

**A STUDY TO COMPARE THE DEKODIPHUKAN READING PROGRAM  
TO THE SILVER BURDETT GINN BASAL READING PROGRAM**

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

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In Partial Fulfillment  
of the Requirements for the Degree  
Education Specialist

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by  
Judith Hogan Castleberry  
May 1992

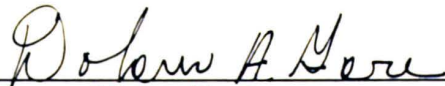
## ABSTRACT

This experimental study was conducted in order to test the question do kindergarten students learn to read with greater success when taught by a decoding program which uses a phonetical, decoding instructional approach as compared to the basal, sight word instructional approach to beginning reading. There were two classes, twenty-six students in one group and twenty-four in the other group, which were given instruction in beginning reading skills using the Dekodiphukan program. Two classes, fifteen students in one group and sixteen students in the other, were instructed using the basal reader, Silver Burdett Ginn. This study was a pretest/posttest, quasi-experimental design. All subjects were administered the Brigance Test as a pretest and the Metropolitan Achievement Test as a posttest. The results were analyzed using the t-test of independence on the pretest and the one-way analysis of variance ( $p < .05$ ) on the posttest. The data collected for the study showed a significant difference in the reading achievement of students who learned to read using the Dekodiphukan program.

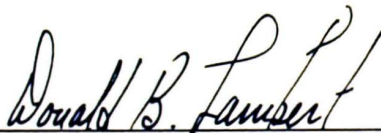


To the Graduate and Research Council:

I am submitting herewith a Field Study written by Judith Hogan Castleberry entitled "A Study To Compare The Dekodiphukan Reading Program To The Silver Burdett Ginn Basal Reading Program." I have examined the final copy of this paper for form and content, and I recommend that it be accepted in partial fulfillment of the requirements for the degree Education Specialist, with a major in Administration and Supervision.

  
Major Professor

We have read this Field Study  
and recommend its acceptance.

  
Minor Professor  
or  
Second Committee Member

  
Third Committee Member

Accepted for the Graduate and  
Research Council

  
Dean of the Graduate School



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## Table of Contents

	Page
List of Tables.....	viii
List of Figures.....	xi
 CHAPTER	
1. Introduction.....	1
Statement of the Problem.....	2
Statement of the Hypothesis.....	3
Significance of the Study.....	3
Definitions of Terms.....	3
Importance of the Study.....	4
2. Review of the Literature.....	5
Phonetical Instruction.....	8
Testing.....	10
Summary and Conclusion.....	12
3. Methodology.....	14
Null Hypothesis.....	15
Description of the Subjects.....	15
Research Design and Procedures.....	15
Design.....	15
Procedures.....	16
Description of Instructors.....	27
Description of Measures Employed.....	28
4. Results.....	30
Summary and Analysis of Data.....	30

## List of Tables

Table	Page
4.1 Experimental Group and Control Group	
Raw Scores .....	31
4.2 <u>T</u> -Test for Significance of Difference	
Brigance Scores.....	32
4.3 Total Reading	
Raw Scores .....	33
4.4 One-Way Analysis of Variance of	
Reading Skills.....	34
4.5 T-Test of Reading Skills.....	35



## List of Figures

Figure	Page
3.1 Dekodiphukan Sound Pictures.....	17
3.2 Dekodiphukan Sound Picture For The Sound 'K'.....	18
3.3 Representative Sample of Pictures With Two and Three Sound Words.....	19
3.4 Representative Sample of Pictures With Word Transition.....	20
3.5 Representative Sample of Words With Pictures of Vowels Only.....	21
3.6 Representative Sample of Stamping Center Activity.....	22
3.7 Representative Sample of Spelling Chart.....	24
3.8 Representative sample of Worksheet.....	26

## CHAPTER 1

### Introduction

Progress in education has provided educators many different methods of reading instruction. Trends in reading instruction have rendered experience upon which educators have launched an attempt to accept and adopt one particular method as the best method over another for their students. However, to quote Marie Carbo, "There is no best way; there are many different approaches-some of which are effective with some children and ineffective with others" (1).

Prior to 1800, reading instruction consisted of an alphabetical system which was relatively comparable to the phonics approach (Pearson 585). Heavy emphasis on the phonetical approach to teaching beginning reading remained the predominant method until 1915. Concern for comprehension brought about the sight, whole word approach which consequently brought about the emergence of the basal reader. Since the early 1900, instruction in reading has evolved through various stages which can be classified into the two above mentioned genre or types, phonics or whole word. Whole language, one-to-one sound symbols including words in color, language experience and linguistics-phonemics are some of the ideas and concepts that were created out of this quest and exploration for the best instructional method. All of these concepts include in their methods of instruction an ingredient of either whole word or phonics or both.

Most reading instruction is coordinated around a basal reading series (Chall 105). The teaching of phonological techniques in learning new words is presented in the basal reader. However, the instruction of

phonics is somewhat diminutive. It does not seem to be a vital instructional component of the total system. Therefore, it can be assumed that a large segment of the student population learns to read using the sight word approach (Aukerman 3).

Research seems to support the theory that the phonetical approach to teaching beginning reading is more effective in producing successful readers than the sight word approach used by the basal readers (Bryne and Fielding 455). Research also gives evidence that a great number of the instructional programs in schools today use the basal reading series as a curriculum guide for reading instruction (Bloome 259).

If it is important for children to receive phonics based instruction in word identification and beginning reading instruction, the answer must be in the planning and implementing of programs that provide guidance in this type of instruction and through the support of research that gives evidence to its effectiveness.

#### Statement of the Problem

The purpose of this experimental study was to make a comparison of two methods of instruction in word recognition and beginning reading. One method, the phonetical, code-oriented method, particularly the Dekodiphukan Program, was designed to teach the student to segment words into phonemes in order to sound out and identify words. This program uses pictures to represent sounds. The student learn the sounds and learn to read words and phrases through the use of these pictures.

The other method, whole word or sight word method, teaches students to read by recognition of words as a whole. The 1989 Silver Burdett Ginn Reading



Series was the instructional program followed by this group. The students basically learned to memorize words by exposure, drill and practice exercises, and practice in reading words and phrases.

### Hypothesis

Students who learn beginning reading concepts, letter and sound correspondence through the use of Dekodiphukan, will show no significant difference in their reading achievement scores than those students who learn beginning reading concepts through the use of the Silver Burdett Ginn reading series which predominantly employs the sight word approach.

### Significance of the Study

This study could have a significant effect on the educational decisions made by teachers and administrators concerning the choice of methods in beginning reading instruction. Should the study show a significant difference in the academic reading achievement scores between the experimental and the control groups, such findings could help establish a position in favor of phonetical, code-oriented approach method of beginning reading instruction. If no significant difference was found, teachers may want to look for other options to increase the academic reading achievement scores of their students.

### Definitions of Terms

For the purpose of the study, the following operational definitions were applied to these 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. Dekodiphukan Program. A beginning reading program developed to teach young children to read through the use of pictures with sound correspondence. The program consists of teacher's guide, materials,

stamps with pads and reading materials.

3. Grapheme. A letter or group of letters symbolizing the smallest unit of writing. The grapheme is to the written word what the phoneme is to the spoken word.

4. Phoneme. A symbol that represents a particular sound element.

5. Phonetics. An approach to reading instruction in which the student is taught to recognize the relationship between graphic symbols (letter or letter combinations) and the speech sounds they represent. The teaching of grapheme-phoneme correspondence.

6. Phonology. The study of distinctive sounds (phonemes) that make up a language. Phonemes are the smallest unit of sound in a language.

