584	36
36	F	0	597	639	618	42
37	F	0	498	554	526	56
38	F	0	584	656	620	72
39	F	0	593	735	664	142
40	F	0	608	708	658	100
41	F	0	594	631	612.5	37
42	F	1	591	634	612.5	43
average mean yr. gain						58.91666667

Male

6	M	0	601	623	612	22
8	M	0	565	597	581	32
11	M	0	599	678	638.5	79
13	M	0	569	539	554	30
14	M	0	657	659	658	2
15	M	0	587	624	605.5	37
17	M	1	571	649	610	78
18	M	0	583	718	650.5	135
19	M	0	595	676	635.5	81
22	M	0	581	669	625	88
25	M	0	558	643	600.5	85
26	M	0	635	712	673.5	77
27	M	0	566	611	588.5	45
28	M	0	667	698	682.5	31
29	M	0	542	526	534	-16
30	M	0	580	676	628	96
32	M	0	613	669	641	56
35	M	0	600	632	616	32
average mean yr. gain						51.66666667

Note. A score of +80 or more represents a mean year gain.

Table 7

Total Reading--Experimental Group 2--Gender

Female

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain
6	F	0	498	596	547	98
7	F	0	575	577	576	2
8	F	0	741	690	715.5	-51
10	F	0	602	683	642.5	81
11	F	0	630	707	668.5	77
14	F	0	556	663	609.5	107
17	F	0	656	694	675	38
18	F	0	572	651	611.5	79
22	F	0	451	531	491	80
23	F	0	679	717	698	38
26	F	0	574	644	609	70
27	F	0	571	624	597.5	53
30	F	0	647	668	657.5	21
31	F	0	658	702	680	44
34	F	0	600	660	630	60
36	F	1	521	578	549.5	57

average mean yr. gain

53.375

Male

1	M	0	626	716	671	90
2	M	0	670	790	730	120
3	M	0	638	751	694.5	113
4	M	0	655	702	678.5	47
5	M	0	634	651	642.5	17
9	M	0	592	660	626	68
12	M	0	563	632	597.5	69
13	M	0	558	623	590.5	65
15	M	0	684	754	719	70
16	M	0	681	759	720	78
19	M	0	498	644	571	146
20	M	0	491	550	520.5	59
21	M	0	609	689	649	80
24	M	0	486	520	503	34
25	M	0	496	447	471.5	-49
28	M	0	661	674	667.5	13
29	M	0	538	569	553.5	31
32	M	0	563	716	639.5	153
33	M	0	550	597	573.5	47
35	M	0	518	622	570	104
37	M	1	571	649	610	78

average mean yr. gain

68.238095

Note. A score of +80 or more represents a mean year gain.

Total Reading—Control— Retained and Not Retained

Not retained

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Yr. Gain
1	F	0	544	647	595.5	103
2	M	0	629	711	670	82
3	M	0	612	669	640.5	57
4	M	0	582	666	624	84
5	F	0	569	700	634.5	131
6	M	0	631	694	662.5	63
7	F	0	541	626	583.5	85
9	F	0	498	589	543.5	91
10	M	0	581	632	606.5	51
11	F	0	576	688	632	112
12	M	0	522	632	577	110
13	F	0	524	614	569	90
14	F	0	448	551	499.5	103
15	M	0	494	594	544	100
17	M	0	595	709	652	114
18	M	0	528	640	584	112
19	F	0	589	685	627	116
20	F	0	600	658	629	58
21	F	0	622	720	671	98
22	F	0	640	751	695.5	111
23	M	0	555	661	608	106
24	F	0	566	729	647.5	163
25	M	0	531	545	538	14
26	M	0	588	680	634	92
27	F	0	564	650	607	86
28	M	0	516	569	542.5	53
29	M	0	534	570	552	36
30	M	0	532	560	546	28
31	M	0	469	621	545	152
32	M	0	520	713	616.5	193
33	F	0	553	590	571.5	37

average mean yr. gain

91.322581

Retained

8	F	1	483	591	537	108
16	F	1	407	489	448	82

average mean yr. gain

95

Note. A score of +80 or more represents a mean year gain.

