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To the Graduate Council:

I am submitting herewith a dissertation written by Lou Ann Walker entitled "Teachers' understandings of phonological awareness." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Education.

Colleen P. Gilrane, Major Professor

We have read this dissertation and recommend its acceptance:

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

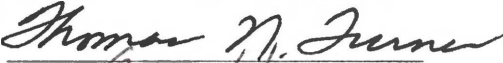
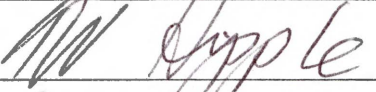
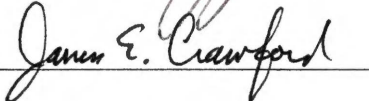
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and recommend its acceptance:

Acceptance for the Council:


Vice Provost and Dean of
Graduate Studies

**TEACHERS' UNDERSTANDINGS
OF PHONOLOGICAL AWARENESS**

**A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville**

**Lou Ann Walker
May 2003**

Thesis
2003b
· W25

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DEDICATION

This dissertation is dedicated to my parents, George and Jo Wildrick,
who taught me to dream big, vigorously pursue my aspirations, and never settle for less,
and
to my husband, Tom Walker, who continues to enrich my life.

ACKNOWLEDGMENTS

I wish to express my heartfelt gratitude to the many people who contributed, both directly and indirectly, to the success of this dissertation. I wish to thank the principals who supported this effort by allowing and encouraging their teachers to participate in the study. Special thanks go to the kindergarten and first grade teachers who gave of their time to respond to the written interview. Their insights and understandings of phonological awareness made this study possible.

I am also sincerely grateful to Debbie Allen and my fellow teachers whose help enabled me to focus on and continue the project. Their daily encouragement and generously offered assistance were indispensable.

I would like to express my sincere appreciation to my doctoral committee, Dr. Gilrane, Dr. Hipple, Dr. Crawford, and Dr. Turner for their support and assistance throughout this process. I especially want to thank my committee chair, Dr. Gilrane, who, in addition to becoming a mentor and friend, became an inspiration. Her tireless guidance and enthusiasm for this project proved to be vital.

ABSTRACT

The purpose of this qualitative study was to investigate teachers' perceptions, knowledge, and teaching practices of phonological awareness. Sixty-four kindergarten and first grade teachers in a rural East Tennessee school district volunteered to participate in the study. The survey instrument was a mailed questionnaire in the form of a two-part written interview. The written interview contained six demographic and general information questions and eight open-ended questions designed to reveal teachers' understandings of phonological awareness and their instructional approaches within the classroom context. Data were analyzed using the constant comparative method.

This study found that most teachers perceive phonological awareness and its constituent skills to involve letter-sound relationships rather than the segmental aspects of oral language. Generally, teachers did not believe phonological awareness to be an essential component of reading instruction; however, approximately one-third of the teachers perceived phonological awareness to be causally related to reading.

The conclusions of this study were that most teachers have limited knowledge concerning the meaning of phonological awareness, how it relates to reading acquisition, and of the ways to instruct it in the classroom context. All but a few of the teachers are conducting phonics lessons rather than instructing children to identify and manipulate various segments of speech. It is also evident that many of the teachers in the present study have actively sought information regarding phonological awareness through

professional development programs, the Internet, and collaborating with colleagues; thus, it appears that their limited knowledge of phonological awareness is not attributable to their disinterest, but to inadequate sources, which often fail either to clearly differentiate between phonological awareness instruction and phonics instruction, or to deal adequately with the complexity of the construct.

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CHAPTER ONE

INTRODUCTION

Young children develop their understanding about the usage and meaning of literacy as they encounter others in the process of reading and writing conjointly with their own attempts to read and write. Some children learn to read with relative ease. However, reading is a complex task for as many as 20% to 30% of children (Lyon, 1997). Unfortunately, poor beginning readers usually continue to have difficulty (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996), have fewer opportunities to advance (Fitzsimmons, 1998), and seldom reach the competence level of their peers (Council for Exceptional Children, 1996). Thus, the literacy gap between good and poor readers enlarges over time (Stanovich, 1986).

Why do children have difficulty becoming successful readers? Although several socioeconomic, environmental, and educational factors may contribute, a convergence of reading research (Bradley & Bryant, 1985; Juel, 1988; Mann, 1993; Spector, 1992; Vellutino & Scanlon, 1987) suggests that a critical barrier to early reading acquisition is a deficiency in phonological awareness. Phonological awareness refers to a child's ability to analyze and manipulate the various sound units of speech. It is a multidimensional ability that varies in complexity (Smith, Simmons, & Kameenui, 1995), depending on the cognitive demands and the size of the linguistic unit (e.g., word, syllable, onset and rime, phoneme). A child's level of phonological awareness is indicated by performance of a variety of skills such as rhyming, blending or segmenting sound units in spoken words, and adding, deleting, or substituting phonemes.

Over the past several decades, research has established a strong link between phonemic awareness and the early stages of reading acquisition. In order for beginning readers to understand the relationship between the letters in an alphabetic orthography and the sounds in language, they must be able to segment spoken words into individual sound units, or phonemes. This ability, known as phonemic awareness, is necessary for children to map the speech sounds they hear onto the letters that represent the word (Ball & Blachman, 1991). According to Lyon (1997), “This understanding that written spellings systematically represent the phonemes of written words (termed the alphabetic principle) is absolutely necessary for the development of accurate and rapid word reading skills.” Conversely, children who do not develop phonological awareness skills, letter recognition, and the ability to decode words rapidly may experience difficulty learning to read (Adams, 1990).

Salient findings from reading research have shown that phonological awareness is highly predictive of future reading success (Ball & Blachman, 1991; Bradley & Bryant, 1983; Liberman, Shankweiler, Fischer, & Carter, 1974; Lundberg, Frost, & Petersen, 1988; Lundberg, Olofsson, & Wall, 1980; Mann, 1993; Mann & Liberman, 1984). Longitudinal studies assessing phonological awareness during kindergarten and reading ability several years later indicate that phonological awareness is more highly related to reading than tests of reading readiness, listening comprehension, and general intelligence (Stanovich, 1986, 1993-1994). In addition, training studies demonstrate increased reading achievement in preliterate children exposed to phonological awareness instructional programs (Ball & Blachman, 1991; Bradley & Bryant, 1985; Cunningham, 1990; Lundberg, Frost, & Petersen, 1988; Wagner & Torgesen, 1987).

Fitzsimmons (1998) contends, “The research is clear and substantial, and the evidence is unequivocal. Students who enter first grade with a wealth of phonological awareness are more successful readers than those who do not” (p. 1).

As evidence mounts that phonological awareness contributes to early reading acquisition, the need for informed classroom instruction becomes increasingly apparent.

Brady and Moats (1997, p. 12) state:

They [teachers] need to understand what constitutes adequate research evidence, to be well-versed about the research regarding sources of difficulty for individuals who are having trouble learning to read, and to know what strengths are central to skilled reading.

Are teachers of reading well-informed about the theory and practice of teaching phonological awareness in order for children to become successful readers? Are they aware of the research gains in the knowledge of the reading process and the importance of including a phonological approach for literacy acquisition? Lyon and Moats (1997) contend, “Although reading intervention research has a long history (Adams, 1990; Chall, 1983; Williams, 1991), its findings have by no means been generally accepted or widely influential in shaping practices in the field” (p. 2).

STATEMENT OF THE PROBLEM

Reading studies consistently demonstrate that phonological awareness is necessary for the literacy acquisition of young children. Stanovich (1986) states: “Evidence is mounting that the primary specific mechanism that enables reading success is phonological awareness” (p. 32). Although some children enter school

with these prerequisite skills, others require instruction in perceiving and manipulating the sounds of language. Moats and Lyon (1996) suggest, “Theoretical, experimental, and clinical evidence points to the necessity of helping unskilled readers and spellers acquire explicit knowledge of language structure, beginning with phonemic awareness, so that the alphabetic print can be deciphered” (p. 75).

In order to provide children with the foundation they need to become skillful readers, primary grade teachers should have knowledge of the concept of phonological awareness and its relationship to emerging literacy. This knowledge influences the instructional approaches that teachers use to foster phonological awareness. The problem investigated in this study was kindergarten and first grade teachers’ background knowledge, perceptions, and instructional approaches concerning phonological awareness.

PURPOSE OF THE STUDY

The purpose of this study was to investigate the perceptions and understandings that kindergarten and first grade teachers in one school district have concerning the concept of phonological awareness. Since teachers’ understandings of content knowledge influence classroom instruction, an additional objective of this study was to determine how kindergarten and first grade teachers incorporate phonological awareness skills during classroom instruction.

Research questions included:

1. What do phonological awareness and phonological awareness instruction mean to kindergarten and first grade teachers?

2. How do kindergarten and first grade teachers teach phonological awareness in the classroom context?
3. To what extent do kindergarten and first grade teachers believe phonological awareness instruction contributes to literacy acquisition?

IMPORTANCE OF THE STUDY

There have been copious scientific studies regarding childrens' phonological awareness. However, teachers' understandings and instructional practices in this area have not been thoroughly examined. Thus, the need for such a study exists. The findings from this study could be relevant to professionals concerned with literacy acquisition in the following ways:

1) future planning of system-wide professional development programs relating to specific instructional components that foster emergent literacy. Such programs could disseminate current research to teachers on the topic of phonological awareness and its role in reading acquisition. Providing quality professional development that focuses on research-validated approaches is critical for improving teacher effectiveness.

2) guiding teacher educators as they design college coursework for early childhood, primary, and reading education programs. Teacher education courses need to focus on the theoretical understandings of language development and the relationship between phonological awareness and literacy acquisition. "Correcting the lack of teacher preparation for most teachers would be an important step toward reducing the reading problems facing this nation" (Brady & Moats, 1997, p. 1).

3) providing state certification boards with information necessary to evaluate current requirements for teachers of reading. These requirements should reflect research on the effects that phonological awareness has on reading development, reading instruction, and reading difficulties.

4) informing textbook publishers of the necessity to include information and instructional methods on phonological awareness in beginning reading programs. Currently, accurate information on phonological awareness and the components of effective reading instruction are lacking in many basal reading programs for primary grades.

METHOD

Kindergarten and first grade teachers' perceptions and background knowledge of phonological awareness, as well as their instructional approaches with regard to it, were investigated using qualitative methods (Denzin & Lincoln, 1998; Glesne & Peshkin, 1992; Lincoln & Guba, 1990). The opportunity to participate in a written interview was offered to all of the kindergarten and first grade teachers in a rural East Tennessee school system (see Appendix A). Teachers who chose to participate were asked to give demographic information as well as to answer eight questions designed to reveal their knowledge of, perceptions of, and instructional approaches to phonological awareness (see Appendix B).

After approval was received from the superintendent's office of the school system, I sent to each kindergarten and first grade teacher in the system a packet including the cover letter, the survey instrument, and a self-addressed, stamped

envelope for its return. A follow-up mailing of the same materials was sent as a reminder several weeks later. No coding at all was done, and all respondents were completely anonymous, in order to help enable participants to feel safe to answer as honestly as possible.

The survey responses were analyzed using a constant comparative method (Bogdan & Biklen, 1982; Glesne & Peshkin, 1992; Lincoln & Guba, 1990) to identify patterns in the teachers' responses. Peer debriefing (Erlandson, Harris, Skipper, & Allen, 1993) was carried out to help insure trustworthiness of the interpretations and coding categories. The final report was a narrative describing patterns in the participants' perceptions, knowledge, and teaching of phonological awareness followed by discussion of these and reflections on their implications for future research and teaching.

ASSUMPTIONS

The following assumptions were made in this study:

1. The participants gave accurate and honest responses to the survey.
2. The participants felt assured that their responses were confidential and anonymous.
3. The participants were typical kindergarten and first grade teachers in a rural school system.
4. The survey questionnaire had validity.

LIMITATIONS

This study included the following limitations:

1. The data was limited to the kindergarten and first grade participants returning the survey questionnaire.
2. The participants may or may not have given complete or accurate responses to the survey questionnaire.

DELIMITATIONS

This study included the following delimitations:

1. The survey instrument may not have completely addressed the issues involved.
2. The survey questionnaire was conducted with kindergarten and first grade teachers in one East Tennessee school system.

DEFINITION OF TERMS

Phonological Awareness: a general term that refers to the ability to reflect upon and manipulate the sound units of speech as distinct from their meaning. Phonological awareness includes all sizes of linguistic units (e.g., syllables, onset rimes, and phonemes) and refers to sounds in spoken words rather than written words. Stanovich (1993-1994) states that phonological awareness “is the foundational ability underlying the learning of spelling-sound correspondence” (p.284). A child’s phonological awareness is measured by highly correlated tasks that vary in difficulty. Such tasks include rhyming (Maclean, Bryant, & Bradley, 1987), syllable tapping (Mann & Liberman, 1984), phoneme segmentation (Ball &

Blachman, 1991; Tunmer, Herriman, & Nesdale, 1988), and blending syllables and phonemes (Lundberg, Frost, & Petersen, 1988).

Linguistic Units: the various sound units of speech. In English, linguistic units include words, syllables, onsets-rimes, and phonemes.

Onset-rime: a linguistic unit between the syllable and phoneme. It refers to the initial phoneme or phoneme cluster (onset) and the vowel and remaining phoneme unit (rime). Example- /tr/ is the onset and /ap/ is the rime in the word *trap*.

Phoneme: the smallest sound unit of speech. There are approximately 44 phonemes in the English language.

Phonemic Awareness: an understanding that language consists of a series of individual sounds. Phonemic awareness is often used interchangeably with the term phonological awareness. In this study, phonemic awareness refers to the awareness of and the ability to manipulate (e.g., count, blend, delete) the smallest unit (i.e. phoneme) of speech.

Alphabetic Principle: the understanding that letters or letter patterns relate to segmented units of speech. In an alphabetic writing system, letters or patterns of letters represent the sounds of speech.

Phonological Processing: the use of the sounds of language to process verbal information. Three major phonological processing skills include phonological awareness, phonological coding of sounds in short-term memory, and phonological recoding in working memory, which involves retrieval of sounds from long-term memory. Of the three processing skills, phonological awareness is the most prevalent linguistic deficit (Frost & Emery, 1995).

Phonics: instruction concerning how speech sounds are represented by letters and spellings; knowledge of the relationship between sounds and their symbols used to decode a word.

Metalinguistic Ability: the capacity to reflect on the aspects of language. Tunmer, Herriman, and Nesdale (1988) state that “metalinguistic abilities enable one to reflect on and manipulate the structural features of spoken language” (p. 136).

Decoding: translating individual letters or groups of letters into phonemes (sounds) in order to pronounce a word.

Sight Word: a word that can be recognized from memory, in contrast to words that can be decoded for identification; a word that is recognized as a whole. Sight words do not require decoding for identification (Hall & Moats, 1999).

Letter-sound Correspondence: the association of a letter with a sound.

ORGANIZATION OF THE STUDY

This study is organized into five chapters. Chapter One contained an introduction, statement of the problem, purpose of the study, importance of the study, research method, assumptions, limitations, delimitations, and definition of terms. Chapter Two provides a review of the literature. Chapter Three contains the methodology used to conduct this study. The findings are presented in Chapter Four. Chapter Five includes the summary, a discussion section for each research question, conclusions, and recommendations.

CHAPTER TWO

REVIEW OF THE LITERATURE

Learning to read is one of the most essential tasks facing school-age children. Unfortunately, as many as 20-30% of children do not experience reading success. The 1994 National Assessment of Education Progress (NAEP), a federally supported program that tracks the academic performance of students, reported that an excess of 40% of fourth graders nationwide could not read at a basic level or understand the meaning of simple, high-interest texts. A long-term assessment by the U.S. Department of Education (1994) indicated that reading scores of nine and seventeen year old children have not significantly improved in the past twenty years. Currently, over 80% of children receiving special education services are identified with reading and language impairments (U. S. Department of Education, 1995). Thus, the number of children with reading problems has reached critical proportions.

During the past 30 years, researchers have investigated the factors contributing to reading difficulties in young children. Calfee (1983) stated that most children with reading disability “reflect an instructional dysfunction rather than a constitutional shortcoming of the child” (p. 26). According to Moats (1999), classroom instruction is the most crucial factor in preventing reading difficulties. She further stated, “We now know that classroom teaching itself, when it includes a range of research-based components and practices, can prevent and ameliorate reading difficulty” (p. 10). Similarly, a review of reading research by the National Research Council (1998) concluded that efficient classroom instruction in the early grades is the most powerful weapon against reading failure. Researchers now agree that well-designed, early

intervention and prevention programs can increase below level reading skills of poor readers to average levels in 85% to 90% of children (Lyon, 1997). What, then, have researchers found to be the most beneficial instructional practices for teaching young children to read?

Converging findings from numerous research studies indicated that direct, systematic instruction in the sound structure of spoken language plays a pivotal role in influencing early reading acquisition. More specifically, there is now abundant evidence that phonological awareness is the skill most strongly predictive of reading success, even more than measures of general intelligence (Chard, Simmons, & Kameenui, 1995; Griffith & Olson, 1992; Liberman, Shankweiler, & Liberman, 1989; Stanovich, 1993-1994). In a synthesis of research, Smith and colleagues (1995) concluded that many reading disabilities are due to a deficit in phonological awareness. Moreover, researchers have demonstrated that phonological awareness measures indicate the differences between reading impaired children and those without reading impairments (Fletcher, Shaywitz, Shankweiler, Katz, Liberman, Stuebing, Francis, Fowler, & Shaywitz, 1994). A study by Juel (1988) revealed that children who lacked phonological awareness at the beginning of first grade were poor readers at the end of first grade. Additionally, these poor first grade readers had an 88% probability of remaining poor readers by the end of fourth grade. Thus, it is crucial that teachers incorporate the skills that develop phonological awareness in their reading instruction for young children.

Even though research consistently indicates that phonological awareness is an essential component of learning to read, many teachers are not aware nor have they

implemented these instructional practices in their classrooms. A major difficulty has been a lack of dissemination of these understandings in three major areas: (1) teacher preparation courses, (2) staff development efforts, and (3) primary reading programs (Moats, 1994, 1999; Snow, Burns, & Griffin, 1998).

Too often teacher preparation coursework is insufficient to provide teachers with the knowledge and skills that enable them to help children, especially those with reading difficulties, become successful readers. Lyon, Vaasen, and Toomey (1989) reported that only 20% of regular classroom teachers and 10% of special education teachers believed they had adequate content preparation in reading and reading instruction. Thelen's (1972) survey showed that only 23 of 48 responding states required a reading course for elementary teachers. In a 1976 survey of New Jersey schools (Frye & Putnam, 1976), classroom teachers reported that they were required to have only three credit hours of coursework for a bachelor's degree. Recent investigations of state certification requirements have noted little improvement. For example, Nolen, McCutchen, and Berninger (1990) indicated that only 29 states required coursework in reading for elementary certification, with most states requiring only two reading courses.