7. 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.

8. Silver Burdett Ginn Reading Program. A reading program consisting of teacher's guide, reading textbook, reading workbook, charts, and teaching materials. This program is adopted by the Clarksville Montgomery County School System and is used throughout the system to teach reading.

### Importance of the Study

It is at the word recognition level of beginning reading that many disabled readers encounter their initial inaptness in the ability to read fluently. It is at this level of instruction that vital importance must be placed on providing the best approach to instruction in beginning reading. There is a never-ending debate on the methods of teaching reading, and studies have only drawn conclusion based on each particular method tried in the research study. More studies are needed in order to discover and improve the philosophies, theories, and practices instructors employ in their educational domain.

## CHAPTER 2

### Review of the Literature

Children exposed to whole word, meaning based programs learn to identify an initial collection of sight words more rapidly and make more initial progress in reading than do children exposed to code oriented programs. However, children taught to identify words through the code oriented programs learn to identify new words with greater facility than children taught through the whole word method (Vellutino 152).

Instruction in any of the various subject areas, beginning reading to be included, should maintain as a foremost goal to teach students to become problem solvers. If the code oriented program instills the ability to identify new words with quick perception, which is a form of problem solving, perhaps this method accomplishes a dual purpose. Frank Vellutino emphasized in the implication of his study that complimentary utilization of both code oriented and whole word method of teaching beginning reading may be a more effective approach than using one approach exclusively (152).

Children tend to develop word identification skills according to how they are taught. However, children will naturally implement the whole word approach as opposed to the code oriented and will use the code oriented approach only after they have been instructed in its analytical process for word identification(153). Vellutino referred to this as instructional bias. He further stated some students will compensate for instructional bias and some students will not. Those who do not or cannot compensate will be identified as the "disabled reader" (154).

Children learn to communicate through the speaking of words. This skill is acquired basically through auditory facilitation. Because a child can skillfully communicate through the verbal use of words does not indicate he/she will be able to read which requires a visual interpretation of words. Jesus Alegria



explained that, "In order to read the child must master a new code that gives access to linguistic knowledge from vision rather than from sound" (Alegria 451). Reading essentially requires a four step process; associating the letters in the alphabet with the produced sounds represented by each letter, segmenting words into parts of phones, sounding these segments out, and thus producing verbally what is written on the page. This is where many children experience their first reading difficulties, the inability to segment speech into phones (Alegria 451). Unlike speech, the ability to segment phones does not naturally take place, therefore, it is then assumed this skill is acquired through a beginning-to-read program and the approach to or method of instruction would influence phonetic awareness. Vellutino and Alegria agree the type of instruction will consequently determine the level of phonological awareness in the beginning reader.

Based on the theory discussed above, children can skillfully communicate through the verbal use of words. One particular study evaluated instruction in beginning reading which entailed the use of materials produced by the child's own language. This type of instruction is called the language experience approach (Stahl 4). In this study experience, charts were developed by small groups or the entire class. These charts were developed in a "natural" way by combining the child's own spoken language and the written language. Stahl explained that the language experience approach was based on the thought that speaking, listening, writing and reading are interrelated and interdependent (5). In his study, Stahl concluded that as in the phonetical approach to beginning reading, the language experience approach too has its place which appears to be in the very early stages of reading acquisitions. As children mature in their reading abilities, these approaches seem to become less functional (Stahl 5).

Reading without phonology was the basis for a study done by Philip

Seymour and Leona Elder. Their study involved an instructional regime which eliminated totally any phonetical approaches to reading and relied completely on a sight word or whole word approach to beginning reading. A word list of 118 words was developed from a collection of words that were most prevalently encountered in the primary years. These words were introduced through the use of flash cards or computer monitor. The responses of the children were recorded and evaluated (Seymour 3).

The results of this study did not present any facts that would support the teaching of beginning reading with the sight word approach as the only method of instruction. However, all of the children involved did learn to read the assigned words with success.

As a branch of sight word or whole word beginning reading instruction was yet another approach called sentence method. This type of instruction emphasized the idea that children do not necessarily need to recognize individual words in order to read (Groff 256). The process for this method is a reversed order of the phonetical approach to instruction. The children were presented the whole sentence first. The instructor discussed the sentence as a whole. Comprehension of the sentence was emphasized more than the skill of recognizing individual words. The children then wrote the sentence through dictation. At this point the sentence was broken down into components and analyzed as individual words. The next step was to study each word, segmenting it into phonetical parts for pronunciation and speech. Groff also discussed in his research that the sight word approach and the whole sentence approach encourages guessing at words which is a habit developed early in beginning reading and one that may be difficult to stop (260).

Groff concluded by pointing out that the sentence method is simply a variation of the sight word method and the studies reveal that the use of context



cues may inhibit the advancement of reading skills in beginning readers (262). This author repeated what has previously been stated in studies of other approaches to beginning reading; this sentence method could be used in conjunction with phonetical methods, but should not take the place or preempt any successful method presently being used.

### Phonetical Instruction

The type of instruction used in teaching beginning reading will be strongly influenced by the reading series that is adopted by a particular school system. Instructors will rely heavily on the basal series to provide the approach, methods, and materials. In a study done by Connie Juel and Diane Roper/Schneider, two contrasting types of reading series were evaluated to see whether the development of letter-sound correspondence (phonics) knowledge was fostered or hindered. One reading text was phonics oriented with emphasis on basic decodable vocabulary and the other text focused on high interest stories which included irregular decodable patterned words as well as regular decodable words (Juel and Roper/Schneider 153). The results showed that the children who were placed in the group that used the basal, which implemented the letter-sound correspondence (phonics), did better on their tests. However, it was also concluded that the facilitation of early letter-sound correspondence knowledge can be accomplished through frequent exposure to many words (Juel and Roper/Schneider 155).

Keith Stanovich pointed out that phonological analysis skills are important determinants of early reading acquisition ("Word Decoding Speed" 809). The ability to rapidly identify words strongly influences the development of a fluent reader. Children identified as skilled readers were shown to have a significant difference in timed response than children who were identified as less-skilled readers in word naming tests. Stanovich found that it is not



essentially the name retrieval speed that discriminates between the skilled and less-skilled reader, but the decoding ability that is the major determinant of reading skills differences ("Word Decoding Speed" 814).

Joanna Williams found, in her review of phonemic analysis studies, children who have difficulties in reading will also have difficulties in analyzing the phonological segmentations of words. Also, instruction in how to segment words according to phonemes will greatly increase their chances of becoming better readers (240). In discussing early studies in phonemic analysis, it seemed this approach was identified with the auditory aspect of reading in its relationship with the study of language. Very little was done in the field of instruction in beginning reading in this area until about 1960 when a move toward phonetical analysis was developed. Studies found that reading was directly related to proficiency in the analysis of spoken language. It was found also that children as young as three years of age could analyze, segment, and blend phonemes. Proficiency in these skills became more accurate with the older children (Williams 241).

Along with the surge of research in the 1970s, came several instructional programs developed in order to instruct children in phonemic skills. These programs consisted of emphasis on articulatory movement of the mouth, the skills of adding, omitting, substituting, and the rearranging of phonemes and the development of three comprehensive programs which incorporated an extensive training in phonemic skills.

In one particular program designed by R. L. Venesky, children were trained to associate sounds with pictures of objects that produced that sound. In Venesky's study the children were successful in learning and retaining the picture-sound associations and at blending phonemes (Williams 242).

A one-to-one tutorial program was set up for another study. Strong

emphasis toward phonetic analysis training showed that children performed significantly better on standardized tests.

