

THE EFFECTS OF TRAINING PARENTS IN TEACHING PHONEMIC
AWARENESS ON THE PHONEMIC AWARENESS AND EARLY
READING OF STRUGGLING READERS

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in collaboration with my advisory committee. This dissertation does not include proprietary or classified information.

Patricia Fisher Warren

Certificate of Approval:

Susan K. Villaume
Professor
College of Education

Bruce A. Murray, Chair
Associate Professor
Curriculum and Teaching

Edna G. Brabham
Associate Professor
Curriculum and Teaching

George T. Flowers
Dean
Graduate School

THE EFFECTS OF TRAINING PARENTS IN TEACHING PHONEMIC
AWARENESS ON THE PHONEMIC AWARENESS AND EARLY
READING OF STRUGGLING READERS

Patricia Fisher Warren

A Dissertation

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Doctor of Philosophy

Auburn, Alabama
August 10, 2009

THE EFFECTS OF TRAINING PARENTS IN TEACHING PHONEMIC
AWARENESS ON THE PHONEMIC AWARENESS AND EARLY
READING OF STRUGGLING READERS

Patricia Fisher Warren

Permission is granted to Auburn University to make copies of this dissertation at its discretion, upon request of individuals or institutions and at their expense.
The author reserves all publication rights.

Signature of Author

Date of Graduation

VITA

Patricia Ann (Fisher) Warren, daughter of Paul Howard Fisher and Doris (Fisher) Putnam, was born September 14, 1950, in Decatur, Alabama. After graduating from Huntsville High School in 1968, she attended The University of North Alabama in Florence, Alabama, for two years. In May 1984, she received a Bachelor of Science degree in Elementary Education from Athens State University. After eight years as a classroom teacher in elementary schools in Geneva and Ozark, Alabama, she entered graduate school at Troy State University in September, 1992. She continued teaching full time while pursuing her degree. In May 1994, she received the degree of Master of Science in Elementary Education. She holds an Alabama Class B, A, and AA certificate in Elementary Education and a Class A Reading Specialist. She is married to Joe P. Warren, son of Clarence E. Warren and Sue P. Warren. They have three children, Michael J. Warren, Lindsey B. Odom, and David P. Warren.

DISSERTATION ABSTRACT

THE EFFECTS OF TRAINING PARENTS IN TEACHING PHONEMIC
AWARENESS ON THE PHONEMIC AWARENESS AND EARLY
READING OF STRUGGLING READERS

Patricia Fisher Warren

Doctor of Philosophy, August 10, 2009
(M.S., Troy State University, 1994)
(B.S., Athens State University, 1984)

101 Typed Pages

Directed by Bruce A. Murray

This study was designed to research the difference in parental training in phonemic awareness on the achievements of their children who had been identified as struggling readers. Subjects were children from ten kindergarten and first grade classrooms residing in federally subsidized housing. An experimental group (the phonemic awareness trained group) and a control group (the read aloud group) attended 10-week training. Groups were determined by random assignment. Experimental group parents were trained to administer phonemic awareness instruction daily to their children. Results of this study did not support the hypothesis that parental tutoring in phonemic awareness statistically improves performance on phonologically based assessments for emergent readers. Data on phoneme segmentation fluency and nonsense word fluency

were collected from 10 students, five in the phonemic awareness trained group and five in the read aloud trained group. There was not a statistically significant difference ($p < .05$) on the posttest scores of the two groups. The p-value was at .295, which is more than the set value .05.

Due to the wide dispersion of scores on the posttest measures and the small sample size of the study, outcomes of the two treatments were then compared using the Mann-Whitney U test. This is a non-parametric, two-sample, rank-sum test. The phoneme segmentation fluency posttest verified the calculated value of U as 7.5, which exceeded the critical value of U (2.0). Likewise, on the nonsense word fluency posttest, the calculated value of U was 10.50 which exceeded the critical value of U (2.). Results for both of these tests led the researcher to retain the hypothesis that parental training and implementation of phonemic awareness instruction for their child does not affect learning phonemic awareness. The researcher also discussed further research that is needed and implications for classroom teachers in the area of parental involvement in phonemic awareness training.

ACKNOWLEDGMENTS

I would like to thank my husband, Joe, for his unending support, patience, encouragement, and help. Thanks are also due to my children Mike, David, and Lindsey for their support during the course of this investigation.

I would like to express appreciation to Dr. Bruce Murray, Dr. Marie Kraska, and Dr. Denise Green, for their support and constructive editorial comments, and also to Dr. Edna Brabham and Dr. Susan Villaume.

Appreciation also is extended to Mr. David Madden of the Ozark Housing Authority who made the logistics for conducting my research very easy to organize.

Acknowledgements are also due to the teachers and children in the Ozark City School System. They welcomed me into their schools and classrooms, and data collection was a very smooth process because of their hospitality.

Style manual or journal used: *Publication Manual of the American Psychological Association* (5th edition).

Computer software used: *Microsoft Word* (Version 5.1a), *Statistical Package for the Social Sciences (SPSS) 11.0 for Windows*

TABLE OF CONTENTS

LIST OF TABLES	xi
CHAPTER ONE. INTRODUCTION	1
Background of the Problem	1
Statement of the Problem.....	3
Purpose of the Study	3
Research Question	5
Statement of Hypothesis	6
Definition of Terms.....	6
Limitations of the Study.....	8
Assumptions of the Study	9
CHAPTER TWO. LITERATURE REVIEW	10
Phonemic Awareness Performance.....	11
Types of Phonemic Awareness and Reading Skills.....	19
Parental Training in Phonemic Awareness	21
CHAPTER THREE. METHODOLOGY	24
Participants.....	24
Recruiting.....	25
Parental Training.....	26
Instrumentation	26
Treatment Groups	30
Setting	31
Experimental Group Training.....	31
Control Group Training	35
Design and Procedures.....	37
CHAPTER FOUR. RESULTS	40
CHAPTER FIVE. DISCUSSION.....	50
Implications	52
Limitations	54

Recommendations for Further Research.....	55
Conclusions.....	58
REFERENCES	59
APPENDICES	68
Appendix A: Informed Parent Consent Letter.....	69
Appendix B. Test of Phonetic Cue Reading.....	72
Appendix C. Test of Phonemic Identities	74
Appendix D. Experimental Group Activities	78
Appendix E. Control Group Activities.....	81
Appendix F. Oral Reading Training Survey	83
Appendix G. Phonemic Awareness Training Survey.....	87

LIST OF TABLES

Table 1	Phoneme Segmentation and Nonsense Word Fluency Raw Data and Rankings.....	40
Table 2	Test of Phonetic Cue Reading and Test of Phoneme Identities Raw Data and Rankings.....	41
Table 3	Minimum and Maximum Scores and Ranges for DIBELS Measures, the Test of Phoneme Identities, and the Test of Phonetic Cue Reading	43
Table 4	Mann-Whitney Test of Mean Pretest and Posttest Ranks for Phoneme Segmentation Fluency, Nonsense Word Fluency, Test of Phoneme Identities, and Test of Phonetic Cue Reading.....	44
Table 5	Statistics for Mann-Whitney U Test – Phoneme Segmentation Fluency	45
Table 6	Statistics for Mann-Whitney U Test – Nonsense Word Fluency.....	46
Table 7	Statistics for Mann Whitney U Test – Test of Phoneme Identities.....	47
Table 8	Statistics for Mann Whitney U Test – Test of Phonetic Cue Reading.....	48

CHAPTER ONE. INTRODUCTION

This chapter presents an introduction to the dissertation and begins with the background of the problem, specifically introducing research on the effect that training parents to teach phonemic awareness has on the phonemic awareness and early reading of their children. The next sections state the problem, discuss the insufficient amount of research on parents' potential for teaching phonemic awareness, and explain the purpose of the study, which was to examine whether parental involvement in tutoring kindergarten age children in phonemic awareness causes an increase in children's reading readiness skills. Finally, the research question, hypothesis, terms, limitations, and assumptions related to the study are discussed and conclude this chapter.

Background of the Problem

Parents are children's first and primary teachers (Morris, Taylor, Knight, & Wasson, 1995). Several studies have examined the relationship that exists between parents and their children in the learning environment and the effects this relationship has on the learning process (Henderson & Berla, 1994; Olmstead & Rubin, 1983). Many research efforts have been undertaken to assess the relationship between parent involvement and student achievement. Epstein (1983) reported that when teachers were committed to increasing parent involvement, the parents felt that they should help their

children more at home and understood more about what their children were being taught in school.

Parents, in studies published by Epstein (1983) and Eagle (1989), were more positive about the teachers' interpersonal skills, and they rated the teachers higher in overall teaching ability when compared to other teachers. Another study has shown that parent-tutored students outperformed untutored students in decoding and spelling (Vadasy, Jenkins, & Pool, 2000).

Phonemic awareness has been shown to be both a reliable predictor of reading achievement and a key to beginning reading acquisition (Lane, Pullen, Eisele, & Jordan, 2002). All of the procedures involved in learning to read and write words require phonemic awareness (Ehri, 1991; Ehri & Nunes, 2001). Research attests that phonemic awareness is the best predictor of the ease of early reading gain, and it is a better predictor than IQ, vocabulary, and listening comprehension (Stanovich, 1994). In an experimental study, Wallach and Wallach (1970) described work with parents helping disadvantaged children learn to read by teaching them phoneme identification skills. Community mothers without college degrees or teaching certificates taught this program. Results of the study indicated that a great many poor children lack the phoneme recognition skills needed to benefit from the literacy instruction they receive. These studies establish the importance and positive effects of parental involvement in strengthening children's phonemic awareness and ability to profit from literacy education.

The research has also shown that parents can be instrumental in delivering phonologically based reading instruction. Faires' (2000) investigation, for example,

indicated that parental training followed by home lessons in phonemic awareness produced statistically significant gains in their children's reading performance.

Statement of the Problem

While there is some research supporting positive outcomes for children's reading achievement when parental involvement is available, the National Reading Panel (2000) reported that there is a paucity of information on the effects of parental training in teaching phonemic awareness on children's progress as readers. After an extensive search for articles in the Educational Resources Information Center (ERIC) using the descriptors *phonemic awareness and parental involvement*, 36 studies conducted between 1979 and 2002 were located and reviewed. Most of the studies examined the effects of phonemic awareness as the causal agent in acquiring reading skills. However, only eight of the studies examined the role of parental involvement as a causal role in acquisition of reading skills. Despite the emphasis on phonemic awareness and its role in reading acquisition, very little research has been focused on the potential influence of parents as tutors in phonemic awareness for their preschool children and the position that they may play in their children's learning to read.

Purpose of the Study

The study presented in this dissertation was undertaken due to lack of research information related to parents teaching phoneme awareness to their children and the effects this may have on the children's later literacy learning. The National Reading Panel Report (NICHD, 2000) indicated that although parents of preschoolers are anxious

to help their children acquire the knowledge and skills they need to become successful in reading instruction, none of the studies reviewed utilized parents as trainers. This study was designed to produce data that adds to the body of research needed to address this gap in our knowledge about parents as teachers of phoneme awareness and facilitators of their children's success in learning to read.

This present study examined whether parental involvement in tutoring kindergarten age children in phonemic awareness might cause an increase in children's reading readiness skills. This study was conducted with children and parents who live in federally subsidized housing because those students scored in the lower range of DIBELS Letter-Naming Fluency and Initial Sounds Fluency tests.

Parental tutoring on phonemic awareness might be effective for several reasons. The closeness that exists between parent and child might allow the child to express more openly the areas that he or she does not understand. This closeness might enable children to listen to a parent more attentively than they might listen to their teacher, and increased opportunities for teaching learning interactions may arise between the child and parent due to one-on-one instruction. All parents want their children to be successful in school; however, they may lack the skills necessary to instruct them in phonemic awareness. These skills are vital for positive gains toward reading independence. If the parent-child bond is a variable that can aid the learning process, then this bond might be built for teaching phonemic awareness by children's teachers. In teaching phonemic awareness to parents, this study allowed educators, administrators, and parents of kindergarten and first grade children to witness the importance of utilizing the bond and closeness that exists between parents and their children.

The researcher developed and evaluated a program to teach parents of kindergarten and first grade children about instruction in phonemic awareness. The study examined the effectiveness of parents as nonprofessional tutors in a phonologically based treatment. In the study, the participants were parents of children in kindergarten and first grade. Based on teacher recommendations, a list of children identified as being at risk in reading because of low levels of phonemic awareness was obtained. Permission forms were sent to the parents for permission to obtain scores on tests for phonemic awareness and other school data concerning their child. Scores from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and teacher portfolio assessment check sheets were acquired at the mid-point of the kindergarten and first grade year. Parents of children considered at-risk based on previous DIBELS scores were enlisted for the study.