Even when certification programs included requisite reading courses, many programs did not require teachers to be knowledgeable about language structure or the way print corresponds to speech (Moats & Lyon, 1996). In a recent survey of novice kindergarten and first grade teachers, Bloom-Sweeney (2000) reported that nearly half of the teachers stated they could not assess or develop children's phonological

awareness or apply their college methodology coursework to their classroom instruction. Liberman (1987) addressed this issue best:

When one considers the central importance of reading skill in the overall educational experience, it is truly astounding to find how little actual training in reading instruction is provided in many of our teacher-training institutions. Though its relevance has been confirmed over and over again, many prospective teachers are not being taught the critical role phonological awareness can play in the child's mastery of the alphabetic principle or how to identify a child who is deficient in such awareness or what can be done about it (p. 7).

Many staff development efforts do not provide teachers with substantive and research-based content on phonological awareness, nor do they include ongoing support necessary for teachers to grasp and utilize the acquired information about reading and reading instruction (Snow, Burns, & Griffin, 1998). Miller and Lord (1993) reported that most inservice training for teachers predominantly consists of 1-day workshops which result in little enduring changes in teacher practice. Even when workshops include research-validated instructional practices, the limited time constraints prevent teachers from comprehending and using that knowledge within the instructional setting (McCutchen & Berninger, 1999).

However, recent staff development training programs that focus on the structural aspects of language, such as sounds within words, have noted beneficial results. For example, McCutchen and Berninger (1999) reported that teachers who attended a two week training session on the structure of oral language improved significantly in their knowledge of the phonological structure of language. Moreover,

children whose teachers attended the training session outperformed children of control teachers on phonological awareness and writing measures. Unfortunately, professional development efforts are frequently of short duration, and “teachers are often asked to assimilate in 1-2 day workshops the results of years of experience” (Nolen et al., 1990, p. 64).

Although research findings on phonological awareness have been reported for numerous years, beginning reading instructional programs continue to lack accurate information about phonological awareness and its role in reading development. Moats (1999) noted that major classroom textbooks omit systematic instruction about speech sounds, the spelling system, and how children learn to read words. In an analysis of basal reading programs, Stein, Johnson, and Gutlohn (1999) found significant discrepancies between research-based strategies and the approaches endorsed by the reading programs. Thus, teachers often receive incorrect or misleading information which is unsupported. Many teachers continue using reading programs regardless of quality or usefulness because they have insufficient knowledge of the reading process needed to select appropriate instructional strategies for different children (Lyon, 1997). According to Stein et al. (1999), “The impact of poorly conceived and ill-designed instruction-instruction not supported by the findings of research literature- on the academic success of children cannot be underestimated” (p. 286).

In recent years there has been increasing interest in identifying both the underlying causes of early reading difficulties and the instructional approaches that may reduce or eliminate such difficulties. However, there is an absence of empirical research related to teacher’s knowledge and understanding of effective instructional practices,

especially explicit linguistic skills concerning phonological awareness. In reviewing the literature, only three studies were found that assessed the specificity and depth of teachers' knowledge of language and phonological awareness.

One study was conducted by Moats (1994b). In an informal survey, Moats investigated teachers' background knowledge of speech sounds, identification of sounds in words, sound-symbol correspondences, concepts of language organization, and morphemic units in words. The study included 89 self-selected participants with various teaching experiences: reading teachers, speech-language pathologists, special education teachers, graduate students, classroom teachers, and teaching assistants. The range of teaching experience was from 0 to 20 years, with an average of five years experience.

Results of the survey indicated that teachers had poorly developed concepts about language and deficiencies in phonological skills. Many of the teachers could not distinguish the differences in the terms *phonetics*, *phonics*, and *phonology*. Although the participants were familiar with the term *phonological awareness*, they were uncertain of the terms *speech sounds* and *phoneme* and assumed that letters were equivalent to speech sounds. For example, only 25% knew that the word *ox* contains three phonemes (although it consists of only two letters) and that the word *precious* contains six phonemes. Moats concluded that “teachers are inadequately prepared to teach emergent literacy, reading, and spelling to beginning readers and those encountering reading failure” (p. 98).

In 1990 Troyer and Yopp conducted a survey to assess teachers' perceptions and understanding of phonological awareness. The data were obtained from 165

randomly selected kindergarten teachers in 25 school districts. Results of the data were divided and compared according to years of teaching experience, educational level, and experience with student teachers.

One objective of the survey was to determine the teachers' level of knowledge of current elementary education concepts such as *phonemic awareness*, *wait time*, *metacognition*, *invented spelling*, and *cooperative learning*. The teachers responded on a Likert-type scale with three categories: "Familiar with the concept", "Have heard of term but unsure of meaning", and "Unfamiliar with term". Results of the study revealed that *phonemic awareness* ranked fourth of the five terms in teacher familiarity. Although 51% of the less experienced teachers (1-5 years experience) indicated familiarity with the term *phonemic awareness*, only 24% of more experienced teachers (6-15 years experience) and 32% of veteran teachers (16 or more years experience) reported that they had knowledge of the term. Of the less experienced group, teachers with master's degrees were more familiar with the term than those with bachelor's degrees, indicating that they gained knowledge about phonemic awareness from graduate courses.

The second objective of the Troyer and Yopp study was to focus on teachers' perceptions of the importance of phoneme segmentation for beginning reading acquisition. The survey included five literacy skills (ability to rhyme, ability to segment, ability to blend, ability to determine the number of syllables, and large vocabulary) to be ranked by teachers in order of importance. Of the five skills, teachers rated "ability to segment" and "ability to determine the number of syllables" as the least important skills. However, a substantive body of research indicates that phoneme

segmentation is a phonological skill that highly correlates with early reading acquisition (Ball & Blachman, 1991; Gough, Larson, & Yopp, 1998; Lundberg, Frost, & Petersen, 1988; Perfetti, Beck, Bell, & Hughes, 1987). Thus, Troyer and Yopp's findings indicated a lack of awareness among teachers concerning research-based instructional approaches and skills, specifically phonemic segmentation, that are critical for early reading development.

A third and final investigation found in the literature concerning teachers' understanding of phonological awareness is a recent doctoral study by Shay (2000). In this study, Shay surveyed 234 kindergarten, first grade, and second grade teachers to determine their knowledge and perceptions of phonemic awareness and skill level in certain phonemic and phonics tasks. The teachers were a diverse group, ranging from 1 to 39 years teaching experience with various teaching degrees. The survey included three sections that focused specifically on phonemic awareness: 1) perceptions of teaching beginning reading, 2) recognition of current research terms, and 3) sound-symbol relationships.

The results of the survey were consistent with Moats (1994b) and Troyer and Yopp (1990), indicating that teachers do not have a mastery of knowledge concerning phonemic awareness concepts, its constituent skills, or the relationship between phonemic awareness and beginning reading. For example, in the section entitled "General Perceptions on Teaching Beginning Reading," 21% of teachers indicated that phonemic awareness is not a prerequisite to reading, and only 17% agreed strongly that it was necessary. Additionally, 54% of the teachers responded that it was not necessary for children to count phonemes (sounds) in words. These perceptions were contrary to

previous research findings concerning the important role of phonemic awareness and the necessary skills for early reading achievement.

On the terminology section of the survey, teachers rated their familiarity of current literacy terms on a 4 point Likert-type scale. The results revealed that many of the teachers did not recognize the terms *phoneme counting* (41%) and *phoneme segmenting* (31%) even though they are two integral components of phonemic awareness. This finding is similar to Moats (1994b) who noted that most teachers had difficulty counting the number of phonemes in words.

An interesting finding in the study concerned teachers' familiarity with phonemic awareness terms and their ability to perform phonemic awareness tasks. Although a majority of the teachers were familiar with the term *phonemic awareness*, they had difficulty identifying phonemes in words. Only 30% knew that the third sound in the word *church* is /r/, and even less identified the third phoneme (/k/) in the word *jackal*.

Unlike the Troyer and Yopp (1990) study, Shay (2000) found no significant relationship between teacher's knowledge and skill level of phonemic awareness and the educational levels or number of college courses completed in reading. This finding suggested that teacher college preparation programs may not have sufficiently addressed these critical phonological skills needed for the early stages of reading.

In summary, results of the studies by Moats (1994b), Troyer and Yopp (1990), and Shay (2000) suggested that teachers lack the phonological foundation needed to directly instruct children in the structural basis of language, specifically phonological awareness. Teachers were unfamiliar with phonological terms such as *phoneme counting*

and *phoneme segmenting* and often did not consider these skills important for early reading acquisition. Moreover, many teachers failed to perform phonological tasks, such as identifying or counting phonemes, at competent levels. These deficiencies were demonstrated by teachers with various educational degrees and teaching experiences and were not confined to those with limited experience or less educational training. However, based on the limited studies found in the literature, more investigations are needed to fully assess teachers' knowledge, perceptions, and instructional practices of phonological awareness in the classroom.

RESEARCH ON READING DIFFICULTIES

According to Foorman, Fletcher, and Francis (1996), approximately 10 million children in the United States experience reading difficulties. The source of difficulty for most poor readers is learning how to accurately and fluently identify printed words (Foorman et al., 1996; Torgesen, 1998). When children do not recognize words automatically, they are not able to construct meaning (Allen, 1998; Lyon, 1997) because the process of reading words is so inaccurate or laborious that their ability to comprehend the text is impeded (Snow, Burns, & Griffin, 1998; Stanovich, 1986). Poor beginning readers usually continue to have difficulties (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996), have fewer opportunities to advance (Fitzsimmons, 1998), and seldom reach the competence level of their peers (Council for Exceptional Children, 1996). Often these struggling readers lose their desire to learn to read and develop poor self concepts (Lyon, 1997).

In contrast, children who develop the skills necessary to recognize words quickly and accurately can attend to the meaning of the text. In a correlational study by Juel, Griffith, and Gough (1986), first grade children who were better word readers were better comprehenders at the end of second grade. Similarly, Byrne, Freebody, and Gates (1992) found that word recognition skills facilitated comprehension in the early grades more than general language abilities relating to listening comprehension.

During the past several decades, researchers have investigated the reading difficulties experienced by young children. There is considerable evidence that now links the primary cause of reading problems in children to a linguistic deficit in phonological processing (Felton, 1993; Gillam & van Kleeck, 1996; Liberman, Shankweiler, & Liberman, 1989; Mann & Liberman, 1984). Recent reading disability research has amply documented phonological deficits in three interconnected areas: 1) phonological awareness (i.e., awareness of sound structure of language), 2) phonological coding in working memory (i.e., translating words into phonological representations or sounds), and 3) retrieval of phonological codes from long-term memory. Children with deficits in these areas often experience difficulties in word recognition, vocabulary, verbal memory, and subsequent reading comprehension. Weaknesses in phonological processing hinder early reading development for students with and without disabilities (Fletcher et al., 1994).

Research studies have shown that children with working memory deficits recall less linguistic information such as repeating a series of letters (Liberman, Shankweiler, Liberman, Fowler, & Fischer, 1977) or words (Mann, Liberman, & Shankweiler, 1980).

Typically, these children have problems blending sounds together when reading (Torgesen, Wagner, & Rashotte, 1994). However, these poor readers do not perform significantly lower than good readers on nonverbal memory span tasks such as unknown faces or meaningless shapes (Katz, Shankweiler, & Liberman, 1981). This finding indicated that children who perform poorly on memory span tasks do not have a memory deficit, but are less efficient in coding phonological information than good readers (Brady, Shankweiler, & Mann, 1983).

Children with deficits in long-term memory are characterized by an inability to rapidly name digits, colors, and letters of the alphabet, which inhibits identifying words on a printed page (Felton, 1993; Wagner & Torgesen, 1987). Performance on rapid naming tasks is highly predictive of the rate that children acquire later reading skills (Felton & Wood, 1989; Wolfe, 1991). Although rapid naming deficits appear to be less prevalent in children than verbal working memory (Brady, 1991) or phonological awareness deficits (Felton, 1993; Frost & Emery, 1995), they are more persistent (Torgesen, Wagner, & Rashotte, 1994). Such important findings implicate the necessity of further research to determine the intensity and duration of training for amelioration.

Many studies have demonstrated the correlation between phonological processing skills and reading achievement. For example, Mann and Liberman (1984) found that kindergarten children who were not phonologically aware of syllabic units of speech and who could not retain a string of words in working memory scored significantly lower on reading ability measures in first grade. Additionally, Manis, Doi, and Bhadha (2000) attributed naming speed, measured by RAN Digit and RAN Letter tasks, to a notable amount of reading variance in second graders. According to Felton

(1993), children with deficits in rapid retrieval and phonological awareness “are at the greatest risk for failure to become readers” (p. 587). Thus, identification of these deficits is critical for early intervention.

DEFINING PHONOLOGICAL AWARENESS

Phonological awareness is the explicit awareness of the sound structure of language. It is considered a metalinguistic ability that requires a child to reflect upon and manipulate various sound units (e.g., word, syllable, onset-rime, phoneme) of speech (Olson & Griffith, 1993). Children’s phonological awareness may be shallow or deep, depending on their ability to analyze and manipulate these linguistic units (Gottardo, Stanovich, & Siegel, 1996). Phonological awareness abilities are oral/aural in nature and are necessary for understanding phonics (i.e., the relationship between letters or letter combinations and specific sounds). Thus, children who are not phonologically aware may reap little benefit from phonics instruction (Juel et al., 1986) because letter-sound training alone is not effective for teaching children to decode words (Ball & Blachman, 1988; 1991).

Generally, phonological awareness begins to develop in children before formal reading instruction (Lyon, 1997). Most young children with emerging phonological awareness have been exposed to various literacy experiences such as rhyming, playing with sounds in words, and engaging in activities with print. However, as many as 25% of first graders from middle income families and more from literacy-poor families have deficient phonological awareness abilities (Adams, Foorman, Lundberg, & Beeler, 1998).

PHONOLOGICAL AWARENESS DEVELOPMENT

Research indicates that the acquisition of phonological awareness is developmental; certain skills are acquired earlier than others. A child's awareness of the phonological structure of words and syllables usually begins to emerge before a sensitivity to phonemes (Ball, 1993; Fowler, 1991). Segmenting sentences into words and words into syllables are among the easier tasks because words and syllables are more recognizable and less abstract (Lundberg et al., 1988). In a study of young children, Liberman and colleagues (1974) found that half of the four year old group could count the number of syllables in words but none were able to count phonemes. By six years of age, 90% of the children could count syllables, whereas only 70% could count phonemes. These results indicate that initial phonological training should include larger linguistic units and that instruction should begin early in a child's education.

Children become aware of onsets and rimes, the linguistic unit between the syllable and phoneme, at about four or five years of age. The onset is defined as the consonant or consonant cluster of a syllable, and the rime is the remainder of the syllable. For example, in the word *cape*, the "c" at the beginning of the word is the onset and "ape" is the rime. Some research suggested that early phonological awareness training focusing on onset and rime activities promotes beginning reading because children make analogies with rimes in order to recognize unknown words (Goswami, 1995; Treiman, 1992). However, other studies indicated that children may not be able to benefit from onset-rime training until they develop some decoding skills and are able to analyze phonemes in words (Ehri & Robbins, 1992; Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998). Thus, further research concerning the importance of

the onset-rime linguistic unit for the acquisition of reading is needed in order to select the best approaches for phonological instruction.

Many children do not develop an awareness of phonemes (i.e., phonemic awareness) automatically or naturally. Phonemic awareness is difficult for children because the individual sounds in words are not acoustically pure, but are blended together at the acoustic level into syllabic units (Liberman, 1973). That is, children who are not phonemically aware hear the word “bat” as one acoustic unit, not as three sound segments /b/ /a/ /t/. Because the individual sounds of words are hard to perceive (Stahl & Murray, 1994), it is difficult to analyze the phonological structure of words. However, knowledge of phonemes is necessary in order to read in an alphabetic writing system.

THE ALPHABETIC PRINCIPLE

To develop rapid and accurate decoding skills, the beginning reader must understand that the letters of the alphabet represent individual sounds (i.e., the alphabetic principle)(Stanovich, 1993-1994; Torgesen, 1998). However, letter knowledge is not sufficient for a child to progress successfully in reading (Busink, 1997). In order for beginning readers to apply the alphabetic principle, they must attend to the sounds of words without focusing on meaning (Bishop, Yopp, & Yopp, 2000). This level of phonological awareness enables the reader to make the connection between the 26 letters of the alphabet and the 44 (or 45) sounds in the English language and translate those sounds to letters or letter combinations.

Although beginning readers at some stage must make the print-speech connection, differing theories exist concerning the involvement of letter-sound

correspondences for initial word recognition. According to Gough (1982), children initially memorize up to 40 words by remembering specific visual features. For example, a child may associate the letter “m” in the word “camel” with the humps on a camel’s back. However, this “sight word” approach becomes ineffective as the availability of distinctive visual cues diminishes. At this point, children utilize their knowledge of letter-sound relationships to read words.

In contrast, Ehri and Wilce (1985) theorized that prereaders use visual cues whereas beginning readers make use of letter-sound associations in the first stage of reading acquisition. In this view, children may associate some of the letters in a word, often the initial and final consonants, with its spelling and pronunciation. For example, a child may identify the word “beak” by noticing the resemblance of the /b/ sound and the /k/ sound with the names of the letters. This beginning process develops into a more refined stage of decoding as the reader’s knowledge of letter-sound correspondences increases.

Regardless of the development of word acquisition for beginning readers, it appears that knowledge of the relationship between letters and sounds is necessary to decode unfamiliar words independently. In contrast, children who lack these critical skills and rely on word memorization are limited in their ability to become competent readers (Freebody & Byrne, 1988). Thus, a combination of a basic level of phonological awareness and letter knowledge instruction is necessary for early reading acquisition.

Experimental studies have consistently demonstrated the importance of phonological awareness and knowledge of letter-sound correspondences for developing early word recognition skills. For example, Bradley and Bryant (1985) reported that

children trained in phonological awareness and letter association performed better in spelling than those who had received only phonological awareness instruction and outscored those who received no training in both reading and spelling. Similarly, Ball and Blachman (1991) found that kindergarten students who were trained in phonological awareness, letter names, and letter sounds improved significantly in reading and spelling, but those trained only in letter names and letter sounds made little improvement in word reading skills.