The third program developed was a project titled "The ABD's of Reading" (Williams 1). The title refers to the skills taught: analysis, blending, and decoding. The purpose of this developmental study was to assist the learning-disabled child and serve as a supplement to the reading program which was being used at that time. Both phoneme analysis and phonemic blending were taught. Since this study was done in conjunction with the regular reading program, the results did not show that the training in phonemic analysis improves reading. However, other studies have demonstrated effectiveness in reading instruction when phonemic training has been emphasized (Cunningham 471).

### Testing

In contrast to the above studies, Tunmer concluded in his study that reading instruction does not greatly affect the development of phonological awareness (Tunmer 425). His difference in opinion stems from the results produced from the tests administered. Tunmer's study included discussions on accurate assessment of phonological awareness in children. The tests used to evaluate phonological awareness required the child to match, utter, or delete phonemes that are embedded in syllables containing two phonemic segments. The difficulty here is that the child is performing two tasks, synthesis and segmentation. A true "clean" test is one that measures a specific cognitive process as precisely as possible, with little or no involvement of extraneous cognitive operations that could prevent the inference of a specific processing problem (Tunmer 417).

The tapping out of the number of phonemes with a wooden dowel is another analysis. The problem with this type of test is the beginning reader may



confuse the segmentation of graphemes with the segmentation of phonemes. For the most part, children over shoot on words which contained letter pairs or graphemes.

In researching the two methods of instruction in beginning reading, whole word vs. phonetical, the end result of what is being taught is the ability to read the whole word. Children must be able to read a whole word as a final product, whether or not the child has been taught to see the whole word and memorize the word as it appears, or break the word down into parts, pronounce the parts, blend the parts together, and say the word. Visual preference for wholes or for parts is a factor that should be considered in determining what approach should be used to teach individuals (Fisher 13). In Fisher's study, children were tested to see what preference, if any, was prevalent in each child's visual perception. The results not only showed that it is possible to identify at an early age children who should be taught analytically (whole word), but also children who tested as preferring wholes or visual wholes profit more from a whole word approach to reading instruction.

Stanovich reiterated the point that difficulties in reading seem to start with the prerequisite skill for successful reading - phonemic segmentation. The beginning reader must first become knowledgeable of phonemes with words and then be able to recognize these phonemes as a unit of the spoken word ("Explaining the Variance in Reading" 74). Stanovich again concurred with Vellutino in pointing out that phonological segmentation skills are directly linked with linguistic awareness which is strongly associated with initial reading acquisition ("Explaining the Variance in Reading" 74).

The importance of phonological awareness and its effect on initial reading acquisition is found in an additional study cited in Stanovich's article where two groups of children were tested on phoneme segmentation. The children were

tested on phoneme segmentation by being asked to simply say a 'piece' of a one syllable word. The children who did well on this task were average and above readers. However, the poor readers could not segment but very few of the words. In a follow-up study three years later, it was found that the poor readers could segment phonemes at this time. However, these poor readers had developed severe reading disabilities ("Explaining the Variance in Reading" 74).

### Summary and Conclusions

The method of beginning reading instruction that is initially presented to children will strongly influence how they will learn to identify new words. This instruction will determine the level of phonological awareness in the beginning reader.

Phonological awareness plays a very important role in word identification abilities in the early stages of learning to read. However, this skill in identifying new words is not as critical after some advancement in reading skills has been accomplished.

Several programs have been developed in an attempt to improve the whole word approach to beginning reading instruction. Some of these include the whole sentence approach. Children are given a whole sentence to work with at one time. This approach is believed to improve comprehension. The language experience approach was developed with the idea that children can learn to read by identifying words contained in their own language pattern.

Many basal reading series basically contains the whole word approach to beginning reading instruction with some series using high interest stories for motivation. Presently many of the basal reading series contains some phonetical skills. However, a comparison of the most frequently adopted series showed the approach to teaching beginning reading is concerned with the whole word method of instruction.



There is a concern among researchers that the testing of the different methods of beginning reading is not valid. It is difficult to determine if the test is truly evaluating exactly what it was intended to test without other skills influencing the results.

Implications of the review of the literature are the phonetical approaches to teaching beginning reading produce a supportive foundation for children to use in their acquisitions of new words (Wagner 263). While some children may learn better with the whole word approach to beginning reading, those who do master the ability to segment phonemes and phonetically analyze words will have better success in recognizing words for reading development.

## CHAPTER 3

### Methodology

The purpose of this study was to determine if kindergarten students who are taught beginning reading skills using Dekodiphukan, a phonetical, decoding instructional approach, show higher achievement scores than kindergarten students who are taught with the instruction presented in the basal reading series Silver Burdett Ginn which is predominantly a sight word approach to instruction. The empirical portion of the study involved students' completion of several months of instruction with the Dekodiphukan program. The length of the study allowed each group ample time and instruction in order to recognize letters, discriminate visually and audibly, recall vocabulary by sight and in context, and have the ability to comprehend simple reading passages. The concern that prompted the study was to see if there would be difference in the academic reading achievement gains of those students receiving instruction provided by the Dekodiphukan program. The major question investigated for this study was:

1) Would students who learn beginning reading concepts through the Dekodiphukan program show higher scores in reading achievement than students who learn beginning reading skills through the use of the Silver Burdett Ginn Basal reader?

The procedures and instructional methods are described in this chapter under the following topics: (1) null hypothesis, (2) description of subjects, (3) research design and procedures, (4) description of the instructors, and (5) description of measures employed.

### Null Hypothesis

Students who learn beginning reading concepts, letter, and sound correspondence through the use of Dekodiphukan, will show no significant difference in their reading achievement scores than those students who learn beginning reading concepts through the use of the basal reader methods which predominantly employ the sight word approach to instruction.

### Description of the Subjects

The subjects were eighty-two kindergarten students enrolled in three different schools. The control group consisted of two classes, sixteen and fifteen students attending two different schools. One school was a city school located in an urban, community type setting and included a mixture of ethnic groups. The other control group's school was located in a predominately rural area. While the school was situated in a rural setting, the students were bussed from residential subdivisions located within the city limits. The experimental group consisted of two classes of twenty-six and twenty-four students. The school setting for the experimental group was rural, but represented population from the city. The total population of subjects for this study attended schools which were a part of the same large, public school system which is located in the Middle Tennessee area.

### Research Design and Procedures

#### Design

The study was a quasi-experimental nonequivalent pretest/posttest control group design. For the purpose of the study, the students were divided into four groups. Four groups with a total N of 82 were chosen in order to control for the possibility of attrition contributing to the internal invalidity of the research. Furthermore, through the use of four groups, an analysis of this large a number of scores controlled for the flexibility of teaching styles to not have an



external effect on the outcome of the study. The groups were assigned as the experimental group was Group One and Group Two. The control groups were Group Three and Group Four.

The instruments used for assessment were the Brigance as a pretest given at the beginning of the school year and the Metropolitan Achievement Test as the posttest given in the spring. The Brigance Test is administered as standard procedure as an entry level evaluation for all incoming kindergarten students. The Metropolitan Achievement Test was selected because the sub-tests measured the specific reading skills of visual discrimination, letter recognition, auditory discrimination, sight vocabulary, phoneme/grapheme consonants, vocabulary in context, and reading comprehension. The reliability of the Metropolitan Achievement Test ranked high according to assessment represented by the Kuder Richardson Formula (Farr 7).

### Procedures

Appropriate school officials which included the superintendent of school, the principals, the teachers, the supervisor of instruction were informed of the study and permission to conduct the study was obtained. The parents were informed through written notices and a parent-teacher meeting was held to answer questions about the study and to gather written permission from the parents for their child to participate in the study. The parents were instructed that the study would concern the effect of beginning reading instruction with the program Dekodiphukan as compared to beginning reading instruction with the basal reading series Silver Burdett Ginn.