The purpose of the present study was to test the hypothesis that parental training in phonemic awareness and oral reading techniques will improve their child's reading readiness skills. A system or program to train parents in phonemic awareness skills was not necessarily a goal expected for this project. However, the procedures in this intervention produced information that informs future research in the area of parental involvement in teaching phonemic awareness and the development of programs teachers may use for this purpose.

Research Question

The following research question was formulated for the study:

1. Compared to a control group with no parent training on phoneme awareness instruction, to what extent does training parents to teach phonemic awareness

have a positive effect on the phonemic awareness and early reading progress of their children who are struggling readers?

Statement of Hypothesis

The following null hypothesis was tested to respond to the research question.

There are no statistically significant differences on tests of phoneme segmentation fluency and nonsense word fluency for children who were tutored by their parents in phonemic awareness and oral reading compared to children who were not tutored by their parents.

Definition of Terms

In order to interpret findings of the research cited in this study, as well as to understand results of my own research, it is necessary to understand the terminology used throughout this dissertation. Definitions of the following terms have been derived from the book *Creating Literacy Instruction For All Students* (Gunning, 2005). DIBELS information was obtained from Dynamic Indicators of Basic Early Literacy Skills (Good & Kaminski, 2002).

At-risk students – students who have been judged likely to have difficulty at school because of poverty, low grades, retention in a grade, excessive absence, or other potentially limiting factors. Pre-testing of children in assessments such as Dynamic Indicators of Basic Early Literacy Skills, 6th edition (DIBELS) indicates that many from low-income homes would be considered at-risk for achievement in phonemic awareness. At-risk can be described as those children who have scored between 0 and 3 on an 8 point

scale in DIBELS Initial Sound Fluency (ISF) at the beginning of the kindergarten year or between 0 and 9 on a 25 point scale in the DIBELS Initial Sound Fluency (ISF) in the middle of the kindergarten year. Other indicators are scores of 0 or 1 on an 8 point scale at the beginning of the kindergarten year in DIBELS Letter Naming Fluency (LNF) and between 0 and 14 on a 27 point scale in DIBELS Letter Naming Fluency (LNF) at the middle of the kindergarten year. Scores between 0 and 6 on an 18 point scale in DIBELS Phoneme Segmentation Fluency (PSF) at the middle of the kindergarten year and between 0 and 9 on a 35 point scale in DIBELS Phoneme Segmentation Fluency (PSF) at the end of the kindergarten year would also indicate at-risk, as well as scores between 0 and 4 out of a 13 point scale in DIBELS Nonsense Word Fluency (NWF) at the middle of the kindergarten year and between 0 and 14 on a 25 point scale in DIBELS Nonsense Word Fluency (NWF) at the end of the kindergarten year. Skill in identifying the beginning and ending sounds of words give these children an advantage when working with symbols and words in beginning reading.

Cluster consonants — combinations of single consonants pronounced in a rapid sequence. The individual phonemes are co-articulated to make a smooth sequence.

DIBELS — The Dynamic Indicators of Basic Early Literacy Skills are a set of standardized, individually administered measures of early literacy development developed by researchers at The University of Oregon. They are designed to be short (one minute) fluency measures used to regularly monitor the development of pre-reading and early reading skills. The measures are used to assess student development of phonological awareness, alphabetic understanding, automaticity, and fluency. The results

can be used to evaluate individual student development as well as provide grade-level feedback toward validated instructional objectives.

Digraphs — graphemes spelled with more than one letter, usually two.

Fluency — flowing, smooth, verbally facile reading that results from automatic word recognition.

Grapheme — a letter or digraph that represents a single phoneme within a word's spelling of a phoneme.

Onset — any consonants proceeding the vowel in a syllable.

Phonemes — the vocal gestures from which words are constructed in a language.

Phonemic awareness — the consciousness of individual sounds in words. It is the realization that a spoken word is composed of a sequence of speech sounds.

Reliability -- the degree to which a test yields consistent results.

Rime — the vowel and consonants following the onset in a syllable.

Sight recognition — instant recognition of printed words without analysis.

Standardized test – a test administered to a group of subjects under exactly the same experimental conditions and scored in exactly the same way.

Validity – the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure.

Limitations of the Study

The findings and conclusions reached in this study were limited in their application to other participants in other settings. They apply only to kindergarten and first grade elementary school children similar to those in this study who are taught by

similar procedures. They apply only to parents similar to those in this study who are trained by similar procedures to teach phoneme awareness to their own children. The findings and conclusions reached in this study were limited to the available sample of parents, teaching resources, and facilities.

Assumptions of the Study

It was assumed in this study that because school policy prescribes that classroom curriculum for all kindergarten and first grade students be standard according to the Alabama Course of Study and that the goals of teaching be standard, the exposure of students during the day to other variables were the same for the experimental and control groups. It was also assumed that because the subjects were selected and assigned randomly to the experimental and control groups, factors such as home background, prior school background, and prior ability to teach phonemic awareness were equal in the two groups.

CHAPTER TWO. LITERATURE REVIEW

This chapter presents a review of the literature pertaining to the study. Through a computer search of the Educational Resources Information Center (ERIC) using the descriptors *phonemic awareness* and *parental involvement* and an examination of references of obtained articles, 36 studies were located examining the effects of phonemic awareness on later reading achievement. Only eight (22%) of the studies examined the role of parental involvement as the causal role in acquisition of reading skills; six (17%) addressed phonological awareness intervention with low-income, inner-city children, or children with severe reading and spelling disabilities. The remaining 22 studies (61%) focused on the benefits of teaching phonemic awareness on the emergent literacy of preschool and kindergarten children. Thus, despite the emphasis on phonemic awareness and its role in reading acquisition, researchers have focused little attention on parents as tutors of phonemic awareness for their preschool children and the position that they may play in helping their child acquire ability to work with phonemes in words, which is a foundation for learning to read.

At the beginning, the chapter includes a brief description of the function of phonemes in the English language. The first section describes the significance of phonemic awareness as a component of beginning reading performance, while the second

section reviews the types of phonemic awareness instruction and their impact on reading skills. The final section reviews the literature on the effects of parental training.

Phonemes are the smallest units constituting spoken language. There are approximately 41 phonemes in the English language. Phonemes are the vocal gestures from which words are constructed in a language. They combine to form syllables and words. There are six basic tasks used to teach and assess children's phonemic awareness. They are phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme segmentation, and phoneme deletion.

Phonemic awareness was one of five topics adopted for intensive study by the National Reading Panel (NICHD, 2000). The Alphabetics subgroup asked whether instruction in phonemic awareness improves reading, and if so, how that instruction is best provided. The Panel also asked if phonemic awareness instruction assists children in learning to read and, if so, which students would benefit from that. Based on correlational studies, phonemic awareness and letter knowledge were identified as the two best school entry predictors of how well children will learn to read during the first two years of instruction (Share, Jorm, Maclean, & Matthews, 1984).

Phonemic Awareness Performance

Lack of phonemic awareness seems to be a major obstacle for learning to read (Wagner & Torgeson, 1987). Many investigations focus on the effects of phonemic awareness training on students' literacy achievement. Fletcher, Foorman, Francis, and Schatschneider (1998), for example, followed children who were considered at risk for reading failure and who received Title I services. These children were placed in one of

three kinds of classroom reading programs: 1) Direct instruction in letter-sound correspondences practiced in decodable text (direct code); 2) Less direct instruction in systematic sound-spelling patterns embedded in connected text (embedded code); and 3) Implicit instruction in the alphabetic code while reading connected text (implicit code). The results showed advantages for at-risk children in reading instructional programs that emphasized explicit instruction in the alphabetic principle.

In a similar study, seven weeks of explicit instruction in phonemic awareness combined with explicit instruction in sound/spelling correspondences for kindergarten children proved more powerful than instruction in sound/spelling correspondences alone. It also proved more powerful than language activities in improving reading skills (Ball & Blachman, 1991).

In an experimental study, Murray (1998) compared teaching phoneme awareness through generalized phoneme manipulation skill and through instruction in particular phoneme identities. A control group received indirect language experiences. He found that knowledge of phoneme identities seems most helpful for gaining initial insight into alphabetic writing. For children who have not yet demonstrated alphabetic insight, instruction on phoneme identities has greater value than manipulation. Because many children come to school void in literacy readiness skills, it is vital that schools provide explicit instruction in phoneme awareness to help these children gain a foundation in learning to decode.

In a quasi-experimental study, Wallach and Wallach (1979) studied the effects of helping disadvantaged children learn to read by teaching them phoneme identification skills. The participants in their study were five-year-old children. Approximately half of

the children were from a kindergarten that served low-income families and the other children were from a middle-class kindergarten. They were assigned two tasks: the first, auditory discrimination, assessed whether a child could hear the difference between spoken words that differed only in the phonemes with which they began; the second task, phoneme recognition, determined whether a child could correctly identify phonemes at the start of a word. After administering the auditory discrimination task, only three out of the 146 children failed to get at least 15 of the 16 correct. Neither middle-class nor poor children starting school tend to have much trouble hearing the difference between different, related phonemes.

On the phoneme recognition task, Wallach and Wallach (1979) found that almost all of the poor children had a great deal of trouble with phoneme recognition in a variety of different tasks. In contrast, most of the middle-class children could identify phonemes easily. The authors indicated that nearly all children starting school were able to hear phoneme differences, but a great many poor children lacked the ability to recognize phonemes and did not benefit from instruction they receive on grapheme-phoneme correspondences.

Instruction using the following types of phonemic awareness tasks has a positive effect on reading acquisition and spelling for nonreaders: rhyming, blending spoken sounds into words, word-to-word matching, isolating sounds into words, counting phonemes, segmenting spoken words into sounds, and deleting sounds from words (Vellutino & Scanlon, 1987; Yopp, 1988).

Blachman, Tangel, Ball, Black, and McGraw (1999) conducted a two-year intervention aimed at helping low-income, inner-city children develop phonological

awareness and word recognition skills. Their study indicated that phoneme awareness training in kindergarten does make a difference in early word recognition and developmental spelling. Additional studies by Murray (1998), Foorman et al. (1997), and Wallach and Wallach (1979) also illustrated how children from low-income families benefit from phonemic awareness instruction as they learn to read.

In another study, Fletcher, Foorman, Francis, and Schatschneider (1998) found that children traditionally at risk for reading failure showed dramatic advantages for reading instructional programs which emphasized explicit instruction in the alphabetic principle. This explicit instruction, whether administered from teachers or parents trained in phonemic awareness skills, could aid in improving the child's phonemic awareness skills.

Hurford and Johnson (1994) conducted a study that shows how phonemic awareness could be improved for first-grade students who are at risk for reading disabilities. Participants were 486 first-grade students sampled from four U.S. schools. Tests were used in order to classify them as at risk for reading disabilities, garden variety poor readers, and readers who were not disabled. Their level of reading skills was assessed using the Woodcock Reading Mastery Test-Revised before and after the training was administered. Children in the at risk group for reading disabilities and garden variety poor readers were placed in the experimental group while nondisabled readers were placed in the control group. Those in the experimental group received more intensive phonemic awareness training tasks (for example, phonemic blending and segmentation tasks) than did the control group. Results from this study show that phonemic awareness skills training can aid children with reading disabilities. Phonological processing skills

were significantly improved by the phonemic awareness training program. While there were significant differences between the at-risk and the non-disabled groups before the study was carried out, these differences became insignificant for the at-risk children who received training when they were assessed in the posttest measurements. Similar results were obtained in measurements for reading skills, showing that the training program was successful in increasing the reading abilities of children in at-risk situations.

Many research studies have recorded the unique relationship between phonemic awareness skills and reading achievement. Byrne and Fielding-Barnsley, (1990, 1991, 1993) conducted two separate quasi-experimental studies, and found that phonological awareness and letter knowledge in combination are necessary but not sufficient for acquisition of the alphabetic principle. The initial study (1990) evaluated a phonemic awareness program that was designed to teach young children about phonological structure. The participants were 64 preschoolers trained in recognition of phoneme identity across words for 12 weeks. The control group consisted of 62 preschoolers who were exposed to the same materials but not to any references to phonology. The experimental group increased in phonemic awareness and knowledge of the alphabetic principle as compared with the control group. The children were re-tested at the end of kindergarten on phonemic awareness, word identification, decoding, and spelling. Children who entered school with advanced levels of phonemic awareness scored significantly higher on each of the measures. Alphabetic knowledge predicted literacy development, but phonemic awareness accounted for significant additional variance in decoding and spelling. However, the data could be interpreted that phonemic awareness may be a consequence of literacy instruction rather than a cause. A follow-up study in

1993 found that the children in the original study (1991) who entered elementary school understanding that words can share individual sounds performed at higher levels in reading real words and pseudo words and in spelling than children who did not understand this concept.