RELATIONSHIPS BETWEEN PHONOLOGICAL AWARENESS AND READING ACHIEVEMENT

Although reading researchers acknowledge a correlation between phonological awareness and reading achievement, the relationship between phonological awareness and learning to read is somewhat unclear. Some studies (Juel, Griffith, & Gough, 1986; Tunmer, Herriman, & Nesdale, 1988) have indicated that knowledge of the internal structure of spoken words is necessary for skillful reading; thus, phonological awareness is a prerequisite for learning to read. Conclusions from these studies were supported by other research (e.g., Bradley & Bryant, 1983; Cunningham, 1990; Lundberg, Frost, & Petersen, 1988) that suggested a causal relationship between phonological awareness and reading achievement. However, a limited number of studies have shown that reading experiences enhance children's abilities to understand the phonological structures of speech and that the development of phonological skills is a consequence of exposure to print (Ehri, 1979; Morais, Cary, Alegria, & Bertelson, 1979).

Many researchers now agree that the relationship between phonological awareness, particularly at the phoneme level, and reading acquisition is reciprocal in nature (Cunningham, 1990; Ehri, 1998; Perfetti, Beck, Bell, & Hughes, 1987; Snow, Burns, & Griffin, 1998; Stanovich, 1986, 1993-1994; Wagner, Torgesen, & Rashotte, 1994; Yopp, 1992). More specifically, phonological awareness enables children to benefit from reading instruction. In turn, the acquisition of reading skills provides children with the speaking and listening experiences that develop their understanding of the phonological structure of language. For example, Perfetti et al. (1987) tested first grade children on tasks of phoneme blending and phoneme deletion. They found that phoneme blending, an easier phonological skill, enabled later reading, whereas the task of phoneme deletion, considered to be a more difficult phonological task, both facilitated reading and benefited from it. These findings indicated that some basic level of phonological awareness is necessary for learning to read although more advanced levels may result from learning to read. Thus, training should be included prior to and during early reading instruction to develop competent reading skills in young children.

PHONOLOGICAL AWARENESS TASK DIFFICULTY

In recent years, researchers have attempted to determine the relative difficulty of the various phonological awareness tasks. In a study of 96 kindergarteners, Yopp (1988) identified two broad levels of task difficulty, simple and compound phonological awareness, in relation to the cognitive demands and memory load needed to complete the task. Simple phonological awareness tasks, such as phoneme blending, involve one operation on a sound unit accompanied by a response (e.g., “Say these

sounds together and make a word /p/-/a/-/t/.”) In contrast, compound phonological awareness requires the child to perform an operation, hold the response in memory, and perform an additional operation before responding. For example, in phoneme deletion tasks, a child must omit a phoneme from a word and pronounce the remaining sequence (e.g., “Say the word snow without the /s/.”). Yopp’s study revealed that rhyming tasks were the easiest for kindergarteners to perform, whereas phoneme deletion was the most difficult. Similar results were found by Stanovich, Cunningham, and Cramer (1984).

Recent research suggests that phonological awareness is a general ability that consists of various dimensions. According to Adams (1990), there are five basic levels of task difficulty. Ranging from easiest to hardest, the task types are: 1) rhyming, 2) sound oddity tasks (e.g., comparing and contrasting initial, medial, and final sounds in words for rhyme and alliteration), 3) phoneme blending and syllable-splitting, 4) phoneme segmentation, and 5) phoneme manipulation (e.g., identifying words when phonemes are added, deleted, or substituted). However, the difficulty of each level may be affected by additional factors, such as the number of sounds manipulated, the type of sound (e.g. nasal or continuant), and the position (e.g., initial, final, medial) of the sound(s) (Yopp & Yopp, 2000). Therefore, the relative order of difficulty, both within and across the various tasks, has yet to be established.

Generally, children as young as three or four years of age can identify rhymes and alliteration (Bryant, 1990). However, most children cannot perform phoneme segmentation tasks until about five or six years of age (Liberman et al., 1974). Phoneme deletion, one of the most difficult tasks, does not occur until a child reaches the mental

age of seven years (Cole & Mengler, 1994). These findings suggested that phonological awareness is a continuing process; thus, training programs should be designed to include developmentally appropriate activities for children of different ages.

PREDICTIVE VALUE OF PHONOLOGICAL AWARENESS TASKS

Research findings establishing a correlation between phonological awareness and reading acquisition have led to investigations to determine which tasks are more predictive of reading achievement. Some studies (Bryant, Bradley, Maclean, & Crossland, 1989; Maclean, Bryant, & Bradley, 1987) indicate that knowledge of rhyming words predicts early reading success. Other studies (Lundberg, Olofsson, & Wall, 1980; Share, Jorm, Maclean, & Matthews, 1984) found that segmenting tasks were predictive of later reading acquisition. Most of the investigations included only a small number of task types; thus, the results were limited to the tasks under study. However, Yopp's (1988) longitudinal study focused on the reliability and validity of 10 different tasks. The results from seven years of data revealed that two tasks, phoneme segmentation and phoneme deletion, were more predictive of initial reading acquisition than tasks such as rhyming.

A two year investigation by Snider (1997) found similar results. In this study, 73 kindergarten children were assessed on five tasks (i.e., phoneme deletion, phoneme segmentation, phoneme substitution, rhyme supply, initial consonant same) representing different levels of phonological difficulty. A follow up assessment of reading achievement was administered at the end of second grade. Results indicated that the harder tasks of phoneme segmentation, phoneme deletion, and phoneme

substitution were highly predictive of later reading achievement. Both the Yopp (1988) and Snider (1997) studies concluded that tasks categorized as compound phonological awareness are the best predictors of reading success.

Research suggests that the predictive value of phonological awareness tasks may change across time, depending on the maturation level and reading development of the child. Yopp (1992a) found that blending, counting, and isolating phonemes were predictive of first grade reading achievement. In first to second grade, tasks including phoneme segmentation, phoneme blending, phoneme deletion, sound isolation, and word to word matching were highly predictive. However, none of these tasks were predictive of reading achievement during second to third grade. It is important that these findings be considered when selecting the task or combination of phonological awareness tasks for assessment and instruction in order to identify children who may be at-risk for reading difficulties.

PHONOLOGICAL AWARENESS INTERVENTION STUDIES

Experimental research has been conducted to investigate the effectiveness of phonological awareness intervention training with children. Many studies have demonstrated positive effects on subsequent phonological awareness development, beginning reading skills, and spelling achievement. For example, Lundberg, Frost, and Petersen (1988) trained 235 kindergarten children over a period of eight months in phonological skills including rhyming, segmentation of sentences, and segmentation of words. Kindergarten posttests indicated that there were no significant differences in prereading ability between the trained and control groups. However, posttest results at

the end of first grade showed significant gains in spelling. Moreover, second grade tests revealed significant gains for the trained group in spelling and reading. In this study, Lundberg et al. (1988) demonstrated that phonological awareness can be developed before reading acquisition and without knowledge of letter-sound correspondences. Additionally, it appears that although the effects of phonological awareness training may not be immediate, they are enduring.

Cunningham's (1990) study found that children who received phonological awareness training in blending and segmenting syllables and pseudo words made significant gains in reading. In this study, 84 kindergarten and first grade children participated in phonological training twice a week for 10 weeks. A distinct feature of this study was that one of the experimental groups was provided with explanations for the purpose and meaning of phonological awareness within the context of reading in addition to the procedural instructions for the phonological activities. During the training, no letter-sound correspondences were taught and children used only wooden chips to represent sounds. Results of this study showed that both of the trained kindergarten and first grade groups made significant improvements in phonological awareness and reading. However, the first grade children who received metalevel knowledge concerning the application of phonological awareness to reading instruction made greater gains in reading than those trained in procedural knowledge only. This study showed that instructional programs that direct children to reflect upon and discuss the purposes and application of phonological activities are more effective than those that teach phonological skills in isolation.

In another study, Uhry and Shepherd (1993) investigated the effects of phonological awareness and spelling instruction within the context of a whole language program. In this study, all first grade children received reading instruction that included activities such as shared reading, writing exercises, and group discussions. However, the experimental group received additional systematic training in segmenting and spelling phonetically regular words using colored blocks. Year end assessments showed that children instructed in specific segmentation and spelling skills outperformed the control group in segmenting and blending, spelling, word reading, and timed oral passage reading. From these findings, it appears that a combination of direct, systematic training in phonological awareness in the context of meaningful reading and writing experiences not only heightens a child's phonological awareness but provides children with the opportunities to develop strong decoding and spelling skills. Thus, a balanced approach that includes explicit phonological awareness training, specifically at the phoneme level, and authentic literature experiences appears to be the most efficacious method for early reading acquisition.

In a longitudinal intervention study, Lie (1991) investigated the effectiveness of phonological awareness training on first grade children with varying intellectual levels of abilities. Children were assigned one of two training groups (i.e., phoneme isolation or phoneme segmentation), or a control group (i.e., discuss book illustrations). Assessments at the end of first grade showed that both types of phonological training facilitated reading and spelling acquisition. An interesting finding in this study was that students of low ability benefited more from phonological training than normally achieving students. Based on this finding, it appears that early phonological instruction

is not only critical for children at-risk for reading disabilities but may have a significant impact on reducing the number of children who require special education services.

Although there is substantial evidence that training can improve performance of phonological awareness skills and reading skills, some studies have shown that not all children equally respond to training. For example, Torgesen and colleagues (1992) trained kindergarten children at-risk for reading disabilities over a period of eight weeks. They found that approximately 30% of the children showed little gains in phonological awareness following the program. Similar results were found in a second study (Torgesen & Davis, 1996) in which training was extended for 12 weeks. From these studies, Torgesen and Davis (1996) concluded that children with reading disabilities may require more explicit and intense training than that provided in previous investigations.

In sum, most intervention studies showed that children can be successfully trained in phonological awareness and that training positively influences subsequent reading and spelling achievement. Moreover, children of all ability levels can profit from such training. However, the intensity and duration of instruction appear to be factors to consider when training children with limited phonological awareness and those at-risk for reading failure. Thus, early assessment is critical in order to identify possible at-risk candidates.

PHONOLOGICAL AWARENESS INSTRUCTIONAL APPROACHES

In recent years, researchers have investigated the effects of various instructional approaches on phonological awareness and literacy achievement of children at-risk for

reading difficulties. Felton's (1993) study compared two different instructional methods with children identified as having deficits in either phonological awareness or rapid name retrieval. In this longitudinal intervention study, 48 children were assigned to either a code-emphasis or meaning-emphasis program for first and second grade. In the code-emphasis program, children received instruction in decoding skills using letter-sound relationships. In contrast, the meaning-emphasis program taught decoding skills by focusing on meaning of the text and picture cues. Assessments at the end of first grade showed that over half of the children instructed in code-emphasis were on grade level in comparison to 13% of children in the meaning-emphasis program. Moreover, by the end of second grade, children in the code-emphasis group significantly outperformed the meaning-emphasis group on measures of reading real and nonsense words, comprehension, and spelling. Felton (1993) concluded that reading instruction for at-risk children should include word specific information, such as symbol-sound relationships, in combination with a meaning-based program.

In contrast, Griffith, Klesius, and Kromrey (1992) found that the instructional approach did not affect children's performance on literacy measures including decoding, spelling, and writing. In this study, six phonological subtests (i.e., phoneme segmentation, blending, initial phoneme deletion, final phoneme deletion, initial phoneme substitution, final phoneme substitution) were individually administered to first graders in order to identify the children's various phonological awareness levels. The six highest and six lowest scoring children in a whole language and traditional (i.e., basal instruction) classroom were included in the study. Children in neither group received specific phonological instruction. Posttest results showed that there were no

significant differences between whole language or traditional instruction in children's performance on decoding, reading, comprehension, or writing fluency. However, high phonological awareness children in the whole language classroom significantly outperformed the high phonological awareness group in the traditional classroom on one of three spelling measures (i.e., spelling unpredictable words). Although children with well developed phonological awareness made significant gains regardless of instructional program, the children with deficient phonological awareness achieved at the same low level.

Both the Felton (1993) and Griffith et al. (1992) studies underscored the importance of explicit, early phonological awareness training for children with deficits in these critical skills. Moreover, children at-risk for reading difficulties may remain painfully slow readers if they are not provided with early remedial classroom instruction that incorporates phonological awareness activities.

SUMMARY

During the past 30 years, there has been increasing research-based information concerning the critical role of phonological awareness for the reading acquisition of young children. Recent studies have shown that children's phonological awareness in kindergarten is highly predictive of their subsequent reading success. Although many children develop phonological awareness and discover the link between printed and spoken words relatively easily, as many as 25% of children need specific training to clearly understand that language consists of individual speech sounds that are represented by letters or letter combinations.

Currently, research findings indicate that instructional practices in phonological awareness should be explicit, systematic, and include frequent opportunities to engage in spelling, writing, and meaningful texts. However, the lack of dissemination of these critical skills and the instructional approaches necessary to foster phonological awareness is evident in teacher preparation coursework, staff development programs, and commercially developed instructional reading programs.

Although the research on teachers' knowledge of phonological awareness is limited, three studies (Moats, 1994b; Shay, 2000; Troyer & Yopp, 1990) found in the literature reported that teachers were not aware of the research knowledge on phonological awareness, nor did they have the phonological foundation necessary to translate this knowledge into appropriate classroom instruction. However, more research is needed in this area to fully understand teachers' knowledge of phonological awareness and their ability to instruct children in these prerequisite reading skills.

CHAPTER THREE

METHODOLOGY

INTRODUCTION

In this study, I investigated the perceptions and understandings, including background knowledge and instructional approaches, of kindergarten and first grade teachers regarding the concept of phonological awareness. In order to understand teachers' perspectives, I addressed the following questions:

- 1) What do phonological awareness and phonological awareness instruction mean to kindergarten and first grade teachers?
- 2) How do kindergarten and first grade teachers teach phonological awareness in the classroom context?
- 3) To what extent do kindergarten and first grade teachers believe phonological awareness instruction contributes to literacy acquisition?

According to Guba (1990), the nature of the research question(s) under investigation determines the research methods. Unlike quantitative methods, which are used to determine facts or causes of social phenomena, qualitative methods are used to "collect descriptive data, people's own written or spoken words" (Taylor & Bogdan, 1984, p. 5). While extensive quantitative research relating to causal statements or factual knowledge of phonological awareness exists in the literature, qualitative research describing teachers' perceptions of phonological awareness and its relationship to the literacy acquisition of young children is virtually nonexistent. This study, in contrast to extant research, attempted to provide kindergarten and first grade teachers with the

opportunity to be heard. It is their opinions and understandings that will determine whether, and to what extent, phonological skills are incorporated in the classroom context as an instructional approach to literacy acquisition.

The method of data collection for this study was a mailed, written interview including demographic questions as well as eight open-ended questions designed to reveal teachers' knowledge of, perceptions of, and instructional approaches to phonological awareness. In-depth explanations of these questions are found beginning on page 42 below.

The data were analyzed using a constant-comparative method (Bogdan & Biklen, 1982; Glesne & Peshkin, 1992; Lincoln & Guba, 1987). To accomplish this task, I followed the guidelines of Glesne & Peshkin (1992) who describe this data analysis as an ongoing, simultaneous method in which the researcher must "categorize, synthesize, search for patterns, and interpret the data you have collected" (p. 127).

Peer debriefing (Erlandson, Harris, Skipper, & Allen, 1993) was carried out to help insure trustworthiness of the coding categories and interpretations. The peer debriefer for this study was a college professor who is knowledgeable about "the substantive area of the inquiry as well as the methodological issues" (Lincoln and Guba, 1985, p. 309). Debriefing meetings occurred throughout the course of the study. During these sessions, we discussed my concerns regarding data collection and data analysis. These discussions helped me clarify understandings of the categories and interpretation of the data. The peer debriefer kept me focused on the analysis process and supported my efforts in writing the dissertation.

RATIONALE FOR WRITTEN INTERVIEW

We interview people to find out from them those things we cannot directly observe. (Patton, 1980, p. 196)

Interviews vary in format and type, depending upon the focus of the study, research questions, and sampling criteria (Miles and Huberman, 1984). Although most conventional interviews in qualitative research consist of individual “face-to-face encounters” (Taylor & Bogdan, 1984, p. 77), interviews can occur in other forms such as group interviews, telephone surveys, and mailed or self-administered questionnaires (Fontana & Frey, 1994).

In qualitative research, interviews may be used in combination with other means of data gathering, such as participant observation and documents, or they may be the exclusive strategy for data collection (Glesne & Peshkin, 1992). The qualitative interview approach permits individuals to communicate information concerning their feelings, opinions, experiences, and perceptions, thus allowing for in-depth analysis by the researcher.

After thoughtful consideration, I chose to use anonymous written interviews due to factors unique to this study. First, I am acquainted with many of the teachers in this county; thus, using a written interview would aid in minimizing interviewer effects on the participants as well as assuring anonymity so that they would feel safe to respond as honestly as possible. Second, the specified participants for this study, all the kindergarten and first grade teachers in a selected school district, comprised a sizable number, approximately 107. By utilizing a written interview, each teacher could be contacted and given an opportunity to participate.

Third, a written interview would allow participants to have sufficient time to respond thoughtfully to the interview questions and “express their own understandings in their own terms” (Patton, 1980, p. 205).

DEVELOPMENT OF THE WRITTEN INTERVIEW

A booklet of interview questions was designed to explore the perceptions of kindergarten and first grade teachers in a rural East Tennessee school system. While constructing the written interview, I considered Patton’s (1980) six types of interview questions. A combination of opinion/value, experience/behavior, background/demographic, and knowledge questions were used in order to obtain detailed, descriptive data from the respondent’s own frame of reference and to serve as a validity check for other questions in the written interview.

The booklet contained two sections (see Appendix B). Part 1 consisted of six demographic and general information questions which were included so that each respondent could be viewed in relation to other respondents (Patton, 1990) during comparative analysis. Part 2 of the written interview contained eight open-ended questions designed to elicit information pertaining to teachers’ background knowledge and understanding of phonological awareness as well as their instructional approaches in the classroom context. These questions allowed respondents to write their own “words, thoughts, and insights in answering the questions” (Patton, 1980, p. 204), even though the wording and sequence of the questions were prepared in advance. When the booklet was constructed, all six demographic questions were presented on one page. Each of the remaining eight questions, which comprised Section 2 of the written interview, appeared

at the top of separate pages of the booklet to allow ample space for teachers' written responses.

The questions were reviewed by two colleagues with a specific interest in and knowledge of phonological awareness, a doctoral candidate who is well-versed in the research literature on phonological awareness, my major professor, and other members of my doctoral committee. One colleague offered slight revisions in the wording of two questions for clarification. Erlandson et al. (1993) stress the importance of preparing “a list of carefully worded questions that reflect the basic research questions and problem(s) of the study” (p.88). The questions for Part 2 of the written interview and the rationale for their inclusion follow.

Question 1: In your opinion, what are the major instructional components necessary for the literacy acquisition of young children?

This question was intended to guide the participants to reflect on their personal theoretical and methodological understandings of how to promote literacy in young children. The purpose of this lead-in question was to provide a broad context with which to respond to the remaining questions.

Question 2: What does the term “phonological awareness” mean to you?