The experimental groups started their reading instruction with the introduction of the forty-four pictures which represent the sounds which make up all of the words of the English language. These pictures were developed by the Baratta-Lorton Center for Innovation in Education are provided with the



Dekodiphukan reading program. Figure 3.1 is an example of all the Dekodiphukan sound pictures.

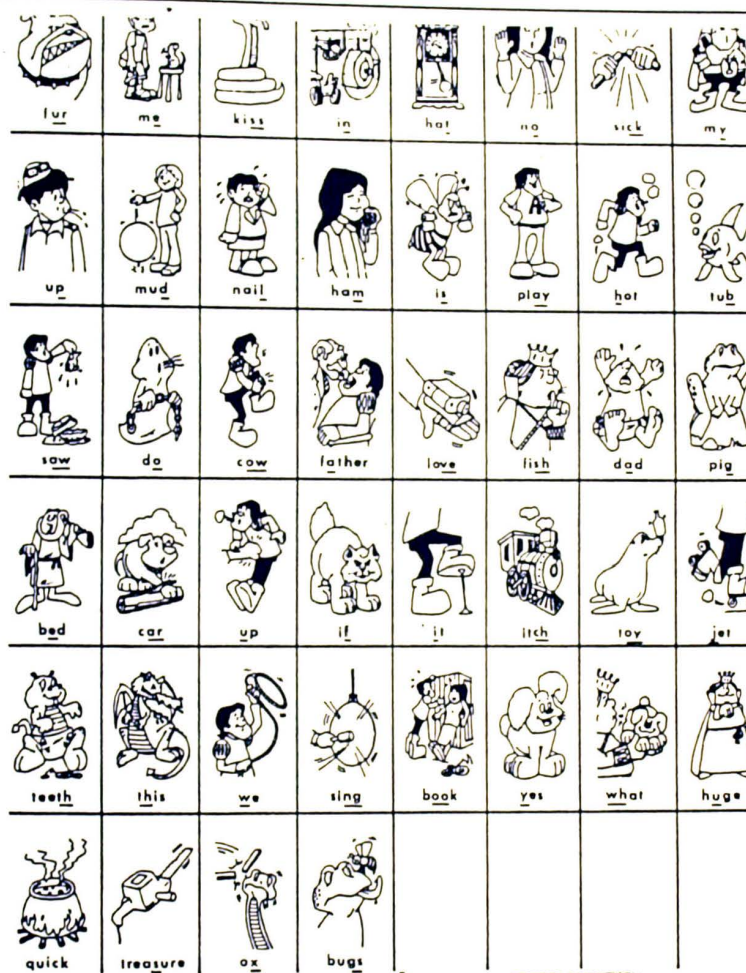


Figure 3.1

Dekodiphukan Sound Pictures

The initial introduction into the program is accomplished through the reading of a rhyming story about a king in the land of Dekodiphukan who feels he is not fit to be a king because he cannot read. A code is discovered in the story which is associated with sounding out words. Each of the forty-four sounds which make up all of the words in the English language has a picture displaying an action which represents the produced sound. These forty-four pictures were used consistently throughout the instruction as a sound-symbol base. Each time a sound occurred in a word, regardless of how it was spelled, a picture representing that sound appeared in the word. For example, the 'k' sound occurs in the following words:

kiss, cat sick school

In each word, the sound is spelled differently, but the sound 'k' is the same. In the Dekodiphukan program a picture of a stick being broken represents the 'k' sound, regardless of the spelling of the word. Figure 3.2 illustrates the picture included in the Dekodiphukan program to represent the 'k' sound.




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Figure 3.2  
Dekodiphukan Sound Picture For The Sound 'K'

A flip book displaying each of the forty-four sound pictures was used after a portion of the story was read. The students were instructed on how to make the sound. The sound was what was emphasized, not the object or name of the object in the picture. After several days of instruction and several sounds were mastered, the next instructional procedure was to teach the blending of two sounds together with the use of the flip book and the Dekodiphukan story book. When half of the class had mastered the majority of the sounds and the skill of blending, centers were introduced. Letters of the alphabet were not introduced until all forty-four sounds had been learned. There were five centers set up in the classroom: (1) Picture Packet Center, (2) Stamping Center, (3) Book Station Center, (4) Writing/Spelling Center, and (5) Worksheet Center.

Figure 3.3 illustrates the materials available in the Picture Packet Center where students read words represented by the pictures. Students began with one sound and progressed to two and three sound words.

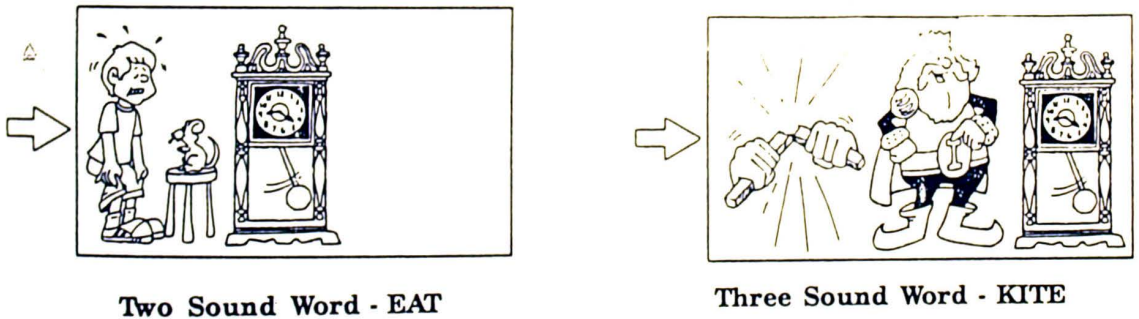


Figure 3.3  
Representative Sample of Pictures  
With Two and Three Sound Words



As more sounds were mastered, the program progressed to word phrases and then to word transition where the printed word is placed under the picture. Figure 3.4 illustrates materials provided in the Dekodiphukan program in reading phrases and word transition skills.

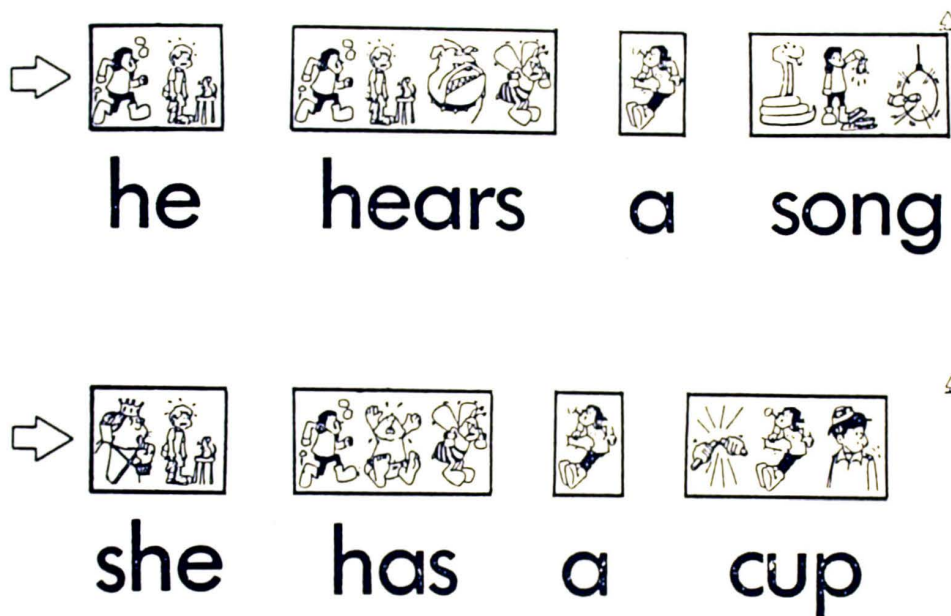


Figure 3.4

#### Representative Sample of Dekodiphukan Pictures With Word Transitions

As progress was made in associating the sound with the pictures and learning the representation of the pictures with the printed word below it, the students were given pictures in which the vowel only had a picture above it. The students were taught to identify or decode words through the association of



the vowels as they were represented by pictures. Figure 3.5 illustrates the materials presented for the learning of words with pictures of the vowels only stamped above it.