In two studies, researchers investigated the relationship of phonological awareness, rapid naming, and verbal memory to assessments taken from word attack, word identification, reading comprehension, and spelling skills as predictors of decoding ability. Whereas previous studies focused on children in kindergarten and preschool, the participants in these studies were older, with the mean age of nine years seven months. Cornwall's (1992) design included 54 children with severe reading disabilities. Rapid letter naming added to a large extent to the prediction of word identification and prose passage speed and accuracy scores, and a word-list memory task added considerably to the prediction of word recognition scores. These results suggested that several independent processes interact to determine the extent and severity of reading problems. In Lenchner, Gerber, and Routh's quasi-experimental study (1990), comparisons were made among 38 male third-and fourth-grade students, some of whom were determined to be reading disabled and poor decoders and some who were above average readers and good decoders. The study included series of six measures of phonological awareness, which included segmentation, blending and manipulation of phonemes. Performance on these tasks was also correlated with phonetic decoding of pseudo words. The results suggested that tasks which require blending and manipulation of phonemes, in addition to segmentation, may be the most effective for predicting decoding ability.

In a study carried out by Kozminsky and Kozminsky (1995), the causal relationship between phonemic awareness in kindergarten children and their reading skills in first and third grade was studied. They selected a sample of 70 students from two kindergarten classes, from which experimental and control groups were set up. The experimental group received more intensive phonemic awareness training than the control group did during eight months in kindergarten. Their results show significant differences in phonemic awareness skills between the experimental and control groups at the end of kindergarten, showing the effectiveness of the extensive training program in increasing phonemic awareness. The most interesting result, however, was that reading comprehension scores, as measured at the end of first and third grades, were significantly better for the experimental group that had received the extensive phonemic awareness training, indicating that long-term effects in reading skills result from phonemic awareness training in kindergarten. These researchers found that phoneme isolation and sound deletion tasks (both related to phoneme segmentation skills) were predictive of success in the acquisition of reading skills in first grade. The long term effects of phonemic awareness training in kindergarten are further confirmed in a study by Schneider et al. (1997).

A comprehensive study by Lundberg, Frost, and Petersen (1988) assessed whether phonemic awareness can be developed by training before reading instruction starts and whether preschool training in phonemic awareness facilitates reading and spelling acquisition at school. Children were sampled from kindergarten classes in Denmark and divided into an experimental and an untreated control group. The training program in phonemic awareness that was administered to the experimental group lasted eight

months. Children in the control group did not receive any additional training in phonemic awareness other than a typical kindergarten curriculum. Children in the experimental group showed significant improvement in phonological skills (which included, for example, phonemic segmentation and blending) when compared to the control group on assessments given before the children entered first grade. Slightly more improvement was also observed in the pre-reading abilities of the experimental group, and no improvement was observed in measures of letter knowledge and language comprehension for either group. Thus an important conclusion from this study is that the level of phonemic awareness in preschool appears to be a powerful predictor of reading and spelling performance in the first years of school.

The impact of phonemic awareness in spelling development was studied by Griffith (1991). In that study, 96 first-grade and 87 third-grade students were tested for their phonemic awareness skills. Spelling was measured by means of a 40-word test which included regular and irregular words (irregular words being a set of words determined to have more than one possible spelling). A regression analysis was then carried out, and the results supported the idea that phonemic awareness was related to spelling abilities: In Grade 1, 54% of the variance in the spelling scores could be accounted for by phonemic awareness and word-specific information, while in Grade 3 this percentage climbed to 70%, although the relative influence of phonemic awareness was smaller. Thus phonemic awareness appears to have a significant effect not only on reading but also on spelling skills as well.

Types of Phonemic Awareness and Reading Skills

A number of studies have examined the relationship between different types of phonemic awareness training and later acquisition of reading skills. This issue is especially important as it directly affects what should be taught in any early literacy or phonemic awareness training.

In a study conducted by Cunningham (1990), 42 children in kindergarten and first-grade were sampled and divided evenly into two experimental groups and a control group. Both experimental groups received phonemic awareness training that was focused in phonemic segmentation and blending. While the core of the training program for each of the experimental groups was the same, in one of those groups special emphasis was placed on the relationship between phonemic awareness and reading (defined as a “meta-level” approach). The other experimental group also received phonemic awareness training but in a decontextualized manner, that is, without any reference to the application of the skills being taught (defined as the “skill and drill” group). Phonemic awareness was measured before and after the training for all three groups using the scores from phoneme deletion tasks, phoneme oddity tasks and the Lindamood Auditory Conceptualization Task (1971). The findings from this study confirmed the notion that the type of training that is administered to children is important. While the type of instruction did not make a significant difference on the phonemic awareness scores (although both experimental groups did better in this aspect than the control group), it did make a difference in first-grade students’ reading achievement. These results suggested that explicit instructions regarding its relationship to reading skills should be included in the contents of the training program.

Davidson and Jenkins (2001) also investigated the relationship between different types of phonemic awareness training and the acquisition of reading and spelling skills. Because phoneme segmentation and phoneme blending are usually assumed to be the most important phonemic awareness abilities in beginning to read, they set up an experiment in order to determine the effects of teaching each. Their sample consisted of kindergarten age children, 18 boys and 22 girls, who were divided into four groups. One of the groups received only phonemic blending instruction, another received only phonemic segmentation instruction, a third group received blending-and-segmentation training, and a fourth group was an untreated control group. Measurements were taken through two word reading transfer tasks and a spelling transfer task. Their findings showed that the segmentation-only and the blending-plus-segmentation groups performed significantly better than the control group on the word reading tasks. They concluded that a combination of segmenting and blending instruction helped preliterate children figure out how to read printed words. Further results showed that blending instruction did not appear to be a decisive agent affecting the children's performance in reading, as the blending-only group did not obtain significantly better results than the control group, and the blending-plus-segmentation group did not significantly outperform the segmentation-only group. The conclusions from this study are that teaching segmentation plays a more important role than teaching blending in the early stages of reading and spelling acquisition; thus, early literacy curricula should give priority to phonemic segmentation.

Similar results were found by Ball and Blachman (1991). In their study, a sample of 90 kindergarten-age students from public urban U.S. schools was divided into three groups. One of the groups received instruction on phonemic segmentation instruction and

correspondences between letter shapes, names, and sounds (phonemic awareness instruction group). Another group received training only in letter names and sounds (language activities group), and a third one was an untreated control group. The results showed that the phonemic awareness instruction group had significantly better performance than the other groups in early reading and spelling tasks. However, children from the language activities group did not show any significant improvement in reading and spelling when compared to the control group. Thus, this study confirmed that learning to segment phonemes is more critical in the acquisition of reading skills than learning correspondences between letters and sounds.

Phonemic awareness is necessary for learning to read and write words (Ehri, 1991; Ehri & Nunes, 2001), and research confirms that it is a better predictor than IQ, vocabulary, and listening comprehension in measuring early reading gain (Stanovich, 1993–94).

Parental Training in Phonemic Awareness

Research reviewed in the previous two sections strongly supports assessing and teaching phoneme awareness as a foundation for effective instruction and children's successful performance in reading. Furthermore, the research indicates that it is important to teach phoneme segmentation.

The outcome of parents' training their own children who are struggling readers in phonemic awareness has yet to be adequately addressed. There have been studies on the relationship that exists between parents and their children in the learning environment and the effects this relationship has on the learning process (Henderson & Berla, 1994;

Olmstead & Rubin, 1983). The literature, nonetheless, does not indicate which form of parent involvement is more likely to be correlated with an increase in phonemic awareness. Only a handful of studies have examined the impact of parental training in phonemic awareness on phonemic awareness development.

Parents are children's first and primary teachers (Morris, Taylor, Knight, & Wasson, 1995). Many researchers (Henderson & Berla, 1994; Olmstead & Rubin, 1983) have documented the importance of parent involvement. These studies indicate that when parents participate in their children's education, the result is an increase in student achievement and an improvement of students' attitudes toward school in general.

Parents play a crucial role in establishing the groundwork of their children's education. It is the parents that promote their children's accomplishments. Likewise, parents have the potential to remedy their children's educational and developmental problems (Becher, 1986).

Early literacy development is supported by a variety of experiences in many types of settings (Juel, 1991). The development and growth of oral language occurs in the home (Dickinson & Tabors, 1991). Ideally, all children should come to school with certain experiences and interests in literacy (Au, 1993). When children are raised in an environment where oral language is encouraged and are exposed to nursery rhymes and simple stories, a primary foundation for later reading success is established (Maclean, Bryant, & Bradley, 1987). Research has indicated a significant positive relationship between the children's attitudes toward reading, based on home experiences, and achievement in reading in the schools (Teale & Sulzby, 1986).

In addition to examining students' performance in phonemic awareness, investigators have further examined the effects of parental involvement in developing competent readers. In a five-week, quasi-experimental study, Faires (2000) examined eight first-grade students reading below grade level. Four were assigned to the experimental group and four served as a control group. The parents of the experimental group received training in selected components of the Reading Recovery model, which they implemented in home lessons based on a "Books in Bags" strategy developed by the teacher. During the five weeks of the study, the teacher shared daily instructional materials with the parents three times each week. The students in the control group did not have access to this program. The results of the study, using informal assessments to evaluate the reading levels of both groups of students, indicated that students involved in the study made significant gains when compared to the gains of the control group.

Demonstrating this conclusion as well was another quasi-experimental study performed by Vadasy, Jenkins and Pool (2000). This study examined the effectiveness of nonprofessional tutors, such as a parent might be, in a phonologically based reading treatment. Twenty-three at-risk first grade students received intensive one-to-one tutoring from non-certified tutors for 30 minutes, four days a week, for one school year. Tutoring included instruction in phonological skills, letter-sound correspondence, explicit decoding, rime analysis, writing, spelling, and reading. At the end of the year, tutored students significantly outperformed untutored control students on measures of reading, spelling, and decoding.

CHAPTER THREE. METHODOLOGY

This chapter presents the methodology for this study of children's learning phonemic awareness skills from their trained parents. This study was an experimental design. In this investigation, attempts were made to identify the differences between children who had been tutored by their parents in phonemic awareness skills and children who had received only oral reading from their parents.

Participants

Participants consisted of ten parents. Of these ten parents, six were Caucasian and four were African-American. Their average age was 33 with a range of 24 years to 58 years. All subjects were clients in a federally subsidized assisted housing program. Surveys obtained from the parents indicated that all had a high school diploma, while four had some additional college experience. Four were married, and six were single. All adult participants were native English speakers, and all could read materials used in the experiment. Most parents had employment obligations that limited both attendance and time allotment to work with their child. Several one-on-one tutoring make-up sessions were arranged for absentees. Transportation to and from the session site was an obstacle to many participants; however, this problem was addressed through carpooling, assistance from family members, and walking.

The children of the parents who participated in the study included six Caucasians and four African-Americans. The children ranged in age from five years to six years, with the average age being 5.5 years. The five children in the experimental group attended three different schools; two attended kindergarten and three attended first grade. The five children in the control group attended three different schools as well; two attended kindergarten and three attended first grade.

Recruiting

Classroom teachers at all three schools provided lists of students who met two criteria: (1) those who, based on their parent's income, participated in the school's federally assisted free-lunch program, and (2) those who scored in the lowest 20% in DIBELS Letter-Naming Fluency and below 10 initial sounds correctly in the DIBELS Initial Sounds Fluency test. A total of 30 children and their parents were identified as potential participants in the study.

Descriptions of the study and consent forms were issued to parents of those children who met those criteria. All 30 parents signed and returned the consent forms. They also gave their consent to the researcher to have access to their child's records. Parents were then contacted by letter and telephone and encouraged to participate in the project. At this time, 20 parents decided not to participate, most giving the explanation that they did not realize there was a 10-week commitment. There were 10 remaining contacts who agreed to participate in the study.

Parental Training

Research suggests that literacy learning begins in the home, not the school, and that instruction at school should build on the foundation for literacy learning established in the home (Becher, 1986). In order to train parents in effective tutoring strategies, weekly tutoring sessions were held to inform the parents regarding the extent to which children's learning to read depends on their phonemic awareness. The resources used in this study were materials that were prepared by the researcher based on the phonological awareness continuum (Texas Center for Reading and Language Arts, 2000). Materials and activities utilized by the parents engaged children in alliteration, rhyming, phoneme segmentation, phoneme identification, phoneme manipulation, phoneme blending, and phoneme isolation. The researcher also developed research-based materials for weekly read-aloud training (Trelease, 2006) for control group parents.