This question focused on the participants' background knowledge of the concept of phonological awareness. The intent of this question was twofold: 1) to provide a frame of reference for the term “phonological awareness” when responding to other questions and 2) to gain information concerning the participants' views of the nature and purpose of phonological awareness.

Question 3: What do you consider to be the most important phonological skills that contribute to reading success?

This question was designed to gain information regarding the participants' understandings of the different phonological skills and those that most advance reading acquisition. It also served as a cross check for other questions. For example, question 5 of the written interview asked participants to describe a recent lesson in which they taught students to become more phonologically aware. To answer this question, participants would necessarily consider and reflect upon the phonological skills they deem essential for the advancement of reading acquisition.

Question 4: Explain your understanding of the relationship between phonological awareness and reading.

This question required the participants to reflect on their own conceptual knowledge of phonological awareness and reading. The purpose of this question was to understand the scope and breadth of the participants' knowledge base with regard to the connection between phonological awareness and reading acquisition.

Question 5: Describe a recent lesson in which you taught your students to become more phonologically aware.

This question was intended to elicit a detailed description of past instructional and phonological awareness activities in the classroom context. It gave the participants an opportunity to clarify their opinions and support their understandings regarding other questions in the written interview.

Question 6: From what sources did you learn about phonological awareness and the ways in which phonological skills can be implemented in the classroom?

This question focused on the influences and previous experiences that contributed to the shaping and construction of the participants' understandings of phonological awareness. The purposes of this question were to reveal sources of information on phonological awareness that were available to the participants and to provide a cross check with questions in the demographic section of the written interview.

Question 7: What difficulties have you encountered in teaching phonological awareness skills to your students?

This question required the participants to reflect on past instructional approaches and to identify any factors contributing to the difficulty of teaching phonological skills. The broad scope of this question allowed the participants to respond in a variety of ways.

Question 8: How does the individual student's level of phonological awareness affect your planning and instruction?

This question required the participants to focus on each student's level of phonological awareness and to recall any variations in instructional planning or strategies which may have been used in the classroom context. This question served as an additional means of understanding the participants' pedagogical beliefs and methodological procedures regarding phonological awareness.

PARTICIPANT SELECTION

The participants selected for this study were kindergarten and first grade teachers in a rural East Tennessee school system. The school district contains three primary and seven elementary schools. The total number of kindergarten and first grade teachers employed in the system was approximately 107, of which 52 were kindergarten teachers and 55 were first grade teachers. Of the teachers employed, 105 were female and two were male. To meet the diverse educational needs of the students, the system provided one developmental kindergarten class, one junior primary class, and six multiage classes comprised of kindergarten and first grade students. According to Erlandson et al (1993), the participants are determined “on the basis of what the researcher desires to know and from whose perspective that information is desired” (p. 91). My interest in studying this particular group of teachers was based on my past educational experiences as well as future goals.

In the 1998-1999 school year, several colleagues and I attended a county-wide workshop on phonological awareness conducted by a major educational publishing company. During this session, the presenter imparted information, relating to specific phonological skills and instructional practices for the literacy development of young children, which conflicted with the research literature. This experience raised many questions about teachers’ understandings of phonological awareness in my district as well as others who had participated in similar workshops. Additionally, one of my future goals is to conduct professional development programs on the topic of phonological awareness. The knowledge gained from this study, in a comparable district, will enable more efficient development and implementation of these programs.

Thus, my pedagogical concerns about the workshop I attended and my desire to conduct professional development programs were the determining factors in choosing to study the teachers in this particular school district.

The participants were limited to kindergarten and first grade teachers because the teachers in these grade levels are responsible for the early formal literacy instruction of young, school-age children. They provide the guidance and training that stimulate the development of emerging reading. It is their understandings of how phonological awareness relates to reading acquisition that will influence their selection and implementation of instructional strategies used in the classroom context; thus, the perceptions of these teachers are of critical importance.

DATA COLLECTION

A cover letter requesting permission to conduct research was sent to the superintendent of the school system used in this study (see Appendix C). After permission was granted by a relevant school authority, I contacted each primary and elementary school principal via phone to secure written approval to conduct research with their kindergarten and first grade teachers. During this contact, I explained the purpose of the study and the procedures that would be utilized to obtain data from the teachers. Each principal expressed a willingness to allow their teachers to participate in the study. Subsequent to receiving written permission from the principals, I obtained a list of teachers employed for the 2001-2002 school year. Each teacher was sent a packet, via the inter-school mailing system, containing the cover letter, survey instrument, and a self-addressed, stamped envelope. The cover letter included the

following: 1) the purpose of the study, 2) an invitation for teachers to participate, 3) an explanation that the responses would be used in the results of the study, and 4) an offer of a final copy of the results upon request.

The first distribution of written interviews was sent to 107 teachers in February, 2002. An updated list of employees revealed that three teachers had taken an interim leave of absence, reducing the possible participants to 104. Two teachers sent letters of declination, citing scheduling difficulties and time constraints, and were excluded from the study. The first distribution of written interviews generated a 31% return.

A letter of reminder (see Appendix D) was sent to the teachers in March, 2002. A second distribution of the written interview followed two weeks later. These contacts were made in order to reduce the number of nonresponses (Johnson, 1991). Of the 102 teachers contacted, I received a total of 64 responses, yielding a return rate of approximately 63 percent. A description of the participants follows.

PARTICIPANT DESCRIPTION

The participants in this study included 35 kindergarten and 29 first grade teachers. Seventeen of these teachers had from one to five years teaching experience, whereas 47 teachers had taught six or more years. At the time of the study, eleven of the 64 teachers held a Bachelor's degree, 33 teachers held a Master's degree, and 20 teachers held an Educational Specialist degree. Teachers varied considerably in the number of college reading courses taken, ranging from one to ten. Twenty of these teachers had never attended professional development programs or workshops on the

topic of phonological awareness; however, two teachers had attended as many as ten.

DATA ANALYSIS PROCEDURES

Because different people manage their creativity, intellectual endeavors, and hard work in different ways, there is no right way to go about organizing, analyzing, and interpreting qualitative data (Patton, 1990, p. 381).

Written interviews were analyzed using the constant comparative method. Data analysis began as written interviews were returned via mail and proceeded throughout the study.

To familiarize myself with the data, I read and reread each interview booklet upon arrival. Initially, I read the first three interviews several times as separate documents to get a sense of each participant's understanding of the topic in totality and to determine the consistency of their responses. For example, were teachers' understandings of the term *phonological awareness*, question one of the written interview, reflected in their responses concerning important phonological skills? Additionally, I wrote summaries of these written interviews to gain understanding of each participant's holistic view of phonological awareness.

After reading the interviews separately and writing summaries for each, I reread them as one document, looking for similarities and differences in participants' responses. The process was repeated as additional interviews arrived. This method proved beneficial in the first steps of analysis as I condensed and further compared the data as whole sets.

Patton (1990) refers to cross-case analysis as “grouping answers from different people to common questions or analyzing different perspectives on central issues” (p. 376). The data in this study, which were comprised of participants’ written responses to standardized open-ended interview questions, allowed me to use cross-case analysis as a method of comparing the data. I read each interview several times, then reread previously returned interviews, comparing participant’s responses for each of the eight interview questions; thus, each question from the interview was read and analyzed as clumps. This initial stage of inductive analysis enabled me to examine manageable units of text and identify patterns and themes in reference to the research questions under investigation.

While analyzing the data in this manner, I realized that the data for question 6 of the written interview, *From what sources did you learn about phonological awareness and the ways in which phonological skills can be implemented in the classroom?*, did not answer any of the three original research questions. Thus, an additional research question was included in the Findings Chapter of this study to explain how teachers constructed their perceptions of phonological awareness. Upon further analysis of the data, it became evident that Research Question One, *What do phonological awareness and phonological awareness instruction mean to kindergarten and first grade teachers*, should be separated into two questions for in-depth analysis and interpretation.

During this phase of analysis, I began writing detailed memos in a journal. Journal entries included plans for ways to compare the data, ideas for category and subcategory names, and questions concerning the relationship among units of data. For example, after reading the data concerning the sources by which teachers learned about

phonological awareness instruction, I listed category names from teachers' responses and wrote a note to compare teachers who cited *colleagues* as a source with the lessons they described in order to identify possible relationships between the two. I later referred to the journal when reviewing initial understandings and impressions of teachers' responses as well as refinements of categories and themes. Memoing continued throughout the data analysis.

Lincoln and Guba (1985) explained that categorizing the data involves classifying meaningful units of data information into categories that have similar characteristics. For the purpose of coding and categorizing the data, I reproduced the original interview booklets. All markings, such as analytic notes, category names, or highlighted text were written on copies, preserving the original booklets in a secure location. During these readings, I discovered similarities in the data. Notations concerning important ideas and preliminary categories were made in the left hand margin of the copied written interview booklets as I examined the text line by line (Strauss & Corbin, 1990). This line-by-line analysis fragmented the data. I continued coding each interview, comparing data set to data set. The units of data were often several sentences, comprising a paragraph. However, at times the units consisted of single sentences or phrases. Units of data were categorized and names were given to these categories. Category names were derived from specific words or phrases in participants' responses, previous readings, or terms that reflected my own interpretation of the data units (Lincoln & Guba, 1985). Subcategories were also identified during this process.

Additional readings of the data resulted in the identification of new categories or refinements of previous ones as categories collapsed or expanded to include several

related characteristics. For example, I originally identified 40 categories; however, upon further analysis, categories previously named *letter activities* and *writing activities* were combined to form the category *print-related activities*. A few segments of data were unrelated to the research questions and were not used in this study.

According to Taylor and Bogdan (1984), qualitative researchers “must learn to look for themes by examining your data in as many ways as possible” (p. 130). To further compare the data, each written interview was typed into a database. I assigned each interview a number for easy reference. Then, I rearranged the data by sorting it in various ways, such as current teaching assignment, years teaching experience, number of professional development programs attended, educational degree, number of college reading courses, or key words which reflected possible themes. Each sort was color-coded, and hard copies were made. I recoded the data after each sort until no new categories emerged from the data. Thus, the data were coded and compared repeatedly as I looked for recurring patterns and characteristics within the categories.

After establishing a set of categories, I wrote the assigned participant number on each line of the interview. Additionally, each line of the interviews was numbered consecutively so that pieces of the data could be readily identified and reassembled as a whole unit if necessary. Data were cut into relevant clumps. These sections of text were placed in separate manila folders, which allowed me to compare the sections of information that related to themes or concepts. I manually sorted the contents of one of the folders on a large surface, arranging the clumps by their relationships. The process was repeated with the remaining folders. I sorted and resorted the data as necessary, sometimes placing the strip of data under a different category. Sorting continued until I

was able to consistently sort the strips. The visual layout from this process was useful in ensuring the proper “fit” of data to the categories and later when writing an outline to present the findings.

CHAPTER FOUR

FINDINGS

The purpose of this study was to investigate the perceptions and understandings that kindergarten and first grade teachers in one school district have concerning the concept of phonological awareness. Findings are presented below, organized according to the five research questions stated in Chapter Three above.

RESEARCH QUESTION ONE

What Does Phonological Awareness Mean to Kindergarten and First Grade Teachers?

All of the teachers in this study perceived phonological awareness to be a sound-related ability linked to the initial stages of literacy development. However, they differ in their perceptions of the meaning of this sound-related ability.

Although phonological awareness has been a topic of educational interest for the past 20 years, three teachers commented that their understanding of phonological awareness was limited. One kindergarten teacher stated, "My answers are very general because I have much to learn myself." Another teacher discussed her limited knowledge of phonological awareness throughout most of the written interview. When asked what the term "phonological awareness" meant, she stated, "I am not really sure what phonological awareness is. I know it is sound-related and not letter-related. I am used to teaching phonics with letters and sounds. I know little, if anything, about phonological awareness. I have not implemented it in the classroom." Although a third teacher

commented that she only partially understood the term “phonological awareness,” she expounded on what she perceived phonological awareness to mean. “I don’t fully understand it myself. However, children should understand that a whole sentence can be broken down into words, and words can be broken down into syllables and individual sounds.”

Sixteen of the 64 teachers in this study perceived phonological awareness as an understanding about the sounds of oral language, a purely auditory sensitivity to the units of sound in the speech stream. To these teachers, children who are phonologically aware are able to attend to the internal structure of a word in various ways, such as hearing, recognizing, and manipulating the sounds in speech. The remaining teachers believed that phonological awareness is an understanding of the relationship between the sounds of speech and the symbols that represent those sounds.

UNDERSTANDING THE SOUNDS OF LANGUAGE

Six teachers perceived phonological awareness as the specific ability to identify and manipulate the component sounds of language, such as words, syllables, onsets and rimes, and phonemes. One first grade teacher spoke of manipulating sounds as isolating and assimilating sound units of varying lengths.

[Phonological awareness is] an awareness of how sounds can be isolated from the whole- whether it be words in sentences, syllables in words, or sounds in words. Also, not only to isolate (break down/apart), but to assimilate (build it up) individual components to a larger whole. In short, the manipulation of parts of a whole-a working knowledge of the inter-connectedness.

Three teachers believed this ability to manipulate the sounds of language precedes letter-sound knowledge or phonics instruction. To these teachers, phonological

awareness is an ability to examine language independent of and prior to understanding the relationship between letters and sounds.

Students can actually understand sounds and breaks between sounds before actually looking at letters and words and sentences. Students can start with a whole sentence and first break down the number of individual words and then syllables of each word.

If a child is phonologically aware, he/she can manipulate-effectively- and understand the relationship between the whole and its parts. The parts can be partially altered, and then reassembled. The child can both “breakdown” and “build up.” This working knowledge is crucial when the child begins to make letter-sound connections (phonics).

When referring to the smallest unit of speech, or the phoneme, several teachers referred to the term “phonemic awareness,” a term often used interchangeably with “phonological awareness.”

The definition of phonemic awareness, according to Ball, Blachman, and Adams is the ability to recognize that a spoken word consists of a sequence of individual sounds and the ability to manipulate those sounds in various ways. I concur with this definition.

Phonemic awareness is the awareness of those small units of which speech consists. Our language is made up of sounds that, when combined, form words.

Several teachers referred to phonological awareness as a child’s ability to “hear” the sounds of language. Teachers believed that children who “hear” the sounds of language are able to perform specific, multi-leveled phonological tasks such as rhyming, discriminating sounds, isolating sound units, and segmenting and blending sounds orally, thus demonstrating a differential awareness of the phonological structure of spoken words. The following three examples illustrate teachers’ perceptions of phonological awareness as the ability to “hear” sounds.

The child who is phonologically aware is able to “hear” the sounds in spoken language-the syllables...in fact, every aspect of the spoken sounds. By “hear” I mean he can isolate it and produce it. In other words, he could sort spoken words for rhymes, number of syllables, some onsets and rimes, etc.

When children are phonemically aware, they are able to hear similarities and differences in sounds of words, such as beginning sounds, ending sounds, middle sounds, rhymes, syllables, etc. They are able to identify and manipulate sounds in words.

It [phonological awareness] means the ability to hear the sounds in spoken language. This includes the ability to separate spoken words into discrete sounds as well as the ability to blend sounds together to make words.

All six of these teachers perceived phonological awareness as an ability to focus on the linguistic features of speech. They believed that children who are phonologically aware are able to actively manipulate the sound segments of speech, whether they be words within sentences, syllables within words, onsets and rimes within words, or phonemes.

UNDERSTANDING THE SOUND-SYMBOL RELATIONSHIP

Most of the teachers in this study perceived phonological awareness as the ability to understand the relation between the sounds in spoken words and the letters of the alphabet. To these teachers, phonological awareness involves an understanding of the interrelated nature of the sounds of language and the symbols used to represent those sounds. As one kindergarten teacher stated, “[Phonological awareness is] a holistic acquisition of language and being able to take the step into the abstract realm of print.”

Thirteen kindergarten teachers and two first grade teachers believed that children who are phonologically aware have an understanding of how sounds are represented by

letters or letter combinations. To these teachers phonological awareness is an exclusive understanding of how letters function as symbols for sounds. One kindergarten teacher wrote, “[Phonological awareness is] students being aware that different letters make different sounds and identifying/recognizing those sounds.”

Three kindergarten teachers discussed phonological awareness as a dual ability which includes a sensitivity to the sounds in language as well as an understanding that speech sounds correspond to letters. As one kindergarten teacher stated, “[Phonological awareness is] a child’s ability to identify and manipulate the sounds of language and be able to apply this to the sound/symbol association.”

Twenty-one teachers in this study perceived phonological awareness as an understanding of the correspondence between sounds and letters and how they work together to form words, thus applying the alphabetic principle to “sounding out” or decoding words. An interesting finding is that 15 of these teachers are first grade teachers and only six are kindergarten teachers. The following statements illustrate teachers’ perceptions of phonological awareness as an understanding of the letter-sound relationship and applying this knowledge to the process of decoding words.

Phonological awareness is] an awareness of phonemes or sounds that are represented by letters of the alphabet. [It is] an understanding of how the alphabet works (letters make sounds, sounds blended together make words, words make sentences, etc.)

Phonological awareness is] the components of sounds, words, etc. Students learn by identifying letters, then putting sounds to them, then blending into words, etc.

Phonological awareness to me means that the students know sounds blended together form words. I introduced this to my class using a mixer. We talked

about how the ingredients alone were not pudding...but when we put them in the bowl and blended them together, we make pudding. We now have a paper mixer on our chalkboard. When a child is stumped on a word, he/she puts the letters in the bowl and tries to blend them together, one sound at a time.

Three teachers referred to phonological awareness as “phonics.” One kindergarten teacher commented, “[Phonological awareness is] the ability of a young child to know and use concepts of phonics... being able to use sounds and ‘sound out’ words.” A description of the sounds and vowel rules children should recognize in order to be phonologically aware was given in a bulletized form by a first grade teacher:

- basic beginning, middle, and ending sounds
- basic vowel rules (long vowels, silent e, double vowels)
- blends, digraphs, etc.

Although many teachers perceived that phonological awareness included the ability to decode words, two teachers believed that phonological awareness extended beyond decoding and encompassed the ability to encode. To these teachers, children who are phonologically aware are able to translate sounds into corresponding letters or letter combinations, a process used when spelling words. As one first grade teacher explained:

The term has such a wide connection to me. The term means the ability to decode information and then take that to the next level and begin to encode.

These teachers perceive phonological awareness to be an ability that focuses on letter-sound associations rather than the linguistic features of speech. Most teachers commented that phonological awareness included the ability to apply letter-sound knowledge to decoding words.

SUMMARY: RESEARCH QUESTION ONE

Teachers' understandings of the meaning of phonological awareness differed considerably. Sixteen of the teachers in this study perceived phonological awareness as an understanding that spoken words consist of speech elements. To these teachers, phonological awareness pertains exclusively to the sounds of speech, an antecedent to learning letter/sound correspondences. Teachers believe children demonstrate their level of phonological awareness by actively manipulating differing sound units of language, such as syllables, onsets and rimes, and phonemes. Such manipulation can occur through phonological tasks that include rhyming, segmenting and blending, and phoneme isolation.