Figure 3.5

### Representative Sample of Words With Pictures of Vowels Only

The Picture Packet Center began as shown above with students being presented elementary skills such as matching two sound words, then matching three sound words. As success was experienced with these skills the students were advanced to word phrases which contain two, three, and four words and, as a final concept, vowels were introduced.

The Stamping Center was arranged so each individual student was provided with a set of inked stamps with all the forty-four sounds. Several activities were provided for the students to stamp out words. The students were given worksheets with two sound words printed on them. The students were to

stamp out the words. After two sound words were successfully decoded, three sound words were introduced and the phrases were provided for stamping out.

As with the Picture Packet Center, the Stamping Center provided a progressive development of skills. The students would stamp out simple words containing two sound words, then three sound words, and, as phrases were provided, a footing was established for creative writing allowing the student to develop and stamp out their own words. Figure 3.6 illustrates words the students were given to stamp out.

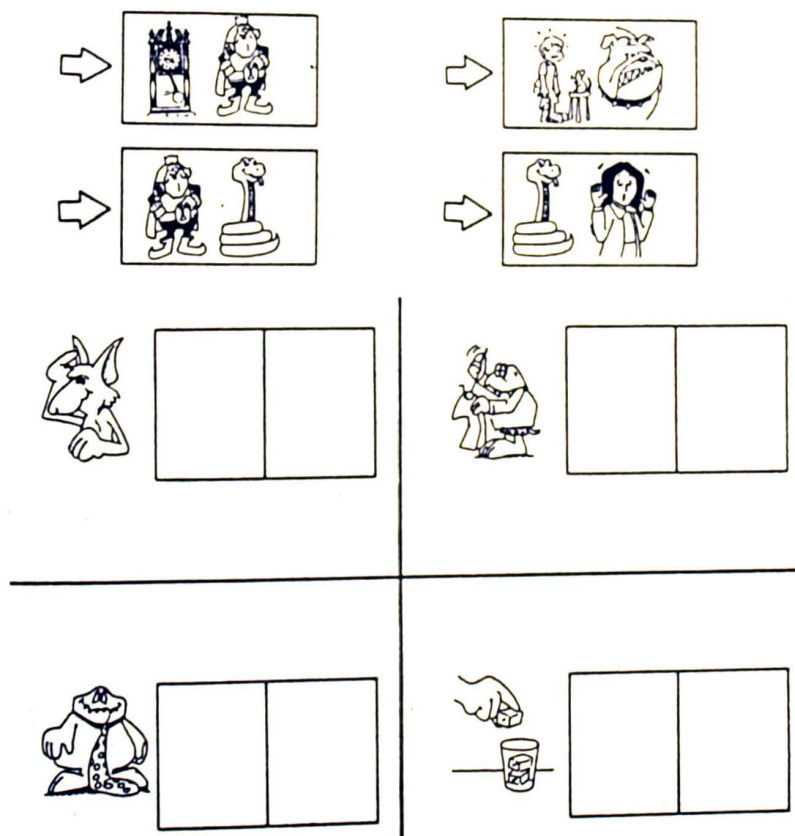










Figure 3.6  
Representative Sample of Stamping Center Activity

The Stamping Center provided time for the students to stamp out their own words, phrases, and stories. This was called free stamping. The students were encouraged to stamp out relevant words, phrases, or stories. Many of the stamped out stories would be about a field trip the class had just taken, a special holiday celebrated, or an event that recently occurred in their personal life. These free stamped stories were laminated and placed in the Book Center for other students to decode and read. This center encouraged creativity. Students were writing/stamping their own stories long before they developed the ability to write or read.









The Stamping Center also introduced the skill of spelling. Instruction in spelling was not introduced until the students began to create and write their personal stories using the alphabet. This skill was taught during the transition period which involved transcribing from the picture symbols to the English language. Spelling charts were provided for students to use as they progressed in their composition abilities. The students would stamp out their story, print their story under the stamped rendition, and use the spelling charts to correct the misspelled words which occurred during the transition process. The spelling chart contained pictures of all forty-four sounds arranged in the same rows and in the same order as taught. Beneath each sound picture were various ways that the sound may be spelled. For example, 'f' sound is spelled more frequently with an 'f' as in food than it is with a 'ph' as in phone. Each of the spellings which appeared beneath the sound pictures were color coded. The first spelling of each sound was coded white. If a second spelling was listed on the decoding chart, it was coded yellow. Third spellings were red, fourth spellings were blue, fifth spellings were green, sixth spellings were brown, and seventh spellings were purple. The decoding charts contained the spellings which appear in between ninety-five to ninety-eight percent of the words the students would



encounter while learning to read and write. Figure 3.7 illustrates a portion of the spelling chart used during the editing of the writing/stamping activity.

							
e	ar	u	f	i	ch	oy	j
ea		e	ph	e	tch	oi	g
@		@	ugh	y	tu		dge
ai		@			ti		ge

							
th	th	w	ng	o	y	wh	u
			n	u			u e
				ou			ew
							you





			
qu	s	x	x
ch	ge	cks	gs

Figure 3.7  
Dekodiphukan Program  
Representative Sample of Spelling Chart

The final step in the Stamping Center was writing and creating stories without using the stamps. These stories were written by the students and read to the class.

The Book Station Center was where students were provided books

to read. Initially students were provided with two sound books. After mastering the ability to read fluently the two sound books, three sound and phrase books were added. Transition books were then placed in the center along with copies of students' free stamping stories. Easy readers chosen by the teacher from the library, book clubs, and other sources were placed in the center for students to read to themselves and to other students.

The Writing/Spelling Center was where the students were taught to use the spelling charts used in the Stamping Center. The students were provided write-on magic slates and small chalkboards in which to practice writing letters. Alphabet cards for the wall were displayed and letter worksheets were also assigned. The letter writing worksheets represented the students' first opportunity to write or trace each letter of the alphabet with a writing instrument. After students mastered the skill of writing and recognizing letters, they were given lined paper to practice writing letters using the lines as a guide. This center also included instructions on how to use the spelling chart. The students were not only given worksheets to practice spelling skills, but also spelling tests. The spelling tests were not given until the latter portion of the year, and was done in order to prepare the students for their next year activities.

The Worksheet Center was developed in order to develop the students' comprehension abilities. The students were given words, and were to mark the picture which tells about the words. They began with two sound words, then three sound words, and progressed to phrases. After the students progressed successfully to the phrase level and had mastered this level, this center was recycled starting with the two-sound pictures and included in the second cycle was the spelling chart for spelling corrections. Some sight word activities were included in this center to provide students with the opportunity to recognize

words without sounding them out. The sight word worksheets were designed to allow students to internalize a basic vocabulary of words which they could both read and write with ease. These worksheet were not meant to be used as flashcard drills for memorization. Figure 3.8 illustrates a worksheet students would work while at the Worksheet Center.