Instrumentation

The major assessment for the central outcome of this research is an individualized, quantitative, standardized test called Dynamic Indicators of Basic Early Literacy Skills, or DIBELS (Good & Kaminski, 2002). DIBELS attempts to measure the essential early literacy fields discussed in reports of the National Reading Panel (2000) and the National Research Council (1998). To examine the reliability and validity of the DIBELS, a study was conducted on a sample of 75 kindergarteners (Elliott, Lee, & Tollefson, 2001). Modified DIBELS measures, referred to as DIBELS-M, were used; these included Letter Naming, Sound Naming, Initial Phoneme Matching, and Phonemic Segmentation. The study was administered in two-week intervals at the end of the

kindergarten year. Reliability for three of the measures ranged from .80 to the mid .90s. Correlations between DIBELS-M scores and criterion measures of phonological awareness, standardized achievement measures, and teacher ratings of achievement yielded concurrent validity coefficients ranging from .60 to .70. Hierarchical regression analysis showed that the four DIBELS-M measures accounted for 73% of the variance in scores on the Skills Cluster of the Woodcock-Johnson Psycho-educational Battery. The results of the analysis support the use of the DIBELS-M measures for identification of kindergarten students who are at-risk for reading failure and who need progress monitoring with ongoing use of alternate forms of each test.

DIBELS is a tool designed to assess student development in literacy in grades K–3. Specifically, one of the areas assessed is students’ performance in the areas of phonemic awareness. Benchmark assessments are given to every student individually three times per year (fall, winter, and spring). Benchmark goals, supported by research, represent minimal levels of sufficient progress. Each measure has been thoroughly researched and established as reliable and valid indicators of early literacy development. DIBELS predicts later reading proficiency and allows early identification of students who are not progressing as expected. In this study, DIBELS was the screening battery used to identify those kindergartners and first graders who might have difficulty demonstrating phonemic awareness. Children were given DIBELS tests in Phoneme Segmentation Fluency and Nonsense Word Fluency.

DIBELS Phoneme Segmentation Fluency (PSF) measure is a standardized, individually administered test of phonological awareness that assesses a student’s ability to segment three- and four-phoneme words into their individual phonemes fluently. The

DIBELS Nonsense Word Fluency (NWF) measure is a standardized, individually administered test of students' ability to use the alphabetic principle to identify letter-sound correspondences. It also measures a student's ability to blend sounds represented by letters into words.

Other posttest assessments included the Test of Phonetic Cue Reading (Byrne, & Fielding-Barnsley, 1989) and the Test of Phoneme Identities (Murray, Smith, & Murray, 2000). These criterion-referenced assessments are designed to reveal what the student knows, understands, or can do in relation to phonemic awareness and rudimentary decoding. They are intended to identify the strengths, weaknesses, and the next steps for the student.

The Test of Phonetic Cue Reading is designed to assess the student's ability to determine a given word by the beginning letter when presented with another word that is similar but with a different beginning letter (Murray, Brabham, Paleologos, Norvell-Hall, & Gaston-Thornton, 2005). In the Test of Phonetic Cue Reading, the student is shown a word by the researcher and is told two words that it might be. He or she is then told to use the beginning letter to figure out which word it is. The following is an example: Given the printed word MAD, the child is asked, "Is this *sad* or *mad*?"

The Test of Phoneme Identities is designed to determine a beginner's ability to recognize phonemes when they are hidden in spoken words (Murray, Smith, & Murray, 2000). This assessment is helpful in determining the decoding potential of children. The child is asked to repeat a sentence and then a sound. Finally the child must determine which given word contains the targeted sound. For example, Teacher: Say, "We'll see the

moon soon. Now say /s/. Do you hear /s/ in *moon* or *soon*?” Teacher: Say, “We saw the old barn burn. Now say /er/. Do you hear /er/ in *barn* or *burn*?”

Scores between 0 and 4 on a 13-point scale in DIBELS Nonsense Word Fluency (NWF) at the middle of the kindergarten year and between 0 and 14 on a 25 point scale in DIBELS Nonsense Word Fluency (NWF) at the end of the kindergarten year also indicate that students may be at risk for reading difficulties.

According to the Summary of DIBELS 6th Edition Technical Adequacy Information (December, 2008), there is a high level of internal reliability within each of the subscales. The Summary reports the following measures of reliability: Grade K, Initial Sound Fluency: single-probe, $r = .61$ and multi-probe, $r = .89$; Letter Name Fluency: single probe, $r = .89$ and multi-probe, $r = .96$; Phoneme Segmentation Fluency: single probe, $r = .74$ and multi-probe, $r = .90$. These scores indicate that DIBELS is consistent with other measures of these constructs. This is a favorable indicator because it suggests that DIBELS is, in fact, measuring what it is designed to do.

Other posttest assessments included the Test of Phonetic Cue Reading (Byrne, & Fielding-Barnsley, 1989) and the Test of Phoneme Identities (Murray, Smith, & Murray, 2000). These criterion-referenced assessments are designed to reveal what the student knows, understands, or can do in relation to phonemic awareness and rudimentary decoding. They are intended to identify the strengths, weaknesses, and the next steps for the student.

The Test of Phonetic Cue Reading is designed to assess the student’s ability to determine a given word by the beginning letter when presented with another word that is similar but with a different beginning letter (Murray, Brabham, Paleologos, Norvell-Hall,

& Gaston-Thornton, 2005). In the Test of Phonetic Cue Reading, the student is shown a word by the researcher and is told two words that it might be. He or she is then told to use the beginning letter to figure out which word it is. The following is an example: Given the printed word MAD, the child is asked, “Is this *sad* or *mad*?”

The Test of Phoneme Identities is designed to determine a beginner’s ability to recognize phonemes when they are hidden in spoken words (Murray, Smith, & Murray, 2000). This assessment is helpful in determining the decoding potential of children. The child is asked to repeat a sentence and then a sound. Finally the child must determine which given word contains the targeted sound. For example, Teacher: Say, “We’ll see the moon soon. Now say /s/. Do you hear /s/ in *moon* or *soon*?” Teacher: Say, “ We saw the old barn burn. Now say /er/. Do you hear /er/ in *barn* or *burn*?”

Treatment Groups

To protect the internal validity of the experiment, the researcher conducted a simple random assignment of the participants. All names of the participants were randomly selected. To prevent bias in the selections, subjects were annotated on individual slips of paper and then placed in an opaque, blind selection container. Hence, each subject in the population had an equal chance of being selected. In the experimental group, parents received instruction in training their child in phonemic awareness. In the second group, the treated control group, parents received instruction in reading aloud to their children.

Setting

Parental training took place at a preschool located in a federally assisted housing complex. Sessions met every Thursday night for 10 weeks, with the control group meeting from 6:00–6:30 PM and the experimental group meeting from 6:45–7:15 PM. Two babysitters were hired, and refreshments were provided.

The cost of the training ranged from \$1,000 to \$2,000. Most of the costs were entailed in purchasing incentives for participants. Prizes for each treatment group included a \$25 grocery coupon, a \$25 gasoline coupon, a \$25 utility credit, a \$25 clothing coupon, a \$25 school supply coupon, a \$25 Wal-Mart coupon, a \$25 children's book coupon, and a 27-inch color television. The only business donation included one grocery coupon for \$25 and one color television set.

Numerous participants indicated the need for childcare in order to participate. Personnel costs included child-care provisions for each group participant. The cost of childcare was \$200. In addition, the cost of weekly refreshments was approximately \$100.

Experimental Group Training

The experimental group studied phonemic awareness skills in phoneme isolation, identity, categorization, blending, segmentation, addition, deletion, and substitution. Eight booklets were created that featured several phonemic awareness skills and one different consonant each week (Weimann & Friedman, 1972). The first part of the week focused on phonemic awareness skills, while the last part of the week focused on a consonant of the week. Activities were scheduled for all seven days. Booklets contained

activities in alliteration, rhyming, stretching sounds, and activities that used manipulatives. These texts were designed to make it easy for parents to teach their children. They were meant to aid in the bonding of parents and child as well as phonemic awareness instruction and, therefore, featured playful activities (Osborn, Osborn, & Weimann, 1981).

Parents taught their children daily with sessions designed to last approximately 30 minutes. Fidelity to treatment was estimated from daily signatures from the parents giving their word of daily administration of the treatment to their child. The following is an example of the entire text of a booklet using the phonemic awareness skills of phoneme isolation and phoneme identity and the consonant *f*.

Day one. Today we are going to learn how to hear sounds that are at the beginning of words. I'm going to say a word and I want you to tell me the first sound that you hear. Tell me the first sound in *feather*. Tell me the first sound that you hear in *frog*. Do this for the following words: *fun, fence, fire, fan, finger, funny, four, fruit, fancy*.

Day two. Today we are going to learn how to hear sounds that are at the end of words. I'm going to say a word and I want you to tell me the last sound that you hear. Tell me the last sound in *house*. Tell me the last sound in *tub*. Do this for the following words: *bad, hog, large, rink, sit, pup, catch, mall, ham, sun, roar, five, cow, key, buzz, ring, fluff, hush, breath, say, sigh, you, boo, sow*.

Day three. Today we are going to learn how to hear sounds that are in the middle of words. I'm going to say a word and I want you to tell me the sound that you hear in the middle of the word. Tell me the middle sound in *boat*. Tell me the

middle sound in *cloud*. Do this for the following words: *stretch, trunk, paste, train, stamp, speech, thrash, shoot, stripe, truck, beach, state, splash, bath, best, cloud, sheep, hat*.

Day four. Today you are going to be a scientist and figure out how you make a sound with your mouth. We are going to learn about some different sounds. The first sound is /f/. Say these after me. Five fuzzy flowers felt funny on Friday. Fifty fancy fish found food flavorful. Good! Now try to stretch the /f/ sound as you say it. Fffffffive Fffffffuzzy Ffffffflowers Fffffffelt Fffffffunny on Fffffffriday. Good! Now try to say the /f/ sound separate from the rest of the word. F---ive F---uzzy F---lowers. What is your mouth doing when you say /f/? The top teeth are on your bottom lip. Do you hear /f/ in *five* or *six*? Do you hear /f/ in *duck* or *flower*? Do you hear /f/ at the beginning of *fish* or at the end of *fish*?

Day five. Today we are going to learn some more things about the /f/ sound. (Answer choices are provided with illustrations. Dots are provided below each illustration for the children to touch as they make their answer choice).

Mr. F has funny feet. Find his funny feet. Touch the dot under the funny feet. Say “funny feet.”

1. Now Mr. F is mopping his floor. His feet are getting wet. There is a fan and a fork on the table. Say “funny feet.” Now touch the dot under each picture that starts with the same sound as *funny feet* (*feet, fan, fork*).
2. Mr. F and the man are sitting on a bag of feathers. Mr. F points to his foot with his finger. The man points to his foot with his finger. Say “funny feet.”

Now, touch the dot under each picture that starts with the same sound as *funny feet* (*feathers, foot, finger*).

3. Mr. F and the fox went fishing. The fish got away. Mr. F caught a feather. Say “funny feet.” Now touch the dot under each picture that starts with the same sound as *funny feet* (*fox, fish, feather*).

Day six. Today we are going to learn some more things about the /f/ sound.

1. Mr. F is fishing at the pond. There is a fence near the pond. Mr. F has a fine fishing pole. He hopes he catches a fish and not the fence. Say “funny feet.” Now touch the dot under each picture that starts with the same sound as *funny feet* (*fence, fishing pole, fish*).
2. The monkey has a feather. He tries to tickle Mr. F. Mr. F shakes his finger at the monkey. He does not like to be tickled. Say “funny feet.” Now touch the dot under each picture that starts with the same sound as *funny feet* (*monkey, feather, finger*).
3. Mr. F and the fox are camping. Mr. F is cooking corn over a fire. Say “funny feet.” Now touch the dot under each picture that starts with the same sound as *funny feet* (*fox, corn, fire*).
4. Mr. F gets his sound from his funny feet. Say “funny feet.” Now say the names of each picture out loud (*fire, mouse, turtle*). Touch the dot under the picture that starts with the same sound as *funny feet*.

Day seven. Review skills from each day. The parent will select 3 words from each day's lesson. The child will determine the beginning, ending, and middle sounds of those words.