Most of the teachers in this study perceived phonological awareness as an ability to understand the sound/symbol relationship, that words consist of individual letters and that these letters represent sounds. To some of these teachers, phonological awareness is an understanding that exclusively pertains to the association between sounds and letters. To other teachers, phonological awareness is the ability to understand that spoken words are composed of individual speech units and that these speech sounds correspond to letters in the English orthography. However, nearly one third of the teachers in this study perceived phonological awareness as including the ability to apply the sound-symbol relationship, as when decoding or encoding words.

RESEARCH QUESTION TWO

What Does Phonological Awareness Instruction Mean to Kindergarten and First Grade Teachers?

When teachers discussed the meaning of phonological awareness instruction, they wrote about their perceptions of essential phonological skills employed during instruction which facilitate reading acquisition. Teachers' perceptions of the skills that comprise phonological awareness instruction were influenced by the meanings they ascribed to the term "phonological awareness." As previously stated, teachers had differing perceptions regarding the meaning of phonological awareness, thus their understandings of the phonological skills essential to the reading process varied. Teachers' responses centered around sound-related skills, print-related skills, or a combination of these two types of skills. Although most of the teachers listed a variety of skills, one teacher stated that she was unsure of the phonological skills used during instruction. She commented, "I'm not sure what phonological skills are. I know that you need to know sounds in order to have reading success."

SOUND-RELATED SKILLS

Only six of the teachers in this study perceived that phonological awareness instruction consists of sound-related skills relating exclusively to the sounds of speech. To these teachers, phonological awareness instruction is comprised of skills which enable children to understand language at the spoken, rather than the written, level. They believe the primary focus of phonological awareness instruction is on understanding how speech is composed of smaller units, an insight that undergirds the readiness for skills involving print.

Two of these teachers believed the most important phonological skills that contribute to reading success concern the auditory recognition of sounds and the ability to imitate and produce sounds. The four remaining teachers wrote about a variety of phonological skills involving the analyzation of the phonological structure of words. These skills include rhyming, orally blending and segmenting sounds, and phoneme manipulation skills. One of these teachers listed a variety of auditory skills which vary in their cognitive and linguistic complexity. Her perception of essential sound-related skills included in phonological awareness instruction follows.

1. auditory discrimination: specific awareness of the phonemes in language
2. skill with rhyme, rhythm and repetitive patterns in read alouds
3. skill with blending and segmenting

One first grade teacher believed that orally segmenting and blending phonological units of different levels are important phonological skills that should precede letter-sound association skills. She stated:

I believe sounds are very important. Students need to be able to break down whole sentences and words and then be able to put back together. After students have a better understanding, they can then move to letter representation.

Another first grade teacher explained how orally segmenting and blending sounds, which she referred to as “breaking down” and “building up,” facilitate children’s learning of print-related skills.

breakdown-helps to foster emergent writing
buildup- helps to promote blending and eventually decoding

Two teachers perceived that categorizing spoken words according to shared phonological elements and rhyming skills are essential instructional skills. One of these

teachers described how these sound-related skills help children make associations between sounds and words.

If children are able to orally hear the differences in sounds and words, they will be able to make associations to new words they encounter. It's more important that students be able to understand that words are made from sounds first than to know what each particular letter represents. When children know letter names and sounds but do not understand that those letters and sounds create words, he or she will struggle in learning to read.

The most important phonological skill that contributes to reading success is the ability to make associations. When children are able to see that "dog" and "dig" sound the same at the beginning and end, but have a middle sound that is different, they are beginning to see the relationship between words and sounds. When children are able to rhyme other words to a given word, they are really ready to read.

To these six teachers, phonological awareness instruction involves skills that require children to examine language independent of print. Instruction does not include written words or letters, and children's responses are based on what they hear rather than see. Teachers' perceptions of phonological skills include analysis of spoken words into parts, such as rhyming, segmenting and blending sound units, and discriminating or categorizing sounds in spoken words. They believe these skills are necessary prerequisites to learning print-related skills.

SOUND-RELATED AND PRINT-RELATED SKILLS

Nearly one-third of the teachers in this study believed that phonological awareness instruction is comprised of a combination of sound-related skills and skills involving print. To these teachers, phonological awareness instruction includes skills that help children become aware of different phonological units in oral language as well as skills that involve graphic representations of sounds.

Most of the print-related skills teachers cited involved an understanding of letter-sound correspondences, such as associating letter sounds with written words, identifying letter sounds, or decoding words. Teachers listed these skills in conjunction with oral/aural skills such as rhyming, determining sound position, and isolating discrete sounds. Although most of these teachers listed a variety of the above skills, four kindergarten teachers had the same perceptions concerning important skills used during instruction. Skills these teachers cited, utilizing both an auditory and visual modality, included the following: identifying sounds, associating sounds with written words, and manipulating sounds.

Fourteen teachers perceived associating sounds with written words or letters to be an important phonological skill used during instruction. To these teachers, associating sounds with letters is a skill which enables children to match the sounds of speech to letters or vice versa. Teachers often referred to this skill as “knowing the sounds of the letters,” “letter-sound recognition,” or “identification of sounds.” One first grade teacher referred to this skill as “sight recognition of sounds and being able to produce said sounds.” Although letter-sound recognition was perceived to be an important phonological skill, one kindergarten teacher stressed that letter-sound recognition should be “introduced, not drilled.”

Eight teachers believed that blending sounds to form words is an important instructional skill. To these teachers, “blending sounds” refers to translating letters into sounds and sounds into words. One teacher referred to this skill as “blending letters.” Unlike teachers who perceived blending as an oral skill that explicitly focuses on sounds, or phonemes, these teachers believed the skill of blending involves the use of

letters. As one teacher stated, “[An important phonological skill is] a child being able to break down a word and blend the sounds in order to sound out a word.”

In addition to print-related skills, teachers perceived that phonological awareness instruction included several sound-related skills. Five teachers identified rhyming skills as important phonological skills. Teachers’ perceptions of rhyming skills included the ability to identify or generate rhyming words. One first grade teacher explained rhyming skills as identifying “word families through listening and reproducing.”

Listening skills were cited by three kindergarten teachers as important phonological skills that contribute to reading success. To one of these teachers, listening skills involved “being able to hear sounds as they are blended to make words.” Another teacher perceived listening skills as “having acquired an adequate listening vocabulary.”

Five teachers perceived that an important phonological skill is reading aloud to children. To these teachers, reading aloud is important because it motivates children to enjoy books. When asked about important phonological skills used during instruction, one teacher responded “joy of being read to,” and another wrote “instilling a love of reading.” A kindergarten teacher’s perception of phonological skills included read alouds as one of many skills that should be used during instruction. She stated,

I feel all aspects are of equal importance. No one skill should be isolated for greater importance. It’s the total immersion of language that gives a student the chance to succeed. You can have a slow learner or disabled child who can succeed in reading by “bombarding” them in all areas: read aloud and often; constantly put a sound/letter association; show them print, let them practice it, use it, create it.

To these teachers, phonological awareness instruction means engaging children in skills which enable them to understand the segmental nature of speech as well as how letters represent the sounds of spoken language. Teachers' perceptions of phonological skills considered important to the success of a beginning reading instructional program are both sound and print-related. Sound-related skills, such as rhyming and categorizing sounds according to phonemic structure, involve the oral processing of language and speech. These teachers additionally perceived that phonological skills teach children how to use letter-sound correspondences to read unfamiliar words.

PRINT-RELATED SKILLS

Approximately 52% of the teachers in this study perceived that phonological awareness instruction involves skills which pertain exclusively to letters in written words and how these letters represent speech sounds. To these teachers, phonological awareness instruction focuses on children's interaction with print rather than their ability to hear smaller sound units in oral language. Most of the teachers in this category believed that identifying letter sounds is an important phonological skill. As one teacher stated,

I believe that the most important [phonological] skill is knowing the letters and being able to recall the sounds for the letters. This process must be the basic foundation for successful reading.

Four of these teachers perceived that specific letter-sound combinations are more important than others. When asked about important phonological skills, one teacher wrote, "vowel sounds (both long and short) as well as blends (ex. sh, ch, etc.). Of course all of it is important."

In addition to letter-sound recognition, many teachers believed that decoding is an important phonological skill. To these teachers, decoding refers to an ability to convert letters into sounds and then blend the sounds together in order to form and recognize a word. They perceived that decoding words requires children to know and apply phonics rules. Teachers often referred to decoding as “word attack skills,” “sounding out words,” or “processing sounds.” Following are two exemplars of teachers’ perceptions of decoding words as an important phonological skill.

Being able to sound out letters and put them together to make a word. Some students know the sounds that letters make but they cannot put them together to make words.

The most important phonological skill is the ability to process small sounds [that] make up spoken language. Students must be able to associate letters with their sounds. They must also be able to blend these sounds to form words.

Four teachers believed that phonological awareness instruction extends beyond decoding skills and includes skills involving comprehension. To these teachers, comprehension refers to the ability to construct meaning from print. The following response by one first grade teacher illustrates these teachers’ perceptions of decoding and comprehension as important phonological skills.

[Important phonological skills are] being able to “attack” new words (word attack) by applying phonetic rules and exceptions and then comprehending what those words mean within a sentence.

SUMMARY: RESEARCH QUESTION TWO

The teachers in this study had differing perceptions concerning the meaning of phonological awareness instruction. Teachers cited a wide variety of skills which they considered to be important phonological skills used during instruction.

Several teachers believed that phonological awareness instruction is comprised exclusively of sound-related skills in which children analyze the phonological structure of speech. These teachers' responses centered around skills, such as rhyming, blending and segmenting, and categorizing sounds, which require children to hear and manipulate oral sound patterns before relating them to print.

Many teachers perceived that phonological awareness instruction included sound-related skills coupled with skills which relate speech sounds to print. These teachers cited skills which develop a child's insight into the segmental structure of speech as well as skills that teach children how to use letter-sound correspondences.

Approximately 52% of the teachers in this study perceived that phonological awareness instruction is comprised exclusively of skills which address the relation between sounds and letters and how to apply knowledge of the alphabetic code to reading words. To these teachers, important phonological skills included letter-sound recognition and decoding. Several of these teachers believed important instructional skills included word recognition, a linking of a written word with its meaning, and comprehension.

Although many teachers perceived that blending sounds is an important phonological skill, their perceptions of this skill varied. Several teachers believed that blending sounds is an oral skill which requires children to synthesize phonological units, whether words, syllables, or phonemes, heard in spoken language. However, most teachers perceived the skill of blending as part of the decoding strategy which requires children to assign sounds to written letters, then synthesize the sounds in order to produce a word.

RESEARCH QUESTION THREE

How Do Kindergarten and First Grade Teachers Teach Phonological Awareness in the Classroom Context?

The answer to this question is organized around three themes: classroom activities, difficulties, and instructional strategies. Teachers wrote about classroom activities they believed encouraged children's' phonological awareness, the difficulties that hindered their teaching of phonological awareness lessons, and the multiple instructional strategies they implemented in order to address students' various phonological levels.

CLASSROOM ACTIVITIES

The kindergarten and first grade teachers in this study described a variety of activities which they believed heightened children's' phonological awareness. Most of the lessons teachers reported centered around activities that are oral/aural in nature and activities linking sounds with print. One teacher commented that she had not implemented phonological awareness activities in the classroom due to her lack of knowledge. She further explained, "I teach using phonics."

Oral/Aural Activities

Six kindergarten teachers and one first grade teacher wrote about oral/aural activities which directed children's attention to sounds. They discussed a variety of materials and approaches used during instruction, including games, music, and children's literature. These activities included a range of sound-related skills, such as auditory discrimination, rhyming, segmenting and blending, and phoneme manipulation, which required children to respond orally or through body movements.

Two of these teachers discussed oral/aural activities involving auditory discrimination as ways to develop children's phonological awareness. One of these teachers explained that her students performed specific motor skills, such as walking and hopping, after identifying those sounds on a CD. Another teacher related an activity in which students listened for animal names and sounds in a poem she read aloud. She stated:

I read a poem "Katie's Kangaroo" aloud. I asked the children to name animals Katie kept on her bed (kangaroos, koalas). I read the poem substituting animal names suggested by the children (kitty, car, bear, snake, etc.). The children then would clap hands each time they hear an animal name. Then I reread the poem using animal sounds associated with the animal. The children identified the animals by their sounds.

In addition to listening activities which required children to respond to specific spoken words or nonspeech environmental sounds, five teachers discussed activities which focused on the manipulation of speech sounds at various levels.

Two other teachers recalled activities that engaged children in rhyming skills. One of these teachers encouraged her students to predict rhyming words while she read a story unfamiliar to them. Another teacher used a song to facilitate her students' oral rhyming and sound manipulation skills. She stated, "My students enjoy the 'Name Game' song and substituting their classmate's names, [such as] Anna Anna bo b _____, Banana Fana fo f _____, Me Mi Mo m _____, Anna."

Activities involving phoneme position in spoken words were cited by two kindergarten teachers. Although one of these teachers gave no more description than "beginning and ending sounds," another teachers described how she taught children to identify initial and final sound position in spoken words by playing a game called

“Sound Snacks.” She explained,

Place two paper cups on the table next to a bowl of M&M’s. Label one cup “B” for “beginning” and “E” for “ending.” Ask the child to identify the beginning or ending consonants in words you name by placing one M&M in the correct cup

One kindergarten teacher reported a lesson requiring oral segmentation and blending. She stated, “In a particular lesson, I used auditory segmenting and blending. An example of this is to pronounce the sounds slowly, followed by pronouncing the sounds quickly. Ex. b-a-t (slowly) bat (quickly).”

In each of these activities, teachers intentionally focused on sounds. One teacher’s lesson focused on environmental sounds; however, the remaining six teachers provided opportunities for children to attend to sounds in the speech stream. Instruction included active responses from children, such as singing, clapping, and movement.

Activities Linking Sounds with Print

Most of the teachers in this study wrote about print-related activities which involved explicit instruction concerning the relationship between sounds and letters. Although several teachers described lessons that engaged children in auditory activities, such as hearing and manipulating oral sound patterns, before requiring them to associate sounds with letters, most teachers introduced their lessons with activities that stressed the acquisition of letter-sound correspondences.

Sound/Symbol Associations

Thirteen kindergarten teachers stated that “High Hat” lessons helped their students become more phonologically aware. “High Hat” is the prominent puppet character in the Goldman-Lynch Sounds and Symbols Development Kit designed for

speech improvement, beginning phonics instruction, and prereading experiences. In this program, teachers instruct children to make connections between 26 speech sounds and a modified alphabet.

One teacher explained that she uses this program with her students “to make words- some real and some nonsense.” Another teacher illustrated how she explicitly directs her students during a “making words” activity.

“Listen to the words I say. Circle the word ‘og’ with your red crayon. Circle the word ‘go’ with your blue crayon” Etc. Etc. with a variety of previously taught sounds.

Although most teachers reported that they use “High Hat” lessons to teach children how to use symbols and sounds to build words, one teacher stated that her students “learn a new sound, use it in blends and words, and sometimes in sentences.”

Letter/Sound Associations

Several kindergarten teachers wrote about lessons which they referred to as “letter of the week.” One teacher explained that these lessons “introduce sounds of letters and how to use these sounds to read words.” Another kindergarten teacher described how she incorporated games, worksheets, and rhyming activities while focusing on a specific letter and its corresponding sound.

Each week, we focus on a different letter of the alphabet. We learn how to make the letter and the sound it makes. We complete a sound sheet for each letter focusing on beginning sounds. At group time, we talk about the letter and the sound it makes. I say the sound several times, and the students repeat it to me several times. Then, we play a game where the students have to listen and see if they hear that sound at the beginning of the word I say to them. Then, I try to get the students to think of some more words that begin with the sounds we are discussing. Next, we do a rhyme or rhythm activity. We say the rhyme or rhythm together listening for the sound we are studying. We review the letter

and sound before students return to their seats to complete the sound sheet. Students are to color, cut, and paste items beginning with the sound we are working. I monitor, adjust, and reteach as necessary.

Three kindergarten teachers reported that their students became more phonologically aware by singing a song involving letter-sound associations during their morning calendar time. One teacher explained that the song “focuses on saying the sound that goes with the picture.” Another teacher described this lesson as a phonics activity. She stated, “We review and discuss phonics daily. We sing a song that reviews letter sounds each morning during calendar time. The children have a picture that they look at that has a picture and a letter that goes with the sound that we are singing.”

Identifying Letter Patterns in Words

Many teachers wrote about lessons which focused on identifying letter patterns in words, such as rhyming or word families, vowel patterns, blends, and digraphs. These activities often included reading or writing experiences for children. Several teachers commented that their activities are extensions or modifications of lessons provided in the current reading series which is adopted county-wide.

Rhyming/ Word Families

Eight first grade teachers and one kindergarten teacher discussed lessons which involved letter patterns at the onset-rime level. In these lessons, teachers directed children to analyze and read words on the basis of shared rime patterns.

Two teachers engaged children in listening for rhyming words or specific rimes in read alouds before introducing them to the letter patterns that represent the rimes. One of these teachers introduced her students to the specific letter patterns in rhymes by writing them on an overhead projector.

Teacher read poem.
Ask students to listen for rhythm.
Clap rhythm.
Find “music” in poem.
Ask to find rhymes in poem.
Hold up hands for rhyming words.
Write word pairs, etc. on overhead.
Circle parts that are the same.
Expand with other letters in substitution to make new rhyming words.
Illustrate favorite pairs of words.

The other teacher included a writing activity in which children composed a list of words containing the target rime pattern.

Through an oral reading lesson, the students were asked to listen for a specific sound and were asked to raise a paper cutout symbolizing the specific sound (“ar”-paper cutout of car). We made a list of words with “ar” from [the] reading. [The] last exercise was for students to come up with “ar” words on their own and to write [the words] on the back of [the] car.

The remaining six teachers reported activities which engaged children in identifying or recognizing written letter patterns for specific word families at the beginning of the lesson. One of these teachers stated that her students identified “all the words that rhyme with ate” after reading a poem in unison; however, several teachers described how they incorporated a combination of reading and writing experiences when instructing students to identify rime patterns.

We made word family flip books at the first of the year. We used the at family and an family and changed the beginning letter.

Students had to find the words that rhymed with their spelling words. We looked at the word endings and listened to the sound. We wrote the words that rhymed and read [the] words together.

Students read from word family books, then developed this family into spelling words. I also do sentence dictation which helps the student to write what they know about the sounds they have heard.

One teacher explained how current themes or stories guided the word family lesson she taught children.