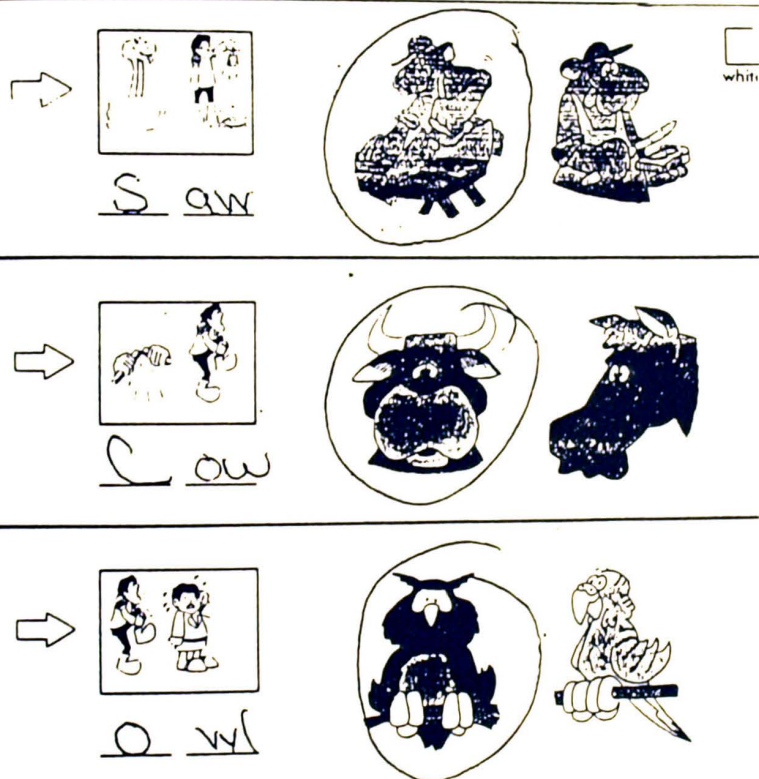


Figure 3.8

### Representative Sample of Worksheet Dekodiphukan Program

The control group began their instruction according to procedures prescribed in the basal reading series Silver Burdett Ginn. The teacher followed the format mapped out in the teacher's guide and utilized all the materials (word charts, workbooks, pictures, worksheets, etc.) available with the series. Initially



the students were introduced to each letter of the alphabet one letter per lesson. The letter was visually demonstrated as well as auditorally presented. The only phonetical relevance given to the letter was the emphasis of how the sound for the letter is used at the beginning of words. After several letters had been introduced, simple words were taught using the whole-word recognition method of reading. The students were assigned activities to do in a workbook which were designed to reinforce the lesson for the day. The above procedures were accomplished by the teacher working with the whole group for the lesson presentation. The instruction was then designed to provide the students with time for individual work.

The experimental and control group started their instruction in the fall and continued during the spring. This study covered a period of eight months in order to assure that each group had ample time to learn to read and to give opportunity to develop skills in comprehension; a skill which develops last and a skill that gives evidence to ability.

#### Description of Instructors

The above procedures were accomplished and managed by the classroom teachers. While it is understood the groups of students were from different schools, the strength of the study of groups evolves from the similar backgrounds the groups possess. However, it is important to discuss and identify the instructors of each group. All four instructors were women with degrees in elementary education with certification in kindergarten instruction. Group one, two, and three's instructor had more than seven years teaching experience. Group four's instructor was in her first year of teaching experience. Both instructors of the experimental group were familiar with the Dekodiphukan Program and had taught reading with the program prior to the study. Group three's instructor had taught reading with the Silver Burdett Ginn Reading

Program several years prior to the study. All four instructors were recommended for the study by the principal.

### Description of Measures Employed

The Brigance Test was given to each student prior to entering the kindergarten programs at each school. This test was used to discriminate among and determine kindergarten students' readiness and ability to achieve academic success in the kindergarten class.

Students who performed at expected standards met the qualification for being placed in the regular kindergarten classroom. A t-test was administered on the Brigance scores and no significance difference in the groups were found at the .001 level of confidence.

The Metropolitan Achievement Test, Primer, Form L was given in the spring. The reading content of this test included the visual discrimination test containing twenty-four items that measured the student's ability to match identical configurations of single graphemes and grapheme combinations. The letter recognition test contained twenty-six items that measured recognition of all letters of the alphabet. The student was required to identify a dictated letter from upper or lower-case printed letters. The auditory discrimination test contained twenty-four items that measured initial and final single consonants and consonant blends. The student was required to match a dictated stimulus to a picture that began or ended with the same sound. The sight vocabulary test contained thirty items that measured quick recognition of a dictated word. The level of the words were Preprimer through Grade Two. The phoneme/grapheme, consonants test contained thirty items that measured initial and final single consonants, initial consonant clusters, and rhyming words. The students were required to match a dictated phoneme to a printed grapheme. The vocabulary in context test contained items that measured the

meaning of words in context. A variety of grammatical constructions were used. The reading comprehension test contained thirty-eight items that measured the comprehension of words, rebus, sentences, and passages. The two passages were at Primer level. Based on the passages, ten items assess the students' ability to recognize literal detail, infer meaning, and draw conclusions.

The posttest was administered by the classroom teacher with assistance from the study director as an adult monitor. The test was scored using hand scoring techniques. The study director checked the raw scores. For the purpose of the study, raw scores were used in the statistical calculations. A  $t$ -test for independent samples was applied to the posttest as well as a one-way Analysis of Variance with the probability level of .01 for both analysis.



## CHAPTER 4

### Results

This chapter contains the summary of the data and provides a representation of the analysis of tests given to examine the hypothesis. The data analysis consisted of a statistical testing of the null hypothesis. Appropriate data were collected and is provided in tables which will show the results of each analysis.

#### Summary and Analysis of the Data

The data reflect the scores received from the pretest and posttest scores. The students were given the Brigance Test as a pretest and the Metropolitan Achievement Test, Form L as a posttest. The pretest was given prior to the beginning of school by kindergarten teachers. The posttest was given in the spring after ample time for instruction in beginning reading had been provided. This also provided opportunity for the students to become comfortable with written measurements.

The study involved two groups within the control group and two groups within the experimental group. The experimental group consisted of two kindergarten classes within the same school with twenty-six students in Group 1, and twenty-four students in Group 2. The control group consisted two classes in two separate schools. Group 3 contained sixteen students, and Group 4 contained seventeen students.

To be assured the groups were alike entering the study, and to account for any differences in the groups at the onset of the study, a  $t$ -test was administered to all the Brigance scores. The raw scores were gathered, tabulated, and arranged in order from highest to lowest score. Group 1 was compared to Group 3.

Group 1 was also compared to Group 4, and, likewise, Group 2 was compared to Group 3 and also Group 4. Table 4.1 summarizes the raw scores for the Brigance Test.

Table 4.1  
Experimental Group and Control Group  
Raw Scores

Experimental Group		Control Group	
Group 1	Group 2	Group 3	Group 4
100	100	99	94
96	100	97.5	93.5
95	100	97	93
95	97.5	96.5	92
95	96.5	96	89
93.5	94.5	95.5	89
93.5	93	95	88
93	92	92	87.5
90.5	91	91	86
89.5	90.5	89.5	85
87.5	89.5	89.5	85
87	89	88.5	85
86	88	88	81
84.5	88	87	77
84	87	86	72.5
82	85.5	80.5	72
81.5	84.5		71
80	83.5		
77	83		
77	81		
76.5	78.5		
76	78		
75	77		
70.5	77		
69.5			
68.5			
68			

The study involved two groups within the control group and two groups within the experimental group; therefore, a  $t$ -test of independent samples for unequal groups was completed on the Brigance scores in order to compare each experimental group against each control group. Table 4.2 shows the scoring data for the  $t$ -test for unequal groups administered on the Brigance scores.