Control Group Training

The control group of parents studied read-aloud techniques that included before-, during-, and after- reading activities, the language-experience approach, and cloze reading techniques. Eight booklets were created, each of which featured a different read-aloud technique. Booklets contained activities in previewing and predicting, questioning, rereading, writing and drawing, and discussion. They were designed to provide instruction for the parents in reading aloud to their children. They were also meant to aid in the bonding of parents and child and, therefore, were selected for entertainment and enjoyment. Texts used for the control group were a blend of researcher-made texts and predictable texts from the *Carousel Readers* Reading Recovery Project at California State University, San Bernadino (1997). These books were predictable texts, meaning that they had a simple structure, rhythmic repetitive language patterns, rhyming words, a text that the child could tell in advance what might occur, and illustrations that supported the text. They were written on preprimer instructional levels for young children to learn comprehension and oral reading strategies. Sessions lasted around 30 minutes. The following is an example of the entire text of a booklet describing before-, during-, and after- reading techniques.

Day one.

1. Preview the book. Look at the cover. Have your child discuss what they think it will be about before you even open the book. Give the title of the book.
2. Give the name of the author.
3. Do a “picture walk.” Don’t read anything, just look at the pictures. Go from one page to the next page discussing the pictures and asking questions to your child about what he/she thinks is happening.
4. Ask your child questions such as, “Where does this story take place? Do you think this is a make-believe story or do you think it could really happen? Does the character seem happy, sad, or excited? How do you think they feel just by looking at the pictures?”
5. “I am going to read a story. You listen and watch.” Read and point to the words.
6. “I will read it again. This time you try to read with me. If you cannot do it, it does not matter.” Read and point to the words.
7. “We will read it for the last time. This time, when we get to the end of the line, I will be quiet and you can say the last word by yourself.” Read and point to the words.
8. “We will do this again tomorrow.”

Day two. Repeat as day one.

Days three and four. Repeat as for day one. Also ask the child if he/she could do it by himself. You point to the words as the child reads .

Day five. Repeat as day one. Ask the child if he/she could read it by himself or herself and point to the words.

Day six. Repeat as day one.

Day seven. Repeat as days three and four.

Design and Procedures

This study used a quasi-experimental research design to determine if a statistical difference in phonemic awareness and reading exists in children who have been identified as struggling readers and trained by their parents in phonemic awareness skills and the children whose parents were trained in reading aloud. In this study, participants were randomly assigned to an experimental or a control group.

Data from the study were analyzed using a Mann Whitney *U* test to examine differences between the experimental and control groups on Phoneme Segmentation Fluency, Nonsense Word Fluency, the Test of Phoneme Identities, and the Test of Phonetic Cue Reading. The Mann Whitney *U* test is appropriate for small sample sizes and non-normal distributions. This test evaluated whether the medians on the test variables differed significantly between the two independent samples. Because analyses for the Mann-Whitney *U* test were conducted on ranked scores, the distributions of the test variable for the two populations did not have to fit the assumption of normality. However, these distributions should be continuous and have identical forms.

Statistical Analysis

The outcome variables in this study were phonemic awareness and decoding ability as assessed by DIBELS Phoneme Segmentation Fluency and Nonsense Word Fluency.

To test the null hypotheses regarding the effectiveness of the treatment of parental training in phonemic awareness and to analyze the data, a Mann Whitney *U* test was administered to determine the difference between the mean of the pre- and posttest scores for each group. The differences in the scores were used in the analysis. The Mann Whitney *U* test uses the median instead of the means. It is appropriate for small sample sizes as is the case in this study. The pretests were used to see if the groups were the same on the dependent variable at the start of the study. A Mann-Whitney *U* test was also used to compare the means of the posttest scores of the two groups.

The hypothesis:

Parental training in application of phonemic awareness strategies to train their children will affect children's phonemic awareness, as measured by the DIBELS subtests, phoneme segmentation fluency and nonsense word fluency assessments.

The null hypothesis:

a) Parental training in application of phonemic awareness strategies to train their child will have no effect on children's learning phonemic awareness as measured by the DIBELS subtest, phoneme segmentation fluency.

b) Parental training in application of phonemic awareness strategies to train their child will have no effect on children's learning phonemic awareness as measured by the DIBELS subtest, nonsense word fluency.

c) Parental training in application of phonemic awareness strategies to train their child will have no effect on children's learning phonemic awareness as measured by the Test of Phoneme Identities.

d) Parental training in application of phonemic awareness strategies to train their child will have no effect on children's learning phonemic awareness as measured by the Test of Phonetic Cue Reading.

CHAPTER FOUR. RESULTS

This chapter describes the statistical procedures used to analyze the data collected in the study and presents the results of the analyses. Pretest and posttest scores on Phoneme Segmentation Fluency (PSF), Nonsense Word Fluency (NWF), and posttest only scores on the Test of Phonetic Cue Reading (TCR) and the Test of Phoneme Identities (TPI) are the variables to be measured. Measurements were available for all the children in the sample. Descriptive statistics on the pre- and posttest scores are presented, and statistical tests are carried out to measure the significance of the effect of parental involvement in tutoring phonemic awareness. The analysis was based on the comparison of the median scores for Phoneme Segmentation Fluency pre-and posttest, the median scores for Nonsense Word Fluency pre- and posttest, and median scores for the Test of Phoneme Identities and the Test of Phonetic Cue Reading posttest only, for children in the experimental and children in the control group. The statistical significance of the difference between the groups was assessed by using a Mann-Whitney *U* test. The Mann Whitney *U* test is appropriate for small sample sizes and non-normal distributions. This test evaluates the data based on the median ranks of the scores (Hollander & Wolfe, 1999). A statistically significant increase in the scores of the experimental when compared to the control group would provide support for the

hypothesis that parental involvement is important in the development of phonemic awareness in children.

Table 1 shows pre- and post test raw data and rankings of the control and experimental groups in Phoneme Segmentation Fluency (PSF), and Nonsense Word Fluency (NWF).

Table 1

Phoneme Segmentation and Nonsense Word Fluency Raw Data and Rankings

	DIBELS		PSF		DIBELS		NWF	
	Pre	Rank	Post	Rank	Pre	Rank	Post	Rank
Experimental Group								
	61	1	65	1	49	1	68	1
	24	2	53	2	6	4	40	2
	4	4	51	3	13	3	27	4
	3	5	6	4	25	2	32	3
	5	3	0	5	4	5	27	4
Control Group								
	15	3	68	1	3	4	32	3
	42	2	67	2	29	2	49	2
	56	1	57	3	53	1	57	1
	5	4	12	4	4	3	14	4
	1	5	6	5	3	4	1	5

Table 2 shows the post test only raw data and rankings of the Test of Phonemic Cue Reading (TPCR), and the Test of Phoneme Identities (TPI).

Table 2

	TCPR (possible 12)		TPI (38 possible)	
	Post	Rank	Post	Rank
Experimental Group				
	12	1	38	1
	12	1	38	1
	12	1	26	3
	12	1	26	3
	7	2	32	2
Control Group				
	7	2	11	4
	12	1	35	1
	12	1	35	1
	6	3	26	2
	7	2	23	3

Table 3 shows the descriptive measurements for DIBELS, the Test of Phoneme Identities and the Test of Phonetic Cue Reading.

Table 3

Minimum and Maximum Scores and Ranges for DIBELS Measures, the Test of Phoneme Identities, and the Test of Phonetic Cue Reading

	N	Minimum Score	Maximum Score	Range
Pretest of Phoneme				
Segmentation Fluency	10	1	61	60
Posttest of Phoneme				
Segmentation Fluency	10	0	68	68
Pretest of Nonsense				
Word Fluency	10	3	53	50
Posttest of Nonsense				
Word Fluency	10	1	68	67
Test of Phoneme Identities	9	14	38	24
Test of Phonetic Cue Reading	9	7	12	5

Table 4 shows the statistical procedures from the Mann-Whitney U test for the pre- and posttest mean rank and the sum of ranks for Phoneme Segmentation Fluency, Nonsense Word Fluency, the Test of Phoneme Identities, and the Test of Phonetic Cue Reading.

Table 4

Mann-Whitney Test of Mean Pretest and Posttest Ranks for Phoneme Segmentation Fluency, Nonsense Word Fluency, Test of Phoneme Identities, and Test of Phonetic Cue Reading

	Group	N	Mean Rank	Sum of Ranks
Pretest of Phoneme	0	5	5.70	28.50
Segmentation Fluency	1	5	5.30	26.50
Total 10				
Posttest of Phoneme	0	5	6.50	32.50
Segmentation Fluency	1	5	4.50	22.50
Total 10				
Pretest of Nonsense Word Fluency	0	5	4.90	24.50
	1	5	6.10	30.50
Total 10				
Posttest of Nonsense Word Fluency	0	5	5.10	25.50
	1	5	5.90	29.50
Total 10				
Test of Phoneme Identities	0	4	4.00	16.00
	1	5	5.80	29.00
Total 9				
Test of Phonetic Cue Reading	0	4	4.25	17.00
	1	5	5.60	28.00
Total 9				

Note. 0 = Control Group, 1 = Experimental Group

Table 5 shows the statistical procedures from the Mann-Whitney U test for the Test of Phoneme Segmentation Fluency. Results of the Mann-Whitney U test, to

ascertain differences between the experimental and control groups for scores on the Test of Phoneme Segmentation Fluency, revealed no statistically significant difference between the two groups. For the Phoneme Segmentation Fluency pre-test, the $U = 11.50$ and the $p = .84$. The calculated value of U exceeded the critical value of $U (2.0)$. If the table value is less than the critical value, the null hypothesis can be rejected. The mean rank for the experimental group was 5.30, and the mean rank of the control group was 5.70.

Table 5

Statistics for Mann-Whitney U Test – Phoneme Segmentation Fluency

	Pretest of Phoneme Segmentation Fluency	Posttest of Phoneme Segmentation Fluency
Mann-Whitney U	11.50	7.50
Z	-.21	-1.05
Exact Sig. [2* (1-tailed Sig.)]	.84 ^a	.31 ^a

For the PSF posttest, the $U = 7.5$ and the $p = .31$. The calculated value of U exceeded the critical value of $U (2.0)$. If the table value is less than the critical value, the null hypothesis can be rejected. The mean rank of the experimental group was 4.50, and the mean rank of the control group was 6.50.

Table 6 shows the statistical procedures from the Mann-Whitney U Test for the Test of Nonsense Word Fluency. Results of the Mann-Whitney U test, to ascertain differences between the experimental and control groups for scores on the Test of

Nonsense Word Fluency, revealed no statistically significant difference between the two groups. For the Nonsense Word pretest, the $U = 9.50$ and the $p = .55$. The calculated value of U exceeded the critical value of $U (2.0)$. If the table value is less than the critical value, the null hypothesis can be rejected. The mean rank for the experimental group was 6.10, and the mean rank of the control group was 4.90.

Table 6

Statistics for Mann-Whitney U Test – Nonsense Word Fluency

	Pretest of Nonsense Word Fluency	Posttest of Nonsense Word Fluency
Mann-Whitney U	9.50	10.50
Z	-.631	-.420
Exact Sig. [2*(1-tailed Sig.)]	.55 ^a	.69 ^a

For the NWF posttest, the $U = 10.50$ and the $p = .69$. The calculated value of U exceeded the critical value of $U (2.0)$. If the table value is less than the critical value, the null hypothesis can be rejected. The mean rank of the experimental group was 5.90, and the mean rank of the control group was 5.10.

Table 7 shows the statistical procedures from the Mann-Whitney U test for the post test only, Test of Phoneme Identities. Results of the Mann-Whitney U test, to ascertain differences between the experimental and control groups for scores on the Test of Phoneme Identities, revealed no statistically significant difference between the two groups. For the Test of Phoneme Identities, the $U = 6.00$ and the $p = .41$. The calculated

value of U exceeded the critical value of U (2.0). If the table value is less than the critical value, the null hypothesis can be rejected. The mean rank for the experimental group for the Test of Phoneme Identities was 5.80, and the mean rank of the control group was 4.00

Table 7

Statistics for Mann Whitney U Test – Test of Phoneme Identities

Posttest Only Test of Phoneme Identities	
Mann-Whitney <i>U</i>	6.00
Z	-.99
Exact Sig. [2*(1-tailed Sig.)]	.41

Table 8 shows the statistical procedures from the Mann-Whitney U test for the posttest only, Test of Phonetic Cue Reading. Results of the Mann-Whitney *U* test, to ascertain differences between the experimental and control groups for scores on the Test of Phonetic Cue Reading, revealed no statistically significant difference between the two groups. For the Test of Phonetic Cue Reading, the $U = 7.00$ and the $p = .56$. The calculated value of U exceeded the critical value of U (2.0). If the table value is less than the critical value, the null hypothesis can be rejected. The mean rank for the experimental group for the Test of Phoneme Identities was 5.60, and the mean rank of the control group was 4.25.