When teaching a new sound, such as old, I tie it in with a current theme or story. For example, we learned about Mel Fisher and his dream of finding the Atocha treasure. We discussed how the salt water affected the silver, but not the gold found on the ocean floor. The children decorated pictures of treasure (including

gold), then brainstormed other words that have the sound “old” to write on their gold pieces. During the next week, every time they come across a word with old (in any subject) they get to write that word on a class poster if they find the word before anyone else- just showing awareness of that sound.

A first grade teacher reported that she engages children in a daily word study designed “to help students see patterns in words, make associations between spellings and sounds, and create new words based on these understandings.” One activity she described involved a rhyme production game.

Another activity children enjoy is an exercise in rhyming/word families. Each child has a marker board. Partners roll a large cube labeled with a variety of middle and ending sounds (-ig, -it, -im, etc.). They try to come up with as many words that rhyme with the one on the die that they rolled. They record their words on the marker board. Many variations are made with this cube game to keep interest and allow for varied abilities.

Long/Short Vowel Patterns

In addition to activities associating letter patterns to sound units at the onset-rime level, eleven first grade teachers reported instructional activities which involved vowels or vowel patterns. Teachers cited a variety of ways which they taught children to focus on these specific letter combinations.

Two first grade teachers discussed how they used stories to teach vowel patterns. One of these teachers explained, “We use Mother Vowel stories to teach the short vowel sounds, and then elaborate on it to introduce long vowels (silent e is on the end to help his brother in the middle say his real name).”

Another teacher described a lesson that involved children composing word lists and creating vowel pattern books. She wrote,

Recently, I reviewed long vowel sounds with my students. The students were asked to write some long vowel words on individual chalkboards. As the students wrote, I monitored and adjusted for understanding. The words were very easy (cake, kite, cute, coke, me, etc.). After completing the chalkboard activity, students then created a long vowel flip book with long vowel words on the outside and pictures on the inside.

One teacher engaged her children in a variety of reading and writing activities, such as writing sentences and completing worksheets, during a lesson targeting long vowel patterns.

Read book about sheep with a beak.
List long e words (with ee and ea) on chart paper at group time.
Review all words listed.
Sing song with long e words.
Students choose 4 long e words and write sentences on a large “sheep” cutout.
Share sentences (with capitalization and punctuation of course).
Independent work- (ee, ea pages- fill in vowels).

Two teachers wrote about activities which focused on creating new words containing specific vowel patterns by substituting the initial or final consonant in a given word. One of these teachers explained how her students wrote these permutations.

We regularly use white boards (dry erase) to ‘play’ P. Cunningham’s change one letter to spell... This week we were spelling words with [vowel patterns] ee, ea,

i-e, o-e. For example: The students spell beet, then change one letter to spell feet...to spell feel...to spell peel...to spell peek, etc.

The other teacher discussed how she additionally directed students to orally omit the initial and final phonemes as they created words containing a specific vowel pattern.

My class reviewed long e/ea words from “The Shrinking Mouse.” Students segmented initial and final sounds. Letter cards [were] used to build words.

Spelling words were used to build [words] such as peach, seat, meat, seal, leaf.

Students would say [the] word without [the] beginning sound, and then say the word without [the] ending sound.

Blends/Digraphs

Two first grade teachers and one kindergarten teacher reported that they taught lessons involving specific letter patterns for blends and digraphs. One of these teachers wrote a general description of how she teaches her students to become more phonologically aware through ongoing instruction. She stated, “We introduce and review blends and digraphs throughout the year. We do several “mini” lessons each week. Most are on the overhead or dry erase boards. We also point out blends, etc. while reading and sounding out new words.”

The two remaining teachers described activities which required children to identify specific blends or digraphs and compose word lists containing these letter patterns. One of these teachers stated that her students identified words containing “sn” and “st” blends in a story, wrote the words and the rule for the blends in a journal, and practiced using the words with an “independent worksheet.” The other teacher

explained how she involved parents in the activity.

We are spending time now in our classroom on blends. The students are asked each night to go home and ask their parents to help them make a list of “sh, ch, th, wh” words, etc. We compile a list together the next day on the computer, print one copy for each child to take home. It’s working great. They’re really surprising me at the words they can recognize with these blends.

Although most of these teachers described lessons which contained specific letter letters, vowel patterns, blends, or digraphs, one first grade teacher wrote a general description of how she teaches any letter sound or letter combination using letter tiles, marker boards, and charts. She stated,

Two or three times a week we use letter tiles. All children are given the same letter cards based on the sound or “chunk” that is the focus (short a words, /th/ words, etc.) in a baggy and a work mat. The consonants are white and the vowels are yellow. I use a large pocket chart with large letters at the front to model creating words. Children manipulate their cards to create the same words. Then, I ask them to work independently and/or with a partner to create the word I give. I model the correct sounds to use at the front when children are finished trying the word independently. Last, I allow them time to create words of their own as I walk around working with children at their own level.

When we aren’t using letter tiles and marker boards, we create charts together. I write a letter, letters, blends, or “chunks,” at the top of the chart. Children will volunteer words, word clusters, or sentences for about 15 minutes. They can volunteer words for the list as long as the word has the designated letter in it somewhere. The children help me sound out the word while I write it. The child, who volunteered it, tells something about it. This helps students connect an image with the symbol of the word. We read the chart orally as we create it. After the chart time is up, students choose to write words from the chart, words that could have been on the chart, and/or words from around the room as long as they have the designated letter in them. They will write for 15 minutes. After that time is up, they’ll share their paper with a teammate. During the writing section, I walk around and discuss sounds, letters, words, etc. with students.

Identifying Letter/Sound Position

Six teachers reported activities in which students identified the position of a target letter or letter combination and their corresponding sounds. One of these teachers wrote about a lesson which required children to identify a target sound and letter pattern in the initial position; however, most teachers discussed activities in which students identified sounds and letters in the initial, medial, and final position as well. Following are three exemplars which illustrated the ways teachers instructed children to identify specific letter sound positions.

In my class we play “Find the Sound.” I have cards with 3 letter words that are divided into 3 sections [c a n]. Students had to identify which isolated sound they heard.

The students have to try and figure out the missing letter. The students have to fill in either the beginning consonant sound or final consonant sound.

We recently did a lesson with tw, sh, ch. We did the sounds at the beginning, middle, and end of words. Students needed to see that knowing sounds that letters or groups of letters make is an easier way to read.

Although most teachers provided activities which combined sounds with written words, one teacher described a multi-level activity in which children selected pictures that represented a target sound and letter.

I provide children with a letter. They locate pictures in magazines that make them think of that letter. I don’t limit it to beginning, middle, or end. As they collect pictures, I monitor the room discussing with children individually the pictures they’ve chosen. In this setting I am able to discern who can locate sounds in the middle, end, or only in the beginning of words. It also allows children to work at their own level. Some children are only able to identify sounds in the beginning of words. This also provides me with information as to how my children think. I often find a child with a picture that I don’t see how it could relate to the letter, but when questioned, he or she is able to provide an accurate association. After 15 minutes of searching time, the children paste the pictures on paper and words they found/wrote. We do this once or twice a week.

DIFFICULTIES

Teachers reported that they encountered difficulties when teaching phonological skills in the classroom context. These difficulties focused on student ability levels, pedagogical concerns, and administrative requirements.

Student Ability Levels

All 64 teachers agreed that the students in their classrooms varied in abilities and developmental levels. Sixty of the 64 teachers reported that the variance in student ability levels presented difficulties when teaching phonological awareness activities. Teachers attributed these variances to several factors: 1) developmental readiness, 2) degree of exposure to oral language, 3) differential learning styles, 4) speech and hearing impairments, 5) learning disabilities, and 6) ESL (English as a Second Language) students.

Teachers additionally cited student variations in performance of specific skills. Eleven teachers reported that a difficulty they encountered when teaching phonological awareness skills involved children who could not “hear” sounds. Two of these teachers wrote about students having difficulty hearing individual sounds, or phonemes, in words.

The majority of students enter first grade with a fairly good understanding of sounds and letters. However, some do not seem to “hear” the sounds or associate a particular sound with a particular letter. We work on this, but there are usually one or two students that end up learning words by “sight.” Some may finally start “sounding out” after Christmas, but I have had some students that never seem to understand.

My only problem is when I have a student who does not hear his letter sounds. We then do sight word reading skills. I combine phonics and sight skills every

year. Even though we all don't hear our sounds, we still have to learn, and use, our vowel rules to help us sound out our words.

One first grade teacher explained that some of her students initially had difficulty hearing sounds at the onset-rime and syllable level.

Many students have trouble rhyming words at the beginning of the year. They also have a hard time hearing syllables. As the year progresses and they have more experiences with looking for letter/sound patterns, similarities and differences, these areas improve tremendously.

Three teachers reported difficulties involving children's' inability to auditorially discriminate between sounds.

There are always difficulties associated with the differing levels of readiness and the maturity of the students in any one classroom. Probably the most difficult area is those "few" students who have difficulty hearing the likenesses and differences in sounds. These students need lots of repetition and have to depend on learning lots of "sight" words to gain fluency in their reading.

Some students have poor auditory skills due to speech problems or processing disorders. This makes teaching skills more difficult.

Some students just can't or aren't ready developmentally ready to distinguish sounds.

Two kindergarten and one first grade teacher explained that a difficulty they experienced when teaching phonological skills involved poor listening skills of students.

Children fail to listen to the sounds of spoken letters or words. Immature children do not recognize the importance of listening.

Many children seem to have poorer listening skills than in years past when families sat and conversed over dinner. They seem to actually "have" much less language to call their own. Further, the passive response to the bulk of their language heard on television seems to have predisposed them to not really hearing language. They seem to have to be taught language through read alouds,

word games (word plays) and through my positive use of language (speaking lots of compliments and encouragement in a pleasant tone of voice). So the real difficulty is ripening them to enjoy listening for sounds...that we may go on to skill development.

In addition to these oral language skills, many teachers wrote about difficulties involving student variance in skills necessary to decode or encode words, such as letter and sound recognition and blending sounds to form words.

Students who have great difficulty in letter recognition have little or no ability to decode words. Sound/symbol awareness is essential.

Some students do not seem to realize there are parts of words and can't tell how many sounds there are in a word. And when they do "sound out" words sometimes they can't even attempt to spell it in writing a story.

Some students can not blend the letter sounds together to form the word. More and more children are coming to school not knowing any letter/sounds.

Every child enters kindergarten with various levels of ability. Some children have been exposed to letters and sounds, etc., where others have not. As a kindergarten teacher I have to help the children that have no previous phonological awareness begin to understand phonics and letter association and with children that already have this knowledge I must help them move on to begin to put sounds into words to begin to read.

When asked about difficulties teaching phonological skills, six of these teachers specifically referred to phonics instruction.

Students who come to first grade and can not identify their alphabet are very difficult. I can't begin teaching phonics if the child does not know his/her alphabet.

Some students have not had early experiences at home with reading. Learning disabilities may hinder the decoding skills and phonemic ability of some students. English does not follow many of the phonics rules. Therefore, it is hard to teach how to sound out or spell certain words.

Some students do not want to learn or cannot learn (are not yet ready to learn)

that phonics can make reading easier.

Some students are not ready to begin a phonics program. They have no awareness of letters, sounds, words, etc.

Students who are not yet ready for the skills. Students who get confused between all the “phonics rules.”

Some students just do not seem to understand what I am saying. It is evident that some children are sight readers. Thus, it takes much more time for them to understand phonics.

A few teachers reported that they have difficulty teaching phonological skills when children are unable to produce or replicate the sounds in speech.

Some children are unable to make the correct sounds, due to speech impediments or other problems. There are also some students that are sight word readers because they have a phonetic problem.

Some children are unable to distinguish phonological differences at a young age. Children with speech difficulties often make the correct sound for letters.

All students learn at their own pace and no two students are just alike. I have two students that can not even produce the sounds we have gone over in class. I have tried different techniques and I do not have much luck with either one of these students.

Pedagogical Concerns

In addition to student-related difficulties, six teachers wrote about pedagogical concerns that hindered their teaching of phonological awareness skills to children. Four of these teachers related difficulties focusing on their limited understanding of phonological knowledge or how to apply it effectively in the classroom context. One first grade teacher stated that she lacked “knowledge in this field and expertise in current trends.” She additionally explained that “identifying the needs [of students] is the

biggest task to overcome.” Another teacher explained that a difficulty she encountered is “developing my understanding of the correct sequence for teaching skills phonemically.” Although one teacher explained that she possessed a “working knowledge” of phonological awareness “in isolation,” she had difficulty “bridging the gap to phonics application.”

A kindergarten teacher expressed her concern about providing children with appropriately leveled lessons in order to maintain children’s attention to activities. She stated, “My biggest challenge is keeping everybody busy and on task. (Interest wanes before acquiring key concepts.) Therefore, being able to construct multi-leveled lessons which are challenging enough to hold interest yet not cause frustration.”

The two remaining teachers related difficulties concerning their presentation of skills. One teacher commented that her “southern accent” presented difficulties when teaching phonological skills. Another teacher stated, “it is also hard to explain things that are 2nd nature and seem so logical to me.”

Administrative Requirements

Three teachers discussed administrative constraints that hindered their teaching of phonological skills to children. All three teachers believed that county-wide curriculum mandates presented difficulties. According to one first grade teacher, “... fitting this into a daily schedule can become difficult due to time constraints and other criteria to teach.” Additionally, two of these teachers reported that the school system testing policies limited their abilities to teach phonological awareness skills effectively.

[Names reading series] is a huge stumbling block. [Names county] does not allow teachers to correctly instruct the young children in developmentally spatial awareness techniques and age appropriate skills. We are too busy pushing sight words on children that can not hold pencils and crayons and have not been taught how to correctly cut. This is an age when the 8 intelligences should be allowed to surface.When I taught kindergarten, I felt that I was able to incorporate more skills without the pressure of teaching to the Terra Nova.

Ultimately, the constructs placed on curriculum mandated testing and evaluation-based instruction. Phonological awareness training teaching requires a more child-centered approach to education. Woefully, the pendulum is swinging in the wayward direction. ...I focus on improvement, therefore in assessment, I most naturally favor authentic assessment. Sadly, our superiors do not. The political and accountability, norm-referenced public school demi-god/demon suppresses that which I so desperately wish to elevate.

INSTRUCTIONAL STRATEGIES

As stated previously, teachers reported that the students in their classrooms possessed differing levels of phonological awareness. All but one teacher believed the differential phonological abilities of students affected their instruction. To accommodate children's phonological awareness levels, teachers wrote about various instructional strategies which they incorporated in their lessons. These strategies included assessment of students, instructional groupings of children, and modifications made during teaching. As one first grade teacher stated, "Depending on my students' abilities and awareness, I spend time on one skill or another, find alternative methods for students to learn, or adapt my lessons according to immediate needs."

An instructional strategy reported by four kindergarten teachers involved assessment of students' readiness or reading performance level. To these teachers, assessing children provided information necessary to construct lessons appropriate for

the differential learning levels of their students. The following exemplars illustrate student assessment as an instructional strategy.

At the beginning of the school year I must assess each child's abilities to recognize letters, letter sounds, and reading ability to see what knowledge each child already possesses. I then make lessons and plans for each child (average, remedial, advanced).

Pretesting or some sort of evaluation is necessary to determine each student's level. After this step is completed, you have to begin at that "readiness level," [and] reteach, etc. It is necessary to plan activities that will strengthen the areas of weakness as well as plan appropriate activities for the advanced student. Various materials are incorporated into this planning- Bob Books, Easy Start Troll Readers, discarded "old" readers, Accelerated Reader.

Many teachers reported that they instruct children in large groupings with selected opportunities to enrich, review, or reteach target skills. One first grade teacher explained, "I try to plan to the class as a whole. I cannot plan and instruct to every student individually. If there is a student that struggles, I will have other strategies and modifications for reteaching when necessary." Another first grade teacher commented that her whole group instruction is based "on the students with the weakest phonemic skills" and that she individualizes instruction "for the more advanced students."

Although most of these teachers cited general instructional strategies, such as modifying, enriching, or reteaching lessons, three first grade teachers described specific instructional strategies they incorporated during whole group instruction in order to meet the various phonological levels of their students. These strategies focused on letter-sound relationships and the application of this knowledge to decoding words.

I just start out the same for all of my students at the beginning of the school year reviewing consonant sounds, short vowel sounds, long vowel sounds,

blends, r-controlled vowels, etc. Most first graders do well if they can hear those sounds and get help at home each night practicing their oral reading assignments. Those who have to rely on sight I have to help all year long.

If most can successfully learn phonemically to read, then I put more stress on phonics. If I have several who can't, then I modify and try a different approach with them.

Of course, planning and instruction depends heavily on a student's developmental level. One starts at the beginning- basic sounds- before moving on to blending sounds together. Hopefully, a teacher can progress with instruction at an acceptable pace. This is not always the case.

The instructional strategies of five kindergarten teachers included extended reading opportunities as well as review or reteaching of skills.

I try to gear most of my lessons to the average child. The ones who are more ready for reading get the opportunity to read more (they seem to be more aware of phonics). The children who are below grade level get more one-on-one help with recognizing letters and sounds and how they work. The whole class participates in work/games, [and] identifying letters, sounds, and words.

We adapt our teaching to accommodate the various levels of learning. Our calendar time plays an important role in our daily teaching. For those students who are ready, we use this time as an enrichment toward reading, at the higher level, but at the same time giving a review to those who need it. Students are encouraged to read simple books if they are "ready," but no pressure is put on students who aren't ready.

If the child can sound out letters and blend words, we begin reading easy, beginning books, if not, then we continue to work on letters and sounds.

High level students-go on and read
lows-go back and reteach

Several teachers wrote about instructional strategies which involved ability teaching in small groups from the beginning of the lesson.

There seem to be definite levels of awareness (if I understand what it is). Therefore I have different groups. Some need added instruction and others need to advance quickly. I try to meet the needs whether high or low.

I try to individualize as much as possible. I have different reading levels to reach each child's reading abilities. For one particular child I work totally one on one to develop her phonics skills.

You must plan extra or different levels of activities, worksheets, and/or center activities to meet the needs of those with differing levels of awareness. Some students may be ready for reading sentences, others may be ready to blend sounds into words and others may need practice recognizing same or different sounds.

I work individually with students in reading. In spelling, I generally have two groups to accommodate learner differences.

A first grade teacher explained how she uses timed, multileveled activities with dyadic groupings of children as well as parental help.

When planning activities in my classroom, I always utilize the knowledge of other students. I have children work with partners, share with teammates, and use others as resources. My activities are interactive and non limiting in abilities. I provide exercises that allow children to work at the level they are at and experience success. I am able to do this through monitoring the activities and reteaching as they are manipulating letter cards, writing on marker boards, etc. I also do not limit lessons, for example, "you need to find five words that rhyme with" I provide time limits. "Find as many words that rhyme with... in five minutes." This allows the top student to possibly find 10, the average student to find 5, and the low one to at least find 1. Everyone works to his/her ability in that time frame. By providing a time frame, my assistant and I are able to spend individual time guiding the struggling students to find words. I also have students pair up so the lower ones are actively learning from their peers.