Table 4.2  
 $t$ -Test for Significance of Difference  
Brigance Scores

Group	Mean	Standard Deviation	T	DF
1	83.673	9.440		
3	91.938	5.102	-3.2	40
1	83.673	9.440		
4	84.719	7.808	-.371	40
2	88.104	7.138		
3	91.938	5.102	1.852	38
2	88.104	7.138		
4	84.719	7.808	-1.416	38

\*Significance at the .05 level of confidence.

Based on the  $t$  test results, which is a comparison of groups for significant differences upon entering the study, the groups appeared to be relatively equal according to the items tested in the Brigance Test. At the .05 level of confidence, the  $t$ -test for independent samples for unequal groups showed that there is no significant difference in the groups. The  $t$  value is established at 1.21 which is less than the 2.045 value using the df of 29 and  $p=.05$ .



The posttest was the Metropolitan Achievement Test, Form L, which was divided into subtests for visual discrimination, letter recognition, auditory discrimination, sight vocabulary, phoneme/grapheme, vocabulary in context, and reading comprehension. Table 4.3 is a summary of the total reading scores for each student in each of the groups.

Table 4.3  
Total Reading Raw Scores

Group 1	Group 2	Group 3	Group 4
172	177	133	151
171	176	127	139
170	175	127	135
170	174	124	127
167	164	120	115
166	163	115	115
165	162	113	115
162	162	110	113
162	160	110	107
162	158	105	90
160	154	100	88
150	151	98	85
150	151	97	85
144	147	75	84
144	146	72	76
144	144		73
141	143		
141	142		
134	139		
132	134		
130	133		
129	132		
115	119		
109	117		
104			
91			

A one-way Analysis of Variance (ANOVA) was used to test the research question: Do students who learn beginning reading concepts, letter and sound correspondence through the Dekodiphukan program show higher scores in reading achievement than students who learn beginning reading skills through the use of the Silver Burdett Ginn basal reader? The analysis showed a significant difference at the .05 level ( $p < .05$ ) in each of the tested skills, with the exception of letter recognition. These data are summarized in Table 4.4.

Table 4.4  
One-Way Analysis of Variance of Reading Skills

Skill	Experimental		Control		F
	G1 Mean	G2 Mean	G3 Mean	G4 Mean	
Visual Discr.	21.00	22.87	20.56	19.31	*5.588
Letter Recognition	25.77	25.87	24.75	24.75	2.077
Auditory Discr.	20.52	21.17	16.13	15.75	*9.499
Sight Vocabulary	24.54	25.08	14.75	13.56	*22.557
Phoneme/Grapheme	24.99	27.75	18.00	16.94	*19.300
Vocabulary In Context	6.23	5.96	1.00	1.50	*11.825
Reading Comp.	22.69	22.29	13.31	14.31	*22.213
Total Reading	145.58	150.96	108.50	106.31	*26.389

\*Significance at the .05 level of confidence.

As with the Brigance Test scores, a  $t$ -test for unequal groups was administered on each subtest score to see if there was a significant difference in the groups after the instruction with the variable of the Dekodiphukan program. Again, Group 1 was compared to Group 3 and Group 4. Group 2 was compared

to Group 3 and Group 4. Significant difference in the experimental and control groups occurred in each of the skills tested except in the areas of visual discrimination and letter recognition. Visual discrimination requires the skill of matching and the letter recognition test included identifying the letters of the alphabet. Both of these skills have been identified as prerequisite skills to learning to read whether using the basal reader or the Dekodiphukan program. Table 4.5 summarizes the results of the  $t$ -test for unequal groups.

Table 4.5  
 $t$ -Test of Reading Skills

Skill G2/G4	G1/G3	$t$ -Score G1/G4		G2/G3
Visual Discrimination	.487	2.309	3.015	*3.981
Letter Recognition	2.303	1.443	2.433	1.492
Auditory Discrimination	*3.447	*3.266	*4.456	*4.020
Sight Vocabulary	*5.304	*5.524	*6.239	*6.311
Phoneme/Grapheme	*4.217	*3.756	*9.352	*6.172
Vocabulary In Context	*5.351	*4.827	*3.758	*3.374
Reading Comprehension	*6.132	*5.304	*6.277	*5.360
Total Reading	*5.624	*5.376	*7.683	*6.933

\*Significance at the .05 level of confidence.

### Summary of Results

#### Null Hypothesis

Do students who learn beginning reading concepts, letter, and sound correspondence through the Dekodiphukan program show higher scores in reading achievement than students who learn beginning reading skills through the use of the Silver Burdett Ginn Basal reader? The statistical analysis comparing the achievement of the experimental group to the achievement of



the control yielded data that rejected the null hypothesis. The Dekodiphukan program does make a difference in the reading abilities of kindergarten students in their first year of instruction. The one-way Analysis of Variance for unequal groups showed at the .05 level of confidence and  $F$  being greater than 3.07, a significant difference in each of the subtested areas with the exception of letter recognition. The ANOVA analysis produced the conclusion that there is a significant difference among the group means and it is concluded that the treatment, the Dekodiphukan program, had a significant effect on the dependent variable.

The  $t$ -Test for independent samples of unequal groups yielded data that also rejected the null hypothesis. The Dekodiphukan program did make a difference in the reading achievement of kindergarten students in their first year of instruction. With a probability level less than .01, the  $t$  values must be greater than 2.02 to establish significant difference. Each of the subtests produced  $t$  values greater than this with the exception of letter recognition. Based on these data the hypothesis would have been rejected.

## CHAPTER 5

### Summary, Conclusions, and Recommendations

#### Summary

In order for students to learn the very vital skill of reading, they must first learn that verbal communication can be recognized in a totally different format than what they have previously experienced; that is the written word. It is the objective of the teacher to introduce each symbol that makes a word, build a data base of symbols and their sounds, teach how to blend the sounds together to make a word, and put the words together in order to understand what is being communicated from the written page (Algeria 451). There are many methods of accomplishing this objective, all of which seek to arrive at the same results. The purpose of this study was to investigate the reading achievement gains of those students who received instruction through the Dekodiphukan program as compared to those students who received their instruction from the Silver Burdett Ginn basal reading program. This study suggested that students have better success in reading if taught with the Dekodiphukan program rather than the basal reading program, Silver Burdett Ginn.

A review of the literature was examined to better investigate the problem. It was found that decoding abilities plays a very important role in the establishment of reading fluency at the early stages of instruction. However, several whole word instructional programs have been developed and improved. Valid testing is a concern among researchers in reporting the results of studies of decoding vs. whole word instruction. The present study was accomplished to add to literature investigating the differences in students who learn to read with the whole word instructional approach or the phonetical, decoding approach.

The empirical part of the study involved a sample of eighty-two kindergarten students. The sample population was from three public

elementary schools in the Middle Tennessee area. The students were tested for kindergarten readiness and were equally compared. The experimental group covered eight months of beginning reading instruction in the Dekodiphukan program and the control covered the same time span with the Silver Burdett Ginn program. The students were given a posttest to compare for differences in reading abilities.

The data were analyzed at the .05 level of confidence using the ANOVA, one-way Analysis of Variance . Also, a t-test for independent samples was analyzed at the .01 level of confidence.