Table 8

Statistics for Mann Whitney U Test – Test of Phonetic Cue Reading

	Posttest Only Test of Phonetic Cue Reading
Mann-Whitney <i>U</i>	7.00
Z	-.89
Exact Sig. [2*(1-tailed Sig.)]	.56

The average scores for both the PSF and NWF, with the exception of one PSF score, clearly increased between the pretest and the posttest measurements. Another important feature of the data is that, in both tests (for PSF and for NWF), 9 out of 10 children showed an improvement in their scores and 1 out of 10 children experienced a decrease — although the one who experienced the decrease in the PSF is not the same as the one who had a decrease in NWF.

The results of the data analysis revealed that the standard deviation measurements are large when compared to the mean. A comparison shows a very high dispersion of the observed scores, showing that, even though all children belonged to the “at-risk” group (as described earlier), there were important differences among them in terms of PSF and NWF scores. For example, the smallest pre-test PSF score was 1, while the largest one was 61. This difference among the children in the sample provides support for the choice of the Mann-Whitney *U* test, as it eliminates the specific effects of each child and focuses on the improvement in the scores. Moreover, the pre- and posttest scores for both PSF

and NWF were highly correlated, further supporting the choice for the Mann-Whitney U test.

CHAPTER FIVE. DISCUSSION

This chapter presents a discussion of the results of the effectiveness of parents as tutors to their children in a phonemic-awareness based reading treatment. This study examined the effectiveness of parents as tutors to their children in a phonemic-awareness based reading treatment. Results did not support the hypothesis that parental tutoring in phonemic awareness statistically improves phonologically based reading instruction for emergent readers. The p-value was at .295, which is more than the set value .05; therefore, based on the statistical methods used to test the null hypothesis, the correlation between the two variables was not significant. The null hypothesis was not rejected.

Due to the wide dispersion of scores on the DIBELS posttest measures, as well as the small sample size of the study, outcomes of the two treatments were then compared using the Mann-Whitney U test. This is a non-parametric, two-sample, rank-sum test. The phoneme segmentation fluency posttest verified the calculated value of U as 7.5, which exceeded the critical value of U (2.0). Likewise, on the nonsense word fluency posttest, the calculated value of U was 10.50, which exceeded the critical value of U (2.0). For both of these tests, the null hypothesis that parental training in application of phonemic awareness strategies to train their child will not affect learning phonemic awareness was retained.

There were environmental influences on the subjects, other than the treatment, which should be considered. The subjects were identified as being in the low socioeconomic class based on their residence in federally subsidized housing. There were occasional absences throughout the length of the study and, at times, difficulty in understanding their role in the actual tutoring of their child. Several of the subjects, although high school graduates, could be considered challenged with their ability to be effective tutors. Due to this weakness, the value of their allegiance to this project was jeopardized.

Another threat to the validity of this study is experimental mortality, or the loss of subjects. For example, this project started with 30 subjects and only 10 of them completed the entire project. Although many subjects dropped out before the study was completed, there were no differences in the subjects of one group who discontinued their participation and the subjects who discontinued in the other group.

This study was underpowered because of its small sample size. Based on conclusion validity, there was not sufficient statistical power to detect a relationship between training parents in teaching phonemic awareness on the phonemic awareness and early reading of their children who have been identified as struggling readers.

Upon examining the data, one student scored a 0 on a phoneme segmentation fluency posttest measure. Upon closer examination, it is clear that the score is numerically distant from the rest of the data. Therefore, it can be concluded that the statistics derived from the data set that included the outlier could be misleading. The cause for the outlier is unknown. The decision was made to include the outlier in the data set because of the extremely small sample size. It was believed that exclusion of the

outlier would not be a scientifically or methodologically sound decision because of the small set where a normal distribution could not be assumed.

Although the results did not suggest that programs using parental tutors can produce statistical improvements for kindergarten and first grade students at risk for reading disability, the gains that were made may have had an impact on the self concept and motivation of these children to succeed.

Students who were identified as in need of intensive intervention and were underserved according to their academic needs by the schools may have a need of small steps of encouragement and success. In summary, the findings and conclusions reached in this study were limited in their application. The findings will apply only to kindergarten and first grade children similar to those in this study and who are taught under similar procedures. The research in this study was also limited by the available literature and by the author's bias.

Implications

The important question that needs to be answered given these results is: Does parental involvement in tutoring of phonemic awareness help its development in their children? The anticipation of developing a program for instructing parents on how to tutor their children in phonemic awareness skills was not supported by the data in this study.

The results of the data in this study might help account for some of the differences in the phonemic awareness performance between poor and middle- or upper-class children. An example of this difference is given in Wallach and Wallach (1979), in which

it was shown that poor children had trouble with phoneme recognition tasks, while middle-class children had no problems in that respect. It could be argued that middle-class children are raised in families where parental involvement in their education is fairly usual. Children raised in poor families, on the other hand, have a number of disadvantages which might prevent them from receiving parental tutoring. First of all, parents in low socioeconomic circumstances usually have lower levels of education. This fact might imply that these parents have less tutoring skills than parents in families with higher levels of education and income. If parental tutoring is indeed related to the acquisition of phonemic skills, then this would imply that children from lower socioeconomic families will not perform as well in phonemic awareness achievement.

Furthermore, the proportion of single parent families is higher among poor families. This implies that children of low socioeconomic status are more likely to come from a family with a single parent, as compared to children from middle or upper socioeconomic backgrounds. In such a context, it is clear that parental tutoring of phonemic skills is more difficult than in a two-parent family. Time constraints are much more important for single parents, who take care of many duties towards the subsistence of the family that in a two-parent family are shared between the two parents. These time constraints directly affect the availability of the parent for parental tutoring. Finally, it is more likely that parents in poor families work more hours or hold more than one job. Again, this has a direct effect on the time available for parents to spend with their children and help them learn what they are being taught at school, including phonemic awareness skills. In short, a significant relationship between parental involvement in the

children's development of phonemic skills could help account for the observed difference in performance between children from poor and non-poor classes.

The question of whether parental tutoring has a significant effect on children's phonemic awareness skills development cannot be easily answered. During the testing period, parental training for tutoring on phonemic awareness was not the only "treatment" the children in the sample received. A number of other factors might have affected the children's development of phonemic awareness. For example, during the period in which parental involvement was instituted, children were still attending classes and, thus, learning phonemic skills at school. Moreover, a general improvement in phonemic awareness might also have occurred naturally through the passage of time, as children learn new things from their environment. In short, there might have been several factors during the testing time which could have affected the children's development of phonemic awareness, and, given our sample measurements, it is not possible to isolate the effects of these factors.

Limitations

A number of factors may have limited the effectiveness of the experimental treatment. One might be the researcher's limitations in providing instructions to the parents. Another factor might have been limited time to instruct the parents properly. Still another might have been the parents' limited ability to instruct their children as the researcher taught them. Although the weekly meetings were held at a local preschool, the conditions were at times crowded. The weather and time of the classes sometimes affected the attendance of the participants.

The number of participants diminished dramatically. Parents were not dedicated to this project even with the incentives of costly prizes. Still another threat could be the fact that the children were enrolled in school at the time of the study. Added instruction by their teacher could be the cause of any progression in their phonemic awareness skills. Thus, the generalizations and conclusions of the study could be limited.

This study demonstrated several issues in research design. The validity of this study was threatened in different ways. The main threat to validity was regression. The children of the subjects were recruited on the basis of their extremely low DIBELS scores. During the posttests, the lack of improvement in scores of these children could be due to regression rather than to the parental tutoring during the program.

This study was limited by its relatively small sample size, which consisted of 10 at-risk children. Thus it could be argued that the results from this test are not applicable to the population of at-risk children.

Recommendations for Further Research

The following recommendations for further research are made based on the results of this study.

1. Obtain a larger sample size of subjects. This would improve the validity of the results because the analysis would be more statistically powerful.
2. Include parents of children attending kindergarten and first grade who are performing at all reading levels, rather than only from those in an at-risk situation. This might reveal that parental tutoring may increase phonemic skills of their children irrespective of whether they currently are struggling readers. Such a program could be

useful for children who have not been identified as at risk, but are having difficulties in phonemic awareness.

3. Investigate what kinds of phonemic skills the parents are already administering to their children. Many parents may already be teaching some phonemic skills to their children through games they play, following advice from books or, more recently, from the Internet. In fact, this might be another causal factor for the difference in performance because of socioeconomic levels, given that higher-income parents may have better access to this kind of informal training. Another useful piece of data that should be collected in such a study is the number of hours per week that parents spend tutoring phonemic awareness skills to their children. Results from this study may help determine guidelines for a parental training program on tutoring of phonemic awareness. These results would help determine the content and length of time for an effective phonemic awareness training program.

4. Include measures of the effectiveness of phonemic awareness training on parental learning, as well as the measurements of students' skill levels in phonemic awareness.

5. Determine which type of phonemic awareness training is more effective. This issue is especially relevant in light of a number of studies (e.g. Davidson & Jenkins, 2001) which confirm that not all types of phonemic awareness instruction produce significant improvements in the later development of reading skills. For example, phoneme blending instruction does not have a significant effect on reading skills while phoneme segmentation instruction does. The issue of whether non-professional phoneme segmentation instruction (in other words, parental tutoring) can result in an improvement

of at risk children's reading skills is still an unanswered question. More research on this issue could certainly help optimize the results obtained from parental tutoring. A similar issue is suggested by the results in Cunningham (1990) in which it was shown that phonemic awareness instruction coupled with explicit instructions on how it is related to reading abilities produced much better results in reading skills than phonemic awareness instruction on its own.

6. Employ alternatives to the treatment used in this study. For example, future investigations might include less intensive training for parents. The treatments in this study had considerable material for the parents to learn each week. They were expected to administer as many as four separate skills in phonemic awareness, weekly. In a study by Adams, Foorman, Lundberg, and Beeler (1998), teaching continuous phonemic sounds such as /f/, /l/, /m/, and /n/, before stop phonemic sounds such as /b/, /c/, /d/, and /g/ was encouraged. However, in this study, parents were required to administer not only continuous phonemic sounds, but alliteration, phonemic identity, and beginning and ending sounds, all within one week of training with their child.

Because of the multiple skills being taught each week, children would run the risk of not responding to treatment in a way that would be anticipated. In addition, the sequence of skills taught to the parents should be addressed. Phonemic awareness should be taught in stages of development and correct sequence of instruction. Word comparison (recognizing the distinction between words and sounds), rhyming, onset-rime blending and segmentation, blending and segmenting individual phonemes, and phoneme deletion and manipulation are the development continuum of phonemic awareness (Moats, 1999).

Many of the lessons included several tasks. For future consideration, the lessons should be limited to only one skill per training session.

Conclusions

The distinction between the reduction in the numbers of participants which produced the small sample size coupled with the pre and post-test data supports the finding of this study that training of parents in phonemic awareness on the phonemic awareness and early reading of their children provides minimal gains. Based on this research, children of low income, single parent families who were trained in phonemic awareness instruction by means of a direct, explicit instruction method appear to have insignificant academic achievement over children of parents trained in oral reading techniques. These findings imitate the results from Henderson, (2004), that indicated no significant differences between the phoneme awareness group and control group. The research concluded that the method of phonemic awareness instruction for parents should be things that parents do naturally and easily with their children, such as nursery rhymes or adapted *I Spy* games, rather than explicit and intensive researcher implemented phonemic awareness programs.

Future research should be directed toward investigating the types of training given to parents that would be more parent-friendly, natural, and more effective in developing phonemic awareness in their children.

REFERENCES

- Adams M., Foorman B., Lundberg I., & Beeler, T. (1998). *The nature and importance of phonemic awareness*. Baltimore, MD: Paul H. Brooks Publishing Co.
- Au, K. (1993). *Literary instruction in multicultural settings*. Fort Worth, TX: Harcourt Brace.
- Ball, E., & Blachman, B. A. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly*, 26, 49–66.
- Becher, R. (1986). Parent involvement: A review of research and principles of successful practice. *Current Topics in Early Childhood Education*, 5, 85–122.
- Blachman, B. A., Tangel, D. M., Ball, E. W., Black, R., & McGraw, C. K. (1999). Developing phonological awareness and word recognition skills: a two-year intervention with low-income, inner-city children. *Reading and Writing: An Interdisciplinary Journal*, 11, 239–273.
- Burns, M. S., Griffin, P., & Snow, C. E. (Eds.). (1998). Preventing reading difficulties in young children. Committee on the Prevention of Reading Difficulties in Young Children (00-448). Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press, Washington, DC.