Generally, there are a couple of children who are extremely phonemically challenged. They are not able to work with words because they do not understand that letter sounds make words. They do not realize that words make sentences and that sentences make stories. I have a phonemic awareness book that has games in it that I reproduce and send home for the parent to play with

the child. Playing games that help them understand language usually benefits these children.

This teacher further explained how she incorporates interdisciplinary instruction to teach vocabulary terms essential for understanding specific phonological activities.

Many [children] don't understand the terms "end, beginning, middle, rhyme," etc. The more concrete I can make these terms the better they are able to apply them to the appropriate parts of a word. I often incorporate these terms in my math activities using "unifix" cubes. We practice identifying colored cubes at the "beginning, middle, and end" of trains. I use the understanding of patterns in math to associate patterns in reading words that rhyme. We look at how the words are the same and how they are different in spelling and sound. We also look at how they shapes of letters in words are similar and different and how they create a shape pattern when they rhyme."

Most of the teachers reported that they varied their instructional approach to include flexible groupings, from large to small to individualized instruction, in order to accommodate the various phonological awareness levels of children. These groupings, often consisting of a combination of whole class learning and heterogeneous small groups, are designed for further practice or reinforcement of skills.

We read in pairs, small groups, and sometimes individually to me. I have an aide about 5 hrs/day who also reads with the students.

I teach holistically in large groups and ability teach in small groups, which means one lesson can have as many as four different plans of attack. Groupings are not "set" and students move in and out of small groups as I see fit so establishing continuity is sometimes a nightmare.

I use the first 6 weeks to deeply and broadly focus on phonemics. Some don't need it although most are benefited from the extra focus and sense of competence that comes with mastery. After that, I have: 1) two 20-30 minute lessons/week that focus on the phonemic skill focused on in the reading stories of the middle group's work that week, or focused on the specific confusions that were apparent in that week's written work (journals). 2) I do a (very)

mini-lesson with each reading group at the end of their time. I usually use my white board to, on the spot, make some foggy area clearer in an explicit way. For example, a recent mini-lesson compared long u, as in “mule,” with ew, as in “new” and oo as in “food.”

SUMMARY: RESEARCH QUESTION THREE

The teachers in this study reported a variety of classroom activities which they believed developed children's' phonological abilities. Seven of the 64 teachers who responded to the written interview described lessons which focused children's' attention to sounds. These oral/aural activities ranged from auditory discrimination of speech and environmental sounds to manipulating speech segments, such as isolating and substituting phonemes in words. Teachers reported that they incorporated a variety of materials during instruction and engaged children in differential response modes such as singing, clapping, and body movements.

More than 85% of teachers taught lessons emphasizing the relationship between letters and sounds. Two of these teachers began their lessons with auditory activities which focused on isolating and identifying specific sound units of speech. The remaining teachers introduced letter or letter combinations, by engaging children in reading and writing activities, at the beginning of the lesson.

Teachers reported that they experienced difficulties teaching phonological awareness skills to children. Several teachers stated that system-wide testing policies, as well as their own limited knowledge of phonological awareness, hindered their teaching of phonological skills. However, most teachers reported that the difficulties they encountered stemmed from the differential ability levels of the children within their classrooms. Several of these teachers described inadequate auditory skills of children

which involved difficulties hearing various sound units, discriminating sounds, and listening ability; however, most teachers reported that they experienced difficulties teaching phonological skills when their students could not identify letters, associate letters with their constituent sounds, or apply this knowledge to decoding or encoding words.

Due to student variation of specific abilities, teachers cited a variety of instructional strategies they utilized when teaching phonological awareness skills to children. Several teachers reported that they assessed students on letter recognition, letter sounds, and reading skills in order to teach to the child's phonological level. Teachers primarily incorporated instructional approaches which focused on groupings of children in conjunction with provisions for modifications during teaching, such as practice and review of skills, reteaching experiences, and enrichment opportunities. Several first grade teachers explained that the instructional strategies they implemented during their teaching of phonological skills involved identification of letter sounds and decoding words with aggregate groups of children. Most of the kindergarten teachers reported that their instructional approach included review of letters and sounds for students progressing more slowly and reading opportunities for rapid learners.

RESEARCH QUESTION FOUR

To What Extent Do Kindergarten and First Grade Teachers Believe Phonological Awareness Instruction Contributes to Literacy Acquisition?

Teachers' understandings of the extent that phonological awareness instruction contributes to the literacy acquisition of young children were influenced by the

meanings they ascribed to phonological awareness instruction. The answer to this question was organized around two themes: instructional components and relationships. Teachers wrote about the instructional components they believed necessary for literacy acquisition and their understandings of the relationship between phonological awareness and reading.

INSTRUCTIONAL COMPONENTS

The kindergarten and first grade teachers cited multiple instructional components which they perceived to be essential for the literacy acquisition of emergent readers. Most teachers reported print-related instructional components involving phonics instruction, sight word recognition, vocabulary development, and exposure to quality literature. The following examples illustrate teachers' perceptions of essential print-related instructional components.

The major instructional components necessary for the literacy acquisition of young children are the ability to identify their letters and sounds. They also need to be exposed to a variety of teaching styles to meet their individual needs, in addition to a vast array of books being read to them.

I feel that children must know their letters and sounds before they will be able to read, so I do a lot of phonetic activities to stress the sounds. Also, I feel they must be exposed to different types of literature, so we read many different kinds of material (books, poetry, etc.).

I feel children should be exposed to many "different" types of literacy instruction. All kids don't learn to read by phonics, so why should that be my main and only focus?

- phonetic application (sight/sound association)
- sight word recognition
- fluent role model (have someone who reads to them)
- repetition (use of "language" i.e. stories, poems, writing, etc.)

- teaching recognition of letters and their sounds
- offering to students many opportunities to see/hear stories being read to them
- singing “letter” songs

Additionally, several of these teachers perceived that important instructional components included materials, such as a variety of trade books and phonics charts, in combination with specific instructional approaches.

[Major instructional components include] incorporating a wide variety of strategies and components such as phonics (phonics is highly important), sight words, big books, trade books, basal readers, whole language, comprehension. There are as many components to learning to read as there are types of readers.

I think it is important to expose children to many types of stories, print, and letters. They need to have a love of language and want to know about printed material. Children need to have a good base of phonics. They need to know the letters (upper and lower case), the letter to sound correspondence, and how the letters blend together to make words! It is important to teach sight words to make the reading process go smoother. Children also need a lot of time to look at books, to make up stories by using pictures, and to enjoy books. I also think it is good to use literature across the curriculum to introduce new concepts.

In addition to literature experiences and phonics instruction, several teachers perceived that writing and spelling experiences are instructional components which enable literacy development. A first grade teacher described how these two instructional components should be integrated to facilitate literacy acquisition.

Another instructional component that is extremely important to literacy is writing. Children need to have time and opportunity every day to write using pictures, sounds, words, word clusters, and sentences depending on their ability level. Allow them to choose which level they feel comfortable. Then guide them to try more challenging forms of writing as their abilities improve throughout the year. By applying the sounds they learn in direct instruction to writing sounds/words/sentences independently, children are internalizing skills and concepts and becoming readers.

Learning to spell words is another component. It should not be an isolated subject. It should be taught in the context of word families (at the first grade level). It should also be taught and practiced through the writing portion of instruction. Children need an outlet other than reading to apply the sounds and patterns they learn. Writing is a perfect outlet. Learning to spell through word families should be done in an informal and fun atmosphere through games and interactive hands-on activities, as should most, if not all instruction.

Although most teachers cited instructional components which are exclusively print-related, 17 of the 64 teachers in this study perceived phonological awareness to be an essential component of literacy instruction. All but two of these teachers included phonological awareness in combination with instructional components involving print. The following three exemplars illustrate teachers' understandings of phonological awareness as an important instructional component for literacy acquisition.

The classroom needs a literature rich environment. A class should have many books for students to look at as well as the teacher reading to the students on a everyday basis. Sight words should be used to build students' vocabulary. Word banks can be made to post on the walls as well. Posters with pictures and words that relate to other subject areas (social studies, science) are important also. Finally, a good phonemic awareness and phonic program is very important. Students need to understand sounds and rules in order to become better readers.

[Major instructional components are] rich and meaningful language experiences coupled with- or yoked to- phonemic experiences or exercises that bring some of the phonemes into clear focus.

Young children must be phonologically aware. That is, they must have an interest in the sounds words make and be able to discriminate between the sounds. Children need to be offered many opportunities to experience rhyme, repetition, and rhythmic activities. They need to be offered many opportunities to hear stories read aloud. This can be followed with finding letters that are special- "first letter in the child's name, etc."

One first grade teacher prioritized her perception of instructional components essential for literacy acquisition, placing phonological awareness as the most essential component.

1st- phonological awareness

2nd- literature rich environment- love of reading is modeled

3rd- phonics

4th- sight words

5th- writing (creative and directed) opportunities

6th- authentic reading opportunities to foster comprehension and self-directed analysis and interpretation.

Several teachers wrote about specific phonological skills they perceived to be major instructional components. These teachers described phonological skills involving sound units at the word, syllable, and phoneme level.

Students should be able to recognize phoneme-grapheme relationships in words. To facilitate this, teachers must be able to gauge students' strengths and

weaknesses with phonemic awareness. Instructors must be adequately trained and familiar with ways to teach phonemically by generating rhyming words, segmenting words into syllables, isolating discrete sounds, and categorizing words according to phonemic similarities.

-Teachers need to demonstrate the relationships of parts to wholes.

-Teachers need to model the sound of the strategy for making the sound and then have the students produce the sound.

-Teachers need to be familiar with the different techniques used when teaching a child how to read.

-phonological properties (which sounds are easier to produce)

-phoneme position in words (beginning consonant sound is easier to identify rather than final consonant and middle consonant)

explicit instruction [in the] sounds of language

-words within sentences

-syllables within words

-units (phonemes) within syllables

Six teachers believed that early oral language experiences, which develop children's phonological awareness abilities, are integral components of literacy acquisition. To these teachers, parents form the groundwork for formal classroom reading instruction by providing children with early literacy and oral language interactions in literate home environments. Following are three exemplars which illustrate teachers' perceptions of how literacy acquisition is facilitated by children's early involvement with oral language.

Children learn to read by forming a basis of concepts that lead to actual reading. It begins before kindergarten. As a parent talks to, reads to, sings to his/her children important language skills and love of reading is developed. Children learn sounds/ABC's in kindergarten which helps beginning reading skills where phonemic skills help decode words. Later children should continue to be exposed to and learn phonics to increase reading ability. Activities involving phonics should take into consideration the multiple intelligences. Children should be read to daily. They should be exposed to a variety of reading material that involves their interest. A special time should be set aside each day for reading.

The major components begin with exposure from birth to preschool age with our spoken language (daily oral discussions, nursery rhymes, etc.) hearing and learning the similarities in sounds. Only then will a child begin to manipulate/imitate and understand sounds. As a child reaches school age, the process will continue by identifying sounds and beginning to associate them with written symbols. The child will learn to write what they hear. Learning will continue as the child begins to sound out words, recognize familiar words, patterns in words, and connecting these to the meaning(s) of print.

Children need to be immersed in language from the time they are born. Parents have a huge responsibility for the child's pre-reading abilities in the first five years before their child ever walks through the door of the schoolhouse. Children who are talked to, read to, sung to generally will be ready for independent reading when they become school age as opposed to children who have not had these experiences. Children should continue to be read to even after

they have become readers....It is important for teachers to model how sentences are made up of words, words are made up of letters, and allowing them time to manipulate sounds, letters, and words. Direct instruction of how to blend and sound words is needed. Teachers need to make sure they are modeling the sounds correctly during instruction.

RELATIONSHIPS

When teachers were asked about their understanding of the relationship between phonological awareness and reading, some teachers wrote about the necessity of phonological awareness for reading acquisition; however, many teachers discussed the importance of phonics knowledge and letter-sound correspondences for reading success.

Although most teachers believed that phonological awareness or knowledge of letter-sound correspondences facilitates reading achievement, one first grade teacher perceived phonological awareness to be only moderately relative to beginning reading. She stated, "I think a person could learn to read without a phonological awareness method of teaching, but teaching letters and sounds (phonological awareness and phonics) can work for most children when nothing else will."

Approximately one-third of the teachers in this study believed that phonological awareness significantly contributes to the reading acquisition of young children. One teacher explained her understanding of this relationship by citing specific reading researchers. She stated, "According to Stanovich (1986, 1994), it is 'more highly related to reading than tests of general intelligence, reading readiness, and listening comprehension.'" She further explained, "Adams (1990) says that the lack of phonemic awareness is the most important factor that separates readers from disabled readers."

Several teachers perceived phonological awareness as the foundation of reading.

To these teachers, phonological awareness is a prerequisite for learning to read.

My understanding of the relationship between phonological awareness and reading would be that the two are interdependent with each other. Without being phonemically aware, the child could not learn to read. Phonological awareness precedes reading. It is the foundation for all reading.

A child who is phonologically aware is ready and able to begin to learn to read. As a baby needs to crawl before it can walk, beginning readers need the foundations that being phonologically aware will give them.

For many children, it is necessary to first have an awareness of the individual sounds before being able to begin reading.

In our language, letters are used to represent specific sounds. A child must be phonologically aware of these sounds before reading can occur.

One kindergarten and three first grade teachers perceived phonological awareness to be a precursor to phonics instruction. To these teachers, it is essential for children to be phonologically aware in order to utilize their phonics knowledge.

Phonological awareness is the beginning step before phonics instruction can and should begin.

If a child is phonologically aware, he/she can manipulate- effectively- and understand the relationship between the whole and its parts. The parts can be isolated, partially altered, and then reassembled. The child can both “breakdown” and “build up.” This working knowledge is crucial when the child begins to make letter-sound connections (phonics). The child will be a better decoder, but also a better writer.

Phonological awareness is primary! The child can't “decode” language he can't understand well enough to separate it into its various parts. There is no suitable phonics instruction for the student who can't “hear” the sounds. Children have to be phonologically aware in order to understand that letters

represent sounds, letters and sounds make words, words make sentences, and that these sentences make stories.

Some of these teachers believed that phonological awareness promotes reading success. The following examples illustrate teachers' perceptions of phonological awareness as fostering successful reading.

Students who have a good background in phonological awareness are more likely to become good readers. The two are tightly related.

Phonological awareness includes every part of a word and a sentence, therefore it is crucial in teaching reading and in comprehending what is read.

When children are taught phonemic awareness and alphabetic skills in K and 1st grade, the majority will become successful readers. Children also need the opportunity to apply these skills to the reading of connected text.

Two kindergarten and one first grade teacher further explained how phonological awareness promotes children's' reading development. To these teachers, phonological awareness facilitates decoding of unfamiliar words.

Children need to realize that words are made up of sounds- as c-a-t, and sentences are made up of these words. When this realization is in place, then the sounds can be taught and blended into words and sentences. I think that a good phonological awareness promotes good readers.

Once the sounds are recognized-learn the letters that represent those sounds then blend the sounds of letters together to decode a word

Students who have a working knowledge of phonology are better readers (usually) because they are able to decode words as they read.

In addition to enabling the decoding process, three teachers reported that phonological awareness enables children to read with fluency.

Phonological awareness is a vital component of a sound foundation for reading. It is essential to understand phonemic awareness in order to develop reading fluency.

Phonological awareness is necessary for reading acquisition. Children who acquire phonological awareness become fluent readers at a much faster pace than those who do not.

Phonological awareness needs to be taught (and exposed) before children are able to read with ease. While some children are not able to do this (and must be taught by sight), it is easier for most to learn to be independent readers quicker teaching phonetically.

Four kindergarten teachers believed the relationship between phonological awareness and reading is reciprocal; that is, proficiency in phonological awareness improves children's' reading ability as well as reading proficiency increasing a child's phonological awareness.

A child must know sounds before he/she can read. Phonological awareness is the ability to identify and manipulate the sounds of language. Phonological awareness affects early reading ability and the ability to read also increases phonological awareness.

There is a reciprocal relationship between each one. Phonological awareness affects early reading and reading ability increases phonological awareness.

One of these teachers explained how the reciprocity between phonological awareness and reading affects other literacy areas such as writing and spelling. She stated,

As children recognize and manipulate sounds, they learn phonics and spelling. As they learn phonics and spelling, they become able to write and read what they wrote. As they gain experience in writing and sounds and letters, their reading and writing (thus phonological awareness) also improves.

Many teachers wrote about the influence of letter-sound correspondence knowledge on children's' subsequent reading achievement. To these teachers, understanding the association between letters and sounds enables children to decode or "sound out" words more efficiently.

For many children, they need to learn letter sounds, which will help them succeed with reading.

As already stated, phonological awareness is the breaking down of the smaller components of reading...giving each symbol meaning (letters to sounds, etc.) and applying that skill to others. Kind of like building blocks---you have to have the phonological awareness components to build on further reading steps or your foundation will crumble.

A child needs to be aware of how letter/words sound and look in print before they are ready to read. Read aloud to them--point out all the "h" words, "t" words, etc. Talk about how it sounds, how the letters look! Then comes reading readiness.

Children need to realize the sound or sounds related to each letter. Then they need to be able to blend the sounds into words.

Phonological awareness is an understanding of how the alphabet works. Each letter represents a certain sound or sounds. Sounds are blended to make words, words make sentences, etc. Children who have an understanding of phonological awareness or who are taught the concept of phonological awareness are better prepared for reading and may become better readers. Phonological awareness aids in the decoding of unfamiliar words. Therefore, reading can be more successful if the reader has an understanding of phonological awareness.

Unless a child is a "sight" reader, he/she needs to possess the ability to recognize the letters and sounds. Sight readers often suffer because they cannot sound out the written word.

When asked to explain the relationship between phonological awareness and reading, eight teachers referred to the term "phonics." Two of these teachers used the

terms “phonics” and “phonological awareness” interchangeably.

They are interrelated. Students who master phonics become good readers. Concepts are learned and build upon each other to aide in the reading process.

Phonics is a “key” component toward reading success. I strongly believe that students should know and understand phonics rules in order to progress in reading. One “rarely” gets a student that can read by sight (maybe later in first grade). Phonics allows students to be able to “sound out” and learn new words that he/she may be unfamiliar with. This promotes positive reading experiences!

Phonics is important when beginning to learn to read. Many words can be sounded out or related to words with similar sounds. However, sight words are equally important because some words do not follow phonics rules.

Students must know phonics before they can really read.

Without the ability or knowledge of phonological awareness, a student would not be a successful reader. Awareness of phonics has to come first, in my opinion.