### Conclusions

The basis of this study was derived by searching for prior studies determining the most successful approach to beginning reading instruction and the present study investigating the differences in groups receiving beginning instruction using two methods. The literature available did not confirm or authorize one method as opposed to another. It does suggest that some students learn to read more fluently through the phonical methods, and others learn better by the whole word approach. The conclusions from this study were based on the data collected at the end of the instructional procedures.

According to the analysis, the scores established from the testing for both the control group and the experimental group remained statistically close in the areas of visual discrimination and letter recognition. This seemed logical when it is noted that both the basal reading program and the decoding program, at some point in time, taught recognition of each of the letters of the alphabet. However, the basal reading program introduced letters as an initial skill while the decoding program did not introduce the actual letters until all of the sounds and blends of sounds had been taught. This may be the variable that contributed to the significant difference at the .05 level of confidence in the auditory



discrimination category. The experimental group had been trained to listen for sounds. This was the very first skill to be developed in preparation for associating sounds with symbols. The sight vocabulary section of the evaluation showed a significant difference at the .05 level of confidence. In this section of the testing, the subjects were given audibly a word and they were to choose that word from a list of four options. There were thirty words which were enunciated with a time limit of not more than two seconds between words. It was observed that the control group marked only the answers which were words recognized as a whole. The experimental group marked their answers by listening for the beginning sound and immediately searching for a word with the letter associated with the sound. It was evident that the experimental group quickly implemented their decoding skills on a test which supposedly eliminated decoding as a method of response. All other areas tested, phoneme/grapheme, vocabulary in context, and, most importantly, reading comprehension, showed significant difference.

The findings from this study support Vellutino and Alegria in their opinions that children taught with a code oriented method of instruction learn to read more fluently. However, Vellutino does establish the view that children may benefit from a complimentary program that utilizes both methods. This study also supports Stanovich who pointed out that phonological analysis skills allow children to become more rapid readers by identifying words quickly. Also, Flesch's vigorous appeal to instruct children through the phonical approach to beginning reading instruction is supported by this investigation.

#### Recommendations

An analysis of the data supported the use of Dekodiphukan as a more successful approach to beginning reading instruction. However, the following

recommendations are being made as a result of the study:

1. It is recommended that replication of this study be administered with other populations.
2. It is recommended that replication of this study be administered comparing Dekodiphukan 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 Dekodiphukan.
4. It is recommended that the implications of this study be made available to teacher institutions for research.

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## Appendixes

Appendix A  
Superintendent Permission Form



August 16, 1989

45

Mr. Pete Kyriakos  
Director of Education  
Clarksville Montgomery County School System  
P.O. Box 867  
Clarksville, Tennessee 37040

Dear Mr. Kyriakos,

I am currently enrolled in an Educational Research class at Austin Peay State University. The design of this graduate course is a seminar practicum format. The practicum will involve conducting action research within the educational setting of our school system.

The study I am planning to do involves the evaluation of two methods of instruction in beginning reading, the Dekodiphukan program and the traditional, basal reader approach. Two kindergarten classes at Woodlawn will receive the Dekodiphukan instruction, while two Ringgold kindergarten classes will receive the traditional instruction. Each student will be pretested and posttested in order to determine significant differences in the academic achievement of reading skills.

I would like to conduct this study from September to December of this school year. I have discussed this research with Mr. Wallace and Mr. Hudson and have received their approval.

This study should provide a great learning experience for all students and teachers involved as well as contribute to the field of education. Your consent to carry out this study would be greatly appreciated. Enclosed is a checklist describing the research and the Informed Consent Statement to be sent to all parents. If you have any questions or would like to discuss this further, please contact me anytime.

Thank You,

Judith H. Castleberry  
Library/Media Specialist  
Woodlawn Elementary

cc: Mr. Lew Wallace  
Mr. Ken Hudson

## Appendix. B

### Checklist for Research Involving Human Subjects

N/A

## AUSTIN PEAY STATE UNIVERSITY

## CHECKLIST FOR RESEARCH INVOLVING HUMAN SUBJECTS

**TITLE** A Comparison of the Dekodiphukan and the Traditional Methods of Reading Instruction on the Academic Achievement of Kindergarten Students

**FUNDING SOURCE** Tennessee Higher Education Grant, Austin Peay State University

**SPONSOR** (if student research) Dr. Dolores A. Gore, Professor of Education

1. Give a brief description or outline of your research procedures as they related to the use of the human subjects. This should include a description of the subjects themselves, instructions given to them, activities in which they engage, special incentives, and tests and questionnaires. If new or non-standard tests for questionnaires are used, copies should be attached to this form. Note if the subjects are minors or "vulnerable" (children, prisoners, mentally or physically infirm, etc.).

**A. Subjects:** The subjects will be kindergarten children attending Woodlawn Elementary School, Ringgold Elementary School, and Moore Elementary School.

**B. Procedures:** The Ringgold and Moore School students will receive the traditional method of reading instruction and the Woodlawn School students will receive the Dekodiphukan method of reading instruction.

**C. Vulnerability:** Prior to any research being conducted, consent forms will be attained from the parents of the subjects involved. No subject will be allowed to participate without this consent.

2. Does this research entail possible risk to psychic, legal, physical, or social harm to the subjects? Please explain. What steps have been taken to minimize these risks? What provisions have been made to insure that appropriate facilities and professional attention necessary for the health and safety of the subjects are available and will be utilized?

No educational or physical harm will result from participation in this study.

3. The potential benefits of this activity to the subjects and to mankind in general outweigh any possible risks. This opinion is justified by the following reasons:

N/A



## CHECKLIST FOR RESEARCH INVOLVING HUMAN SUBJECTS

4. Will legally effective, informed consent be obtained from all subjects or their legally authorized representative?

Yes

5. Will the confidentiality/anonymity of all subjects be maintained? How is this accomplished? (If not, has a formal release been obtained? Attach.) (a) If data will be stored by electronic media, what steps will be taken to assure confidentiality/anonymity? (b) If data will be stored by non-electric media, what steps will be taken to assure confidentiality/anonymity?

No names will be used. All information will remain anonymous.

6. Do the data to be collected relate to illegal activities? If yes, explain.

No

7. Are all subjects protected from the future potentially harmful use of the data collected in this investigation? How is this accomplished?

Yes. Anonymous information.

I have read the Austin Peay State University Policies and Procedures on Human Research and agree to abide by them. I also agree to report to the Human Research Review Committee any significant and relevant changes in procedures and instruments as they relate to subjects.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Student research directed by faculty should be co-signed by faculty supervisor.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix C

### Informed Consent Statement

## INFORMED CONSENT STATEMENT

50

The purpose of this study is to investigate the effects of the Dekodiphukan reading program on reading achievement. All responses will be confidential. At no time will persons involved be identified nor will anyone other than the investigators have access to data. No potential hazards may occur from participation in this research. Participation in this study is completely voluntary and participants are free to terminate involvement at any time without any penalty.

A copy of the research findings will be available at the school for your examination.

Thank you for your cooperation.

*Mrs. Judith H. Castleberry*

Mrs. Judith H. Castleberry, Graduate Student  
Austin Peay State University

*Dr. Dolores A. Gore*

Dr. Dolores A. Gore, Faculty Advisor  
Austin Peay State University

---

I agree to allow my child to participate in the present study being conducted under the supervision of a faculty member of the Department of Education at Austin Peay State University and a faculty member of Woodlawn Elementary School, Clarksville, TN. I have been informed either orally or in writing or both, about the procedures to be followed and about any discomforts or risks which may be involved. The investigator has offered to answer any further inquiries I may have regarding the procedures. I understand that I am free not to participate in this study if I desire. I have also been told of any benefits that may result from my participation.

---

Name (Please Print)

---

Signature

---

Date



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