- Byrne, B., & Fielding-Barnsley, R. (1989). Phonemic awareness and letter knowledge in the child's acquisition of the alphabetic principle. *Journal of Educational Psychology, 81*, 313–321.
- Byrne, B., & Fielding-Barnsley, R. (1990). Acquiring the alphabetic principle: A case for teaching recognition of phoneme identity. *Journal of Educational Psychology, 82*, 805–812.
- Byrne, B., & Fielding-Barnsley, R. (1991). Evaluation of a program to teach phonemic awareness to young children. *Journal of Educational Psychology, 83*, 451–455.
- Byrne, B., & Fielding-Barnsley, R. (1993). Evaluation of a program to teach phonemic awareness to young children; A 1-year follow-up. *Journal of Educational Psychology, 85*, 104–111.
- Cornwall, A. (1992). The relationship of phonological awareness, rapid naming and verbal memory to severe reading and spelling disability. *Journal of Learning Disabilities, 25*(8), 532–538.
- Cunningham, A. (1990). Explicit v. implicit instruction in phonemic awareness. *Journal of Experimental Child Psychology, 50*, 429–444.
- Davidson, M., & Jenkins, J. (1994). Effects of phonemic processes on word reading and spelling. *Journal of Educational Research, 87*, 148–157.
- Dickinson, D., & Tabors, P. (1991). Early literacy: Linkages between home, school, and literacy achievement at age five. *Journal of Research in Childhood Education, 6*(1), 30–46.

- Eagle, E. (1989, Mar.). *Socioeconomic status, family structure, and parental involvement: Correlates of achievement*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Ehri, L. C. (1991). Development of the ability to read words. In R. Barr, M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.), *Handbook of Reading Research, Volume II* (pp. 383–417). White Plains, NY: Longman.
- Ehri, L. C., & Nunes, S. R. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly, 36*, 250–287.
- Elliott, J., Lee, S. W., & Tollefson, N. (2001). A reliability and validity study of the dynamic indicators of basic early literacy skills-modified. *School Psychology Review, 30*(1), 33–49.
- Epstein, J. (1983). *Effects on parents of teacher practices in parent involvement*. Baltimore, MD: Center on Families, Communities, Schools, and Children's Learning. Johns Hopkins University.
- Faires, J. (2000). Effects of parental involvement in developing competent readers in first grade. *Reading Psychology, 21*, 195–215.
- Fletcher, J. M., Foorman, B. R., Francis, D. J., & Schatschneider, C. (1998). The role of instruction in learning to read: Preventing reading failure in at-risk children. *Journal of Educational Psychology, 90*, 37–55.
- Foorman, B. R., Francis, D.J., Fletcher, J.M., Winikates, D., & Mehta, P. (1997). Early interventions for children with reading problems. *Scientific Studies of Reading, 1*(3), 255–276.

- George D., & Mallery, P. (1999). *SPSS for Windows, step by step, A simple guide and reference*. Needham Heights, Massachusetts: Allyn & Bacon.
- Good, R. H., & Kaminski, R. A. (Eds.). (2002). *Dynamic indicators of basic literacy skills* (6th ed.). Eugene, OR: Institute for the Development of Educational Achievement. Available: <http://dibels.uoregon.edu/>
- Griffith, P. (1991). Phonemic awareness helps first graders invent spellings and third graders remember correct spellings. *Journal of Reading Behavior*, 23(2), 215–233.
- Griffith, P., & Olson, M.W. (1992). Phonemic awareness helps beginning readers break the code. *Reading Teacher*, 45(7), 516–523.
- Gunning, T. (2005). *Creating literacy for all students*. Boston, MA; Pearson Education, Inc.
- Henderson, A. T., & Berla, N. (1994). *A new generation of evidence: The family is crucial to student achievement*. St. Louis, MO: Danforth Foundation, and Flint, MI: Mott (C.S.) Foundation.
- Henderson, S. C., Murray, B. A., Buskist, C., & Brabham, E. G. (2004, December). *Do Try this at Home: Training Parents in Phoneme Awareness and Reading Aloud*. Paper presented at the annual meeting of the National Reading Conference, San Antonio, TX.
- Hollander, M., & Wolfe, D. A. (1999). *Nonparametric statistical methods*, 2nd ed., New York, New York: John Wiley.

- Hurford, D. P., & Johnston, M. (1994). Early identification and remediation of phonological-processing deficits in first-grade children at risk for reading disabilities. *Journal of Learning Disabilities, 27*(10), 647–659.
- Juel, C. (1991). Beginning reading. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds), *Handbook of Reading Research, Vol. II* (pp. 759–788). White Plains, NY: Longman.
- Kozminsky, L., & Kozminsky, E. (1995). The effects of early phonological awareness training on reading success. *Learning and Instruction, 5*(3), 187–201.
- Lane, H. B., Pullen, P. C., Eisele, M. R., & Jordan, L. (2002). Preventing reading failure: Phonological awareness assessment and instruction. *Preventing School Failure, 46*(3), 101–112.
- Lenchner, O., Gerber, M. M., & Routh, D. K. (1990). Phonological awareness tasks as predictors of decoding ability: Beyond segmentation. *Journal of Learning Disabilities, 26*(3), 167–177.
- Lindamood, C., & Lindamood, P. (1971). Lindamood auditory conception test. Austin, TX: PRO-ED.
- Lundberg, I., Frost, J., Petersen, O. P. (1988). Effects of an extensive program for stimulating phonological awareness in preschool children. *Reading Research Quarterly, 23*(3), 263–284.
- Maclean, M., Bryant, P., & Bradley, L. (1987). Rhymes, nursery rhymes, and reading in early childhood. *Merrill-Palmer Quarterly, 33*, 255–282.

- Moats, L. C. (1999). *Teaching reading is rocket science: What expert teachers of reading should know and be able to do*. Washington, DC: American Federation of Teachers.
- Morris, V. G., Taylor, S. I., Knight, J., & Wasson, R. (1995, February). *Preparing pre-service teachers to take leadership roles in parent involvement programs in schools*. Paper presented at the 1995 annual meeting of the Association of Teacher Educators, Detroit, MI.
- Murray, B. A. (1998). Gaining alphabetic insight: Is phoneme manipulation skill or identity knowledge causal? *Journal of Educational Psychology*, *90*(3), 461–475.
- Murray, B. A., Brabham, E. G., Paleologos, T., Norvell-Hall, B., & Gaston-Thornton, P. (2005, November 30). *Does body-coda or onset-rime blending better help kindergartners begin to decode words?* Paper presented at the annual meeting of the National Reading Conference, Miami, FL.
- Murray, B. A., Smith, K. A., & Murray, G. G. (2000). The test of phoneme identities: Predicting alphabetic insight in pre-alphabetic readers. *Journal of Literacy Research*, *32*, 421–447.
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read; An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Reports of the subgroups (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.

- Olmstead, P., & Rubin, R. I. (1983). Linking parent behaviors to child achievement. Four evaluation studies from the parent education follow-through programs. *Studies in Educational Evaluation*, (8), 317–325.
- Osborn, J. D., Osborn, D. K., & Weimann, E. R. (1981). *The letter people*. World Book-Childcraft International, Inc., Chicago, Illinois and New Dimensions in Education, Inc., White Plains, New York.
- Phonological Awareness: Principles for Instruction and Progress Monitoring-Professional Development Guide*. (2000). Texas Center for Reading & Language Arts, College of Education, Reading XIII Education Service Center. The University of Texas at Austin, Austin, TX.
- Rigby PM Benchmark Collection Level 2 Series*. (2000). Orlando: Harcourt Supplemental Publishers, Rigby, Steck-Vaughn.
- Roper, H.D. (1984). *Spelling, word recognition and phonemic awareness among first grade children*. Unpublished doctoral dissertation.
- Schneider, W., Küspert, P., Roth, E., Visé, M., & Marx, H. (1997). Short- and long- term effects of training phonological awareness in kindergarten: Evidence from two German studies. *Journal of Experimental Child Psychology*, 66(3), 331–340.
- Share, D., Jorm, A., Maclean, R., & Matthews, R. (1984). Sources of individual differences in reading acquisition. *Journal of Educational Psychology*, 76, 1309–1324.
- Spies, R. A., & Plake, B. S. (Eds). (2005). *DIBELS: Dynamic Indicators of Basic Early Literacy Skills* (6th ed.). The sixteenth mental measurements yearbook (pp. 306–312). Lincoln, NE: Buros Institute of Mental Measurements.

- Stanovich, K. E. (1993-1994). Romance and reality (Distinguished Educator Series).
Reading Teacher, 47(4), 280–291.
- Teale, W. H., & Sulzby, E. (1986). *Emergent literacy: Writing and reading*. Norwood, NJ: Ablex.
- Trelease, J. (2006). *The read-aloud handbook* (6th ed.). New York, NY: Penguin Group, USA.
- Vadasy, P. F., Jenkins, J. R., & Pool, K. (2000). Effects of tutoring in phonological and early reading skills on students at risk for reading disabilities. *Journal of Learning Disabilities, 33*, 579–591.
- Vellutino, F. R., & Scanlon, D. M. (1987). Phonological coding, phonological awareness and reading ability: Evidence from a longitudinal and experimental study. *Merrill-Palmer Quarterly, 33*(3), 321–363.
- Wagner, R. K., & Torgesen, J. K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychological Bulletin, 101*, 192–212.
- Wallach, M. A., & Wallach, L. (1979). Helping disadvantaged children learn to read by teaching them phoneme identification skills. *Theory and Practice of Early Reading* (vol. III). Hillsdale, NJ: Erlbaum.
- Weimann-Reiss, E. & Friedman, R. (1972). *The Letter People*. Waterbury, Connecticut: New Dimensions in Education, Inc.
- Yopp, H. K. (1988). The validity and reliability of phonemic awareness tests. *Reading Research Quarterly, 23*, 159–177.

York, Reginald O. (1997). *Building basic competencies in social work research; An experiential approach*. Needham Heights, MA: Allyn & Bacon.

APPENDICES

APPENDIX A
INFORMED CONSENT LETTER

INFORMED CONSENT

FOR

The Effects of Training Parents to Help Their Children Learn to Read

You are invited to participate in a study designed to help parents learn skills that may help improve their preschool child's reading skills. This study is being conducted by Mrs. Pat Warren under the supervision of Dr. Bruce Murray, Department of Curriculum and Teaching, Auburn University. I hope to learn if elementary children can benefit in learning to read from parents being trained in the skills needed to teach their child. You have been selected as a possible participant because you are a parent of a child at Lisenby Elementary School who will greatly benefit from this program.

If you decide to participate, you will be required to attend training classes once a week for a ten-week period. The training class itself will last about 30 to 45 minutes each week.

These classes will focus on the following:

- How to teach reading skills by reading aloud to your child.
- How to teach sounds (phonemes) at the beginning and end of words.
- How to teach sounds of words through pictures, songs, and rhymes.

Those who attend each session will be eligible for a weekly raffle. The prizes are as follows:

- \$25 grocery coupon
- \$25 gasoline coupon
- \$25 utility credit coupon
- \$25 children's clothes coupon
- \$25 coupon for school supplies
- \$25 coupon for read aloud children's books
- Final raffle give-away – color television

The odds of winning a weekly prize are approximately one in twenty. The odds of winning the color television at the end of the sessions are approximately one in fifty. You must attend all sessions to claim your prize. Prizes will be awarded at the end of the ten-week project.

You will be asked to work with your child on a daily basis with what you have learned in the training classes. You will need to keep a daily record of working with your child.

Through this study, you will discover the benefits that come from teaching your own child. You have a unique bond, as your child's parent, and are able to communicate with your child in a way that no one else can. Your child can learn from you! In addition, very nice prizes will be awarded weekly, to those who participate, with a grand prize of a 27" television

Participants initials

All of the information that is gathered from this program will remain confidential. Neither your name, nor your child's name, will ever be used when any of the research is published. You may choose not to participate in the program at any time. Information collected through your participation may be published in a professional journal, and/or presented at a professional meeting. If so, none of your identifiable information will be included. You may withdraw from participation at any time, without penalty, and you may withdraw any information which has been collected about you or your child.

Your decision whether or not to participate will not jeopardize your future relations with Auburn University or the Department of Curriculum and Teaching.

If you have any questions I invite you to ask them now and I will be happy to answer them. I can be contacted at (334) 774-3228. You will be provided a copy of this form to keep.

For more information regarding your rights as a research participant you may contact the Office of Human Subjects Research by phone or e-mail. The people to contact there are Executive Director E.N. "Chip" Burson (334) 844-5966 (bursoen@auburn.edu) or IRB Chair Dr. Peter Grandjean at (334) 844-1462 (grandpw@auburn.edu).

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO PARTICIPATE.

_____ Participant's signature	_____ Date	_____ Investigator's signature	_____ Date
_____ Print name		_____ Print name	
_____ Parent or Guardian Signature (if appropriate)	_____ Date	_____ Co-investigator's signature (if appropriate)	_____ Date
_____ Print name		_____ Print name	

APPENDIX B
TEST OF PHONETIC CUE READING

Test of Phonetic Cue Reading

Materials: You will need to make individual cards with the words in the “card” column printed in capital letters.