Table 9

Total Reading--Experimental Group 1--Retained and Not Retained

63

Not Retained

Student ID	Sex	Retained	First Gr.	Second Gr.	Mean	Year's Gain
1	F	0	726	751	738.5	25
2	F	0	603	684	643.5	81
3	F	0	618	661	639.5	43
4	F	0	608	693	650.5	85
5	F	0	561	630	595.5	69
6	M	0	601	623	612	22
7	F	0	566	635	600.5	69
8	M	0	565	597	581	32
9	F	0	589	644	616.5	55
10	F	0	577	650	613.5	73
11	M	0	599	678	638.5	79
12	F	0	626	656	641	30
13	M	0	569	539	554	-30
14	M	0	657	659	658	2
15	M	0	587	624	605.5	37
16	F	0	578	625	601.5	47
18	M	0	583	718	650.5	136
19	M	0	595	676	635.5	81
20	F	0	500	587	543.5	87
21	F	0	589	620	604.5	31
22	M	0	581	669	625	88
23	F	0	585	729	657	144
24	F	0	519	516	517.5	-3
25	M	0	558	643	600.5	85
26	M	0	635	712	673.5	77
27	M	0	566	611	588.5	45
27	M	0	566	611	588.5	45
28	M	0	667	698	682.5	31
28	M	0	667	698	682.5	31
29	M	0	542	526	534	-16
29	M	0	542	526	534	-16
30	M	0	580	676	628	96
30	M	0	580	676	628	96
31	F	0	675	706	690.5	31
32	M	0	613	669	641	56
32	M	0	613	669	641	56
33	F	0	534	553	543.5	19
34	F	0	566	602	584	36
35	M	0	600	632	616	32
35	M	0	600	632	616	32
36	F	0	597	639	618	42
37	F	0	498	554	526	56
38	F	0	584	656	620	72
39	F	0	593	735	664	142
40	F	0	608	708	658	100
41	F	0	594	631	612.5	37

average mean yr. gain

53.63043478

Retained

17	M	1	571	649	610	78
42	F	1	591	634	612.5	43

average mean yr. gain

60.5

Note. A score of +80 or more represents a mean year gain.

Table 10

Total Reading--Experimental Group 2--Retained and Not Retained

Not Retained

Student ID	Sex	Retained	First Grade	Second Grade	Mean	Year's Gain
1	M	0	626	716	671	90
2	M	0	670	790	730	120
3	M	0	638	751	694.5	113
4	M	0	655	702	678.5	47
5	M	0	634	651	642.5	17
6	F	0	498	596	547	98
7	F	0	575	577	576	2
8	F	0	741	690	715.5	-51
9	M	0	592	660	626	68
10	F	0	602	683	642.5	81
11	F	0	630	707	668.5	77
12	M	0	563	632	597.5	69
13	M	0	558	623	590.5	65
14	F	0	556	663	609.5	107
15	M	0	684	754	719	70
16	M	0	681	759	720	78
17	F	0	656	694	675	38
18	F	0	572	651	611.5	79
19	M	0	498	644	571	146
20	M	0	491	550	520.5	59
21	M	0	609	689	649	80
22	F	0	451	531	491	80
23	F	0	679	717	698	38
24	M	0	486	520	503	34
25	M	0	496	447	471.5	-49
26	F	0	574	644	609	70
27	F	0	571	624	597.5	53
28	M	0	661	674	667.5	13
29	M	0	538	569	553.5	31
30	F	0	647	668	657.5	21
31	F	0	658	702	680	44
32	M	0	563	716	639.5	153
33	M	0	550	597	573.5	47
34	F	0	600	660	630	60
35	M	0	518	622	570	104
average mean yr. gain						61.485714

Retained

36	F	1	521	578	549.5	57
37	M	1	571	649	610	78
average mean yr. gain						67.5

Note. A score of +80 or more represents a mean year gain.

VITA

Martha Belk Rust was born in Pulaski, Tennessee on February 5, 1949. The family moved to Orlando, Florida shortly after her birth. She attended public schools in Orlando and graduated in June 1967. The following September she entered George Peabody College for Teachers in Nashville, Tennessee and in May 1971 received a Bachelor of Science in Education with a Home Economics major, secondary endorsement. She continued her graduate work there, receiving in May 1972, a Masters of Arts in Elementary Education. In the fall of 1996, she entered Austin Peay State University to work on the degree of Education Specialist in Administration and Supervision.

Martha began her teaching career in the Sumner County School System in Tennessee. After 6 years, she moved to the Todd County School System in Kentucky to teach for 10 years. She presently is teaching in the Robertson County School System in Tennessee where she has taught for 11 years and completed the requirements for Career Ladder III.

She is a member of the Robertson County Education Association, Tennessee Education Association, and National Education Association. She has been a school representative to the Robertson County Education Association and presently

serves as the first grade representative from her school.