Instructions: I’m going to show you a word, and I’ll tell you two words it might be. See if you can use the beginning letter to figure out which word it is.

Pretest version

<u>Card</u>	<u>Question</u>	<u>Card</u>	<u>Question</u>
1. MAD	Is this sad or mad?	7. MICE	Is this mice or nice?
2. FAN	Is this man or fan?	8. LIGHT	Is this light or fight?
3. SAT	Is this sat or fat?	9. LOCK	Is this sock or lock?
4. TEAR	Is this tear [TEER] or near?	10. FOG	Is this log or fog?
5. SELL	Is this sell or tell?	11. TOP	Is this mop or top?
6. NEST	Is this test or nest?	12. NOT	Is this lot or not?

APPENDIX C
TEST OF PHONEME IDENTITIES

Test of Phoneme Identities

Materials. None. The test is administered conversationally. Read with expression. Do not emphasize phonemes. Accept any repetition of the sentence that includes the target words, but repeat the sentence if either is incorrect. Require a correct approximation of the isolated phoneme. Repeat the sound-to-word matching question if the response is unclear. Circle the response.

Directions: We're going to play a repeating game. First, I'll say a sentence, then you say it back. Then I'll say a sound, and you say it back. Then I want you to listen for the sound in a word. Let's begin.

1. Say: We'll see the moon soon. [Wait] Now say /s/. Do you hear /s/ in moon or soon?
2. Say: She caught a fish by the fin. [Wait] Now say /sh/. Do you hear /sh/ in fish or fin?
3. Say: That bug makes a buzz. [Wait] Now say /z/. Do you hear /z/ in bug or buzz?
4. Say: We hid from him. [Wait] Now say /m/. Do you hear /m/ in hid or him?
5. Say: Those girls have the same name. [Wait] Now say /n/. Do you hear /n/ in same or name?
6. Say: I race to wash my face. [Wait] Now say /f/. Do you hear /f/ in race or face?
7. Say: Can you move a moose? [Wait] Now say /v/. Do you hear /v/ in move or moose?
8. Say: He get a badge for taking a bath. [Wait] Now say /th/. Do you hear /th/ in badge or bath?
9. Say: This card game is hard. [Wait] Now say /h/. Do you hear /h/ in card or hard?
10. Say: His chin is too thin. [Wait] Now say /ch/. Do you hear /ch/ in chin or thin?
11. Say: We found him in the gym. [Wait] Now say /j/. Do you hear /j/ in him or gym?

12. Say: I brought a scoop to school. [Wait] Now say /l/. Do you hear /l/ in scoop or school?
13. Say: There's a rat under that hat. [Wait] Now say /r/. Do you hear /r/ in rat or hat?
14. Say: We have tar on our car. [Wait] Now say /k/. Do you hear /k/ in tar or car?
15. Say: Would you share a pair of socks? [Wait] Now say /p/. Do you hear /p/ in share or pair?
16. Say: The playground is part of the park. [Wait] Now say /t/. Do you hear /t/ in part or park?
17. Say: The cub will come when you call. [Wait] Now say /b/. Do you hear /b/ in cub or come?
18. Say: She likes to leap into deep water. [Wait] Now say /d/. Do you hear /d/ in leap or deep?
19. Say: In this game, you have a new name. [Wait] Now say /g/. Do you hear /g/ in game or name?
- [Take a stretch break for half a minute.]
20. Say: We hate to wait for the bus. [Wait] Now say /w/. Do you hear /w/ in hate or wait?
21. Say: The yarn is in the barn. [Wait] Now say /y/. Do you hear /y/ in yarn or barn?
22. Say: He popped the bag with a bang. [Wait] Now say /ng/. Do you hear /ng/ in bag or bang?
23. Say: Find a space by the spice. [Wait] Now say /A/. Do you hear /A/ in space or spice?
24. Say: This street is straight. [Wait] Now say /E/. Do you hear /E/ in street or straight?

25. Say: We go from nine till noon. [Wait] Now say /I/. Do you hear /I/ in nine or noon?

26. Say: I have a nose for news. [Wait]. Now say /O/. Do you hear /O/ in nose or news?

27. Say: Your shoelace is loose. [Wait]. Now say /OO/. Do you hear /OO/ in lace or loose?

28. Say: He's the last on the list. [Wait] Now say /a/. Do you hear /a/ in last or list?

29. Say: I have a red fishing rod. [Wait] Now say /e/. Do you hear /e/ in red or rod?

30. Say: On Halloween bring a big bag. [Wait] Now say //i/. Do you hear /i/ in big or bag?

31. Say: Move the rock with the rake. [Wait] Now say /o/. Do you hear /o/ in rock or rake?

32. Say: Don't cut our kite. [Wait] Now say /u/. Do you hear /u/ in cut or kite?

33. Say: I heard a sound in the sand. [Wait] Now say /ow/. Do you hear /ow/ in sound or sand?

34. Say: We saw the old barn burn. [Wait] Now say /er/. Do you hear /er/ in barn or burn?

35. Say: The fair is far from school. [Wait] Now say /ar/. Do you hear /ar/ in fair or far?

36. Say: We'll draw on our pictures after they dry. [Wait] Now say /aw/. Do you hear /aw/ in draw or dry?

37. Say: That spill might spoil. [Wait] Now say /oy/. Do you hear /oy/ in spill or spoil?

38. Say: Look at the beautiful lake. [Wait] Now say /oo/. Do you hear /oo/ in look or lake?

APPENDIX D
EXPERIMENTAL GROUP ACTIVITIES

Experimental Group Activities

Lessons for the experimental group were focused on developing phonemic awareness for a limited set of 7 phonemes: /p/, /s/, /b/, /d/, /z/, /f/, and /m/. These phonemes were chosen because (a) /s/, /z/, /f/, and /m/ named fricative consonants, or continuants, are easy to stretch and pronounce by themselves; also there are many example words that can be created using these phonemes; (b) /p/, /b/, and /d/, named bilabial consonant sounds, where the lips come together to stop or impede the airstream, were chosen because there are many example words that can be created using these phonemes.

A sequence of seven lessons introduced a single phoneme activity per day for one week. The lessons extended for a seven-week period. The parents in the study were trained to present the phonemic awareness activities to their child in an explicit instructional manner

1. Introduction to the concept of isolating beginning sounds, with modeling, guided practice, and independent practice, e.g. the first sound in paste, “/p/”, the first sound in dog, “/d/”
2. Introduction to the concept of isolating ending sounds, with modeling, guided practice, and independent practice. eg. the last sound in house, “/s/”, the last sound in tub, “/b/”
3. Introduction to the concept of isolating sounds in the middle of words with modeling, guided practice and independent practice. eg. the middle sound in boat, “/oa/”, the middle sound in cloud, “ /ou/”

4. Teach the correspondence of the phoneme with its sounds through alliteration and tongue twisters, stretching the phoneme sound, and phoneme identity of the target sound in words.
5. Identify the target phoneme from a series of pictures and pronouncing the sound that is made by the phoneme.
6. Identify the target phoneme from a different set of pictures and practice the sound that is made by the phoneme.
7. Blend the target phoneme with onset and rime activities.

Each day included a lesson that began with a review of what was previously taught. These reviews included activities in isolating, blending, deleting, identifying, and adding the target phoneme.

APPENDIX E
CONTROL GROUP ACTIVITIES

Control Group Activities

Lessons for the control group were focused on training parents in developing read aloud strategies. Parents demonstrated skills in teaching vocabulary awareness and comprehension skills through discussions before, during, and after reading aloud to their child. In addition, parents were trained in cultivating fluency strategies for their children who were emergent readers. Books for use were selected by the researcher on the child's appropriate reading level. Running records performed by the child's teacher, prior to the lessons, determined the reading level of each child. A sequence of lessons over a one-week phase extended throughout the seven-week period.

1. Introduction to the story through discussion of the pictures on the cover of the book, activating prior knowledge, reading the title, reading the author's name, and predicting what the story might be about. Unfamiliar vocabulary is discussed for understanding.
2. Parents are trained in modeling fluency through reading words with ease, using expression, and stopping at punctuation. Stopping throughout the reading allows for questions and comments from the child. Parents read and point to the words as they read.
3. Children then reread the story with the parent through various models such as choral reading and echo reading.
4. Through discussion after the story, children can extend their understanding of the reading, as well as reflect on their comprehension of the story.
5. Parents allow the child to practice rereading the text with support from them.
6. Child practices rereading the text, while tracking the words as they read.

APPENDIX F
ORAL READING TRAINING SURVEY

Oral Reading Training Survey

1. Age: _____
 2. Gender (circle) Male/ Female
 3. Occupation: _____
 4. Number of children living at home: _____
 5. Ages of children living at home: _____
 6. Marital status (circle) married/ single/ divorced/ widowed
 7. Education: (circle) did not graduate from high school/ did graduate from high school/
College
-

1. Did you find this project useful? Yes _____ No _____
 2. Was the purpose of the project clear to you? Yes _____ No _____
 3. Did you find the instructions easy to understand? Yes _____ No _____
 4. Were you able to use the information with other children? Yes _____ No _____
 5. Do you see a need for a similar project next year? Yes _____ No _____
 6. Would you recommend this project to others? Yes _____ No _____
 7. Was the day and time of the class convenient for you? Yes _____ No _____
 8. If the answer to #7 was no, please list a time that you believe to be more convenient.
_____.
 9. Has your child benefited from this project? If so, please explain.

 10. How did you feel at the beginning of this project?

-

11. How did you feel at the end of this project?

12. How much did you know about oral reading before this project?

- a. none
- b. a small amount
- c. familiar

13. How much did you know about oral reading after the project was over?

- a. none
- b. a small amount
- c. very familiar

14. Has your child learned more about oral reading from this project?

Yes _____ No _____

15. How much time did you spend with your child on the project each night?

- a. 0-30 minutes
- b. 30-60 minutes
- c. greater than 1 hour⁷³

16. Have you noticed a change in your child's ability to read words?

Yes _____ No _____

17. How would you describe your child's change toward oral reading? (circle all that apply)

a. tries to read

e. interested in books

b. sounds out words

f. identifies small words

c. reads with expression

g. recites books from memory

d. improvement in fluency

18. The project should be available to all kindergarten and first grade parents.

Yes___ No ____

19. Is parental support in teaching reading important? Yes _____ No _____

20. Has this project given your child more self-confidence? Yes _____ No _____

* Please include any comments about this project that you believe would help in future decisions about working with parents in oral reading training.

APPENDIX G
PHONEMIC AWARENESS TRAINING SURVEY

Phonemic Awareness Training Survey

1. Age: _____
 2. Gender (circle) Male/ Female
 3. Occupation: _____
 4. Number of children living at home: _____
 5. Ages of children living at home: _____
 6. Marital status (circle) Married/ Single/ Divorced/ Widowed
 7. Education: (circle) High School DNG /High School/ College
-

1. Did you find this project useful? _____ Yes _____ No
2. Was the purpose of this project clear? _____ Yes _____ No
3. Did you find the instructions easy to understand? _____ Yes _____ No
4. Were you able to use the information with other children? _____ Yes _____ No
5. Do you see a need for a similar project next year? _____ Yes _____ No
6. Would you recommend this project to others? _____ Yes _____ No
7. Was the day and time of the class convenient for you? _____ Yes _____ No
8. If the answer to #7 was no, please list a time that you believe to be more convenient.

9. Has your child benefited from this project? If so, please explain. _____

10. What were your feelings about the project at the introduction? _____

11. What were your feelings about the project at the conclusion? _____

12. How much did you know about phonemic awareness before this project?

- a. none
- b. a small amount
- c. very familiar

13. How much did you know about phonemic awareness after the project was completed?

- a. none
- b. a small amount
- c. very familiar

14. Has your child learned more about phonemic awareness from this project? ___Yes

___No

15. How much time did you spend with your child on the project each night?

- a. 1-30 minutes
- b. 30-60 minutes
- c. greater than 1 hour

16. Have you noticed a change in your child's ability to recognize phonemes in words?

_____Yes _____No

17. How would you describe your child's change toward phonemic awareness? (circle all that apply)

a. tries to read

e. knows the name and sound of each letter

b. sounds out words

f. more interested in books

c. speech has improved

g. identifies small words

d. likes to work with sounds

h. recites books from memory

18. Should the project be available to all kindergarten and first grade parents? ___Yes
___No

19. Is parental support in teaching reading important? _____Yes _____No

20. Has this project given your child more self-confidence about reading? _____Yes
_____No

21. Include comments about this project that would help in future decisions about PA training.