Phonological awareness makes reading easier. All words cannot be sight words nor can all words be sounded out. Phonics gives a student different ways to sound out (Is it a long or short sound, are there blends, etc.).

SUMMARY: RESEARCH QUESTION FOUR

Teachers varied in their perceptions of the extent that phonological awareness contributes to the literacy acquisition of young children. Most of the teachers cited letter-sound knowledge, vocabulary, various instructional materials, sight word recognition, and experiences with books as the major instructional components which positively impact children's' reading development. To these teachers, children who engage in experiences with print, including read alouds, instruction in alphabet recognition, and the application of letter-sound associations, are more likely to experience reading success.

Only 17 of the 64 teachers who responded to the written interview perceived phonological awareness to be an essential component of reading instruction. These teachers believed that phonological awareness instruction, in conjunction with exposure to quality literature and instruction in letter-sound relationships, facilitates initial reading acquisition. Although most of these teachers cited instructional components utilized within the classroom situation, six teachers perceived phonological awareness as an instructional component which should be fostered through early oral language experiences prior to formal instruction within a classroom setting.

In addition to the variance in teachers' responses of essential instructional components, teachers differed in their understandings of the relationship between phonological awareness and reading. Most of the teachers explained their understanding of the ways in which letter-sound associations enabled children's' decoding ability, often referring to the term "phonics."

Approximately one-third of the 64 teachers in this study wrote about the contributions of phonological awareness instruction for reading success. Most of these teachers believed that phonological awareness is causally related to reading acquisition or is a facilitator during the initial stages of learning to read. To these teachers, children in the pre-alphabetic stage must acquire basic phonological awareness in order to benefit from instruction in letter-sound associations. Thus, when children are phonologically aware, they can more efficiently apply this knowledge to the decoding process of reading words and will develop reading fluency. However, four kindergarten teachers perceived phonological awareness to have a reciprocal relationship with reading. To these teachers, phonological awareness positively affects children's literacy

development and multiple reading experiences increase children's phonological awareness.

RESEARCH QUESTION FIVE

From What Sources Do Kindergarten and First Grade Teachers Construct Their Perceptions of Phonological Awareness?

When asked to identify sources from which teachers learned to implement phonological skills in the classroom, one teacher responded that she knew little, if anything, about phonological awareness and had not implemented it in the classroom; yet on the demographic section of the interview, she stated that she had taken 10 college courses in reading. Another teacher who listed no sources in the written interview commented,

I've always been aware of the importance of phonological awareness. Recently, however, many materials and manipulatives have become available to help in teaching this. By using a variety of materials the individual student's strong modality may be emphasized.

Most teachers cited a variety of sources that helped them construct their perceptions of phonological awareness instruction, including teacher education coursework, professional development activities, practical experience, and colleagues. A kindergarten teacher who identified multiple sources commented that she had actively sought ways to increase her knowledge of phonological awareness. She stated, "I started by attending [names workshop] and just kept looking for ideas and materials that provided enough activity and manipulation to be effective."

TEACHER EDUCATION COURSEWORK

Many of the teachers in this study wrote about teacher education coursework; however, their perceptions of the degree that college prepared them to implement phonological awareness instruction in the classroom varied.

More than half of the teachers in this study believed they gained knowledge about phonological awareness instruction from teacher education coursework. One teacher commented that she learned about phonological awareness instruction by reading handouts distributed in college. Additionally, several teachers responded that reading or language based courses provided sources from which they constructed their perceptions of phonological awareness instruction. Most of these teachers simply listed “college courses” as a source of information. However, eight teachers expounded upon the details of the coursework or the degree of coursework effectiveness. One first grade teacher wrote,

My teaching children to read course at (name of college) discussed phonological awareness quite often. My professor stressed the importance as well as incorporating it into a whole language philosophy.

Five teachers believed they learned about phonological awareness instruction while pursuing a Master’s degree. One of these teachers commented that her understanding of phonological awareness instruction came from colleges other than those in Tennessee.

Many years ago- when the dinosaurs roamed the earth- and I took my B. A. and M. Ed., this was basic teaching for teachers. Methodology is not taught in the TN schools that I have been associated with.

When teachers were asked from what sources they learned about phonological awareness and the ways to implement phonological skills in the classroom, three first grade teachers referred to the term “phonics.” One of these teachers believed she learned about phonological awareness instruction while researching the topic “phonics versus whole language.” She stated, “It turned out that both methods can be effective if taught correctly. I use both methods with my classes.” Another teacher wrote, “As a student of education, I was taught the importance of teaching phonics and the provided method of teaching.” The third teacher perceived that she was taught “very, very little about phonics in college.”

Two of the teachers in this study believed they gained limited knowledge of phonological awareness instruction in college. One of these teachers responded with the phrase “very very few college courses.” The other teacher wrote that she was “taught little in college, they focused more on whole language.”

Three teachers perceived that they did not learn about phonological awareness instruction in college. One teacher stated emphatically, “College did not prepare me for this!!!!” Another teacher commented, “I don’t really remember any courses that dealt with phonological awareness.” The third teacher believed that she “learned these [phonological awareness and phonological skills] after college.”

PROFESSIONAL DEVELOPMENT ACTIVITIES

Thirty teachers in this study believed they had gained knowledge concerning phonological awareness instruction via attendance of various professional development activities such as inservice programs, workshops, seminars, and conferences. One teacher with 22 years experience as a first grade teacher recalled her first encounter with

phonological awareness instruction.

My awareness of this term came in the summer of 2001 at a workshop. The leader showed us ways that children's literature could be used to teach different skills.

Although most teachers had attended workshops concerning reading and literature, one kindergarten teacher commented on specialized workshops. She stated, "Music workshops are Great for phonological awareness."

Five of these teachers commented that they had learned about phonological awareness instruction by attending in-school inservices in which the presenter was specialized personnel such as a speech/language therapist or teacher of special education. Three other teachers perceived that state conferences such as the Tennessee Reading Association Conference, Alabama Kindergarten Conference, and Multiage/Looping Conference in Indiana were sources from which they learned about phonological awareness instruction.

An interesting finding was that of the 30 teachers who responded that they learned about phonological skills and the ways to implement them in the classroom context by attending professional meetings, 19 are kindergarten teachers and only 11 are first grade teachers. In addition, the demographic section of the survey questionnaire revealed that approximately 65 professional development programs and workshops were attended by kindergarten teachers, whereas only 42 professional development programs were attended by first grade teachers.

PROFESSIONAL READINGS

Both kindergarten and first grade teachers perceived professional readings to be a salient source from which they learned about phonological awareness instruction.

Teachers often listed professional journals and magazines, teacher resource books, and teacher's manuals as a source of their independent readings and research. Five teachers stated that their understanding of phonological awareness instruction came from educational sources on the internet.

Two teachers believed that resource books involving phonics instruction enabled them to learn about phonological awareness instruction. Another teacher perceived that independent reading of a resource book was the source from which she had developed an understanding of the difference between phonological awareness and phonics instruction.

I understand there is a difference between "phonics" instruction and being phonemically aware. I discovered this about three or four years ago by purchasing a teacher resource book on phonemic awareness. I have only one

book that specifically refers to it as such. My other books support this process/theory but don't refer to it as phonemic awareness.

Fifteen teachers stated that county-wide adopted instructional programs had provided them knowledge of phonological awareness instruction. Ten teachers referred to the newly adopted reading series as a source of information concerning phonological awareness instruction. One teacher stated, "I learned from basal readers teacher's editions. Our newly adopted series has quite a lot of material on the subject."

Although one first grade teacher considered the current reading series a source of information, she explained her limited use of the series.

Our new reading series also has phonological awareness lessons with each story. I don't necessarily use them, but I might use the objective and create another project.

Another teacher related how she perceived the reading series to instruct children in phonological awareness by teaching lessons on the relationship between letters and sounds. She stated, “ Also, our new reading series (name) has included in each lesson how to teach letter and sound association.”

Five kindergarten teachers referred to “High Hat” as a source from which they learned about phonological awareness instruction. As previously mentioned, “High Hat” refers to the Goldman-Lynch Sounds and Symbols Development Kit. The program was adopted county-wide for kindergarten teachers in the early 1980s and currently is used to provide children with an introduction to reading and instruction in phonics. In this program, teachers instruct children to make connections between twenty-six speech sounds and a modified alphabet.

COLLEAGUES

Twenty-two teachers believed they learned about phonological awareness instruction from colleagues, including specialized personnel and the county primary supervisor. One kindergarten teacher wrote, “I learned these after college as I began teaching, from other teachers.” Many of these teachers referred to the term “fellow teachers” as sources of information concerning phonological awareness instruction. Nine teachers perceived specialized personnel, such as resource teachers and speech/language pathologists, to be primary facilitators in their understandings of the ways to implement phonological skills. Although most of these teachers listed multiple sources on the written interview, six of the 22 teachers responded that colleagues provided the only source of information by which they learned about phonological awareness instruction. One kindergarten teacher related the importance and value of learning about

phonological awareness instruction from colleagues such as fellow teachers and specialized personnel.

I was blessed in (name of state) and (name of state) to be associated with classroom teachers and resource teachers who taught me so many important basics.

PRACTICAL EXPERIENCE

Nine of the teachers in this study perceived that they had gained knowledge of phonological awareness instruction from practical experience, whether as a young student in the classroom or as a teacher themselves. Two teachers believed their childhood experiences in the classroom are sources from which they learned ways to implement phonological skills. To these teachers, learning phonics skills and being “taught to read phonetically” enabled them to instruct children in phonological skills once they became teachers. One of these teachers further explained, “I learned most of my phonics skills from when I was in elementary school. I retaught myself when I started teaching. College didn’t prepare me for this!!!! Actual classroom teaching did.”

Although all nine teachers listed other sources in addition to practical experience, several teachers emphasized the importance of daily teaching experiences in the classroom. These teachers believed that “trial and error” and “responding to children’s needs,” in combination with intuition based on experience, helped them gain important understandings of phonological awareness instruction. One teacher explained that she was “self taught through frustrating efforts to teach ineffective curriculum.” Another teacher stated,

Most importantly- basic experience teaching daily lessons and seeing what students respond to best. Teaching phonetic awareness using different strategies

allow students to grasp info better-rather than teaching [the] same way everyday.

SUMMARY: RESEARCH QUESTION FIVE

Teachers reported that they learned about phonological awareness and the ways to instruct phonological skills from a variety of sources, including teacher education coursework, professional development activities, professional readings, colleagues, and practical experience. Nearly twice as many kindergarten teachers as first grade teachers reported attendance of professional development activities, including system-wide inservices, state and local conferences, and inschool workshops. Some of these teachers stated that the workshops and professional development programs they attended were not specific to phonological awareness, but included reading or music workshops.

Although many teachers reported that teachers education coursework provided them with information concerning ways to teach phonological skills, the degree to which they learned about the topic ranged from “very little” to discussions held “quite often.” Additionally, several teachers believed that reading and language arts courses providing phonics information were sources from which they learned about phonological awareness and the implementation of phonological skills in the classroom. These teachers used the terms “phonics” and “phonological awareness” interchangeably. For example, when asked to identify phonological awareness sources, one teacher wrote, “I learned most of my phonics skills from when I was in college.”

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

OVERVIEW OF THE STUDY

Effective classroom instruction is essential for successful literacy development. Thus, the importance of teachers providing efficient reading instruction informed by salient research-based approaches cannot be overemphasized.

Several decades of reading research have established a clear link between children's sensitivity to the phonological structure of language and their emerging reading. More specifically, phonological awareness, the ability to identify and manipulate speech sounds, aids in understanding the alphabetic principle, an insight necessary for proficient decoding of unfamiliar words.

Research indicates that 25 % or more children do not acquire this insight naturally (Adams, 1998). However, notable training studies, such as those conducted by Ball and Blachman (1991), Cunningham (1990), and Lundberg et al. (1988), evidence the significant potential for success in the teaching of phonological awareness. Moreover, recent national education publications, such as Preventing Reading Difficulties in Young Children (1998) and Every Child Reading: An Action Plan of Learning First Alliance (1998), recommend the inclusion of phonological awareness instruction within kindergarten and first grade reading curricula. Considering the sizable proportion of children who require instruction in speech sound awareness, it appears critical that primary educators have theoretical and practical knowledge of this necessary component for reading achievement.

The purpose of this qualitative study was to investigate teachers' understandings of phonological awareness. Specifically, the study investigated teachers' perceptions and background knowledge of phonological awareness as well as their instructional approaches with regard to it. The main source of data was a written interview. Sixty-four kindergarten and first grade teachers in a rural East Tennessee school district participated in the study. The interview booklet, *Teacher's Understandings of Phonological Awareness*, contained two sections. Section 1 contained the demographic information. Section 2 consisted of eight interview questions designed to ascertain teachers' in-depth knowledge, perceptions, and instructional practices of phonological awareness. The data were analyzed using the constant comparative method.

In order to present in-depth analysis and interpretation of the data, the research questions in Chapter One were restructured with the inclusion of an additional question. The original research questions presented in Chapter One were as follows:

1. What do phonological awareness and phonological awareness instruction mean to kindergarten and first grade teachers?
2. How do kindergarten and first grade teachers teach phonological awareness in the classroom context?
3. To what extent do kindergarten and first grade teachers believe phonological awareness instruction contributes to literacy acquisition?

The restructured questions presented in Chapter Three and in this chapter follow.

1. What does phonological awareness mean to kindergarten and first grade teachers?

2. What does phonological awareness instruction mean to kindergarten and first grade teachers?
3. How do kindergarten and first grade teachers teach phonological awareness in the classroom context?
4. To what extent do kindergarten and first grade teachers believe phonological awareness instruction contributes to literacy acquisition?
5. From what sources do kindergarten and first grade teachers construct their perceptions of phonological awareness instruction?

DISCUSSION OF FINDINGS: RESEARCH QUESTION ONE

What Does Phonological Awareness Mean to Kindergarten and First Grade Teachers?

Nearly 75% of the teachers in this study perceived phonological awareness to be an understanding of phoneme-grapheme relationships or the application of this knowledge when decoding or encoding written words. This perception existed with both kindergarten and first grade teachers, regardless of years experience, current teaching position, or educational degree. Stanovich (1993-1994) notes, “Researchers argue intensely about the meaning of the term and the nature of the tasks used to measure it.” However, leading reading experts (Adams, 1990; Brady & Moats, 1997; Olson & Griffith, 1993; Stanovich, 1993-1994) emphasize that phonological awareness is a construct which pertains to an understanding about oral language rather than written language. Chard and Dickson (1999) state, “Phonological awareness involves the auditory and oral manipulation of sounds” (p. 263). They further explain, “phonological

awareness is the understanding of different ways that oral language can be divided into smaller components and manipulated” (p. 262). Thus, it appears that many of the teachers in this study have misunderstandings about the term *phonological awareness*.

This finding is consistent with the research literature. According to phonological awareness advocates (for examples see Snider, 1995; Yopp & Yopp, 2000), many educators have misconceptions concerning the difference between phonological awareness and phonics and believe they refer to the same concept. In an article entitled *Supporting Phonemic Awareness in the Classroom*, Yopp and Yopp (2000) clearly define the terminology of several reading concepts including the distinction between phonological awareness and phonics. They explain that phonemic awareness (often used interchangeably with phonological awareness) is “the awareness that spoken language consists of a sequence of phonemes” (p. 131). In contrast, phonics is a “way of teaching reading and spelling that stresses sound-symbol relationships” (p. 131).

The importance of this finding is twofold. First, phonological awareness is viewed to be the foundation which supports the understanding of the alphabetic principle (Adams, 1990; Chard & Dickson, 1999; Juel, 1988; Snider, 1995). Moreover, children with deficiencies in phonological awareness most likely do not benefit from phonics instruction (Busink, 1997; Juel, Griffith, & Gough, 1986; Snider, 1995). As previously stated in the findings, only a few teachers in this study reported the importance of phonological awareness for developing phonics knowledge. For example, one teacher commented, “This working knowledge [phonological awareness] is crucial when the child begins to make letter-sound connections (phonics).” Another first grade

teacher stated, “There is no suitable phonics instruction for the student who can’t ‘hear’ the sounds.”

Teachers’ understandings of the meaning of phonological awareness have significant implications for effective classroom instruction necessary to develop children’s sensitivity to oral language and, in turn, increase their subsequent reading achievement. It is crucial that teachers have a firm grasp of the meaning and function of phonological awareness. Without this understanding, many children may continue to have difficulty making sense of letter-sound relationships, and learning to read may remain confusing for those children who have not made the print-speech connection.

DISCUSSION OF FINDINGS: RESEARCH QUESTION TWO

Research Question Two: What does phonological awareness instruction mean to kindergarten and first grade teachers?

The teachers in this study perceived that phonological awareness instruction means engaging children in the learning of important phonological skills which facilitate reading acquisition. As reported in the summary of findings, most of the teachers cited skills that are related to print or a combination of sound and print-related skills. These findings are consistent with teacher’s perceptions of the meaning of phonological awareness. Because teachers’ instructional emphasis was on skills which stress the acquisition of letter-sound correspondences, processing letters, and sounding out words, their perceptions of phonological awareness skills appeared to be more phonics-related than phonologically oriented. According to Yopp and Yopp (2000), ... “once letters are attached to the sound manipulation in phonemic awareness instruction, the activity also

becomes a phonics activity. This overlap explains some of the confusion between the terms ‘phonemic awareness’ and ‘phonics’.” Thus, the interrelated nature of phonics and phonological awareness may additionally explain why many teachers in this study perceived essential phonological awareness skills to involve print.

Nevertheless, studies such as Ball and Blachman (1991) demonstrated that children instructed in letter names and letter sounds, in the absence of phonological awareness instruction, do not significantly improve in reading or spelling skills. In order for children to grasp the alphabetic orthography, they must first understand that the sounds attached to letters of the alphabet are the same sounds they hear in speech. A review of research (Adams, 1990) confirmed that at least 25% of children will not develop phonological awareness without direct instruction. Thus, many of these children will lack the ability to process letters and decode words effectively and efficiently. Stanovich (1993-1994) explained that the inability to recognize words directly affects comprehension because “word recognition processes demand too much cognitive capacity” and “fewer cognitive resources are left to allocate to higher-level processes of text integration” (p. 281).

Throughout the research literature, there is support for instructing children in both phonological awareness and letter-sound correspondence skills. For example, Ball and Blachman (1991) instructed children in phoneme segmentation skills and letter-sound recognition with positive results. Similarly, Williams’ study (1980) involved phoneme segmentation of syllables in conjunction with letter-sound correspondence and decoding skills. However, in each of these studies, children were initially instructed in phonological awareness skills using concrete cues prior to manipulating sounds with

letters. Ball and Blachman (1991) incorporated a scaffolding approach and trained children in oral segmentation skills with blank squares for a three-week period before instruction in segmenting words with letters. Williams' study (1980) introduced children to letters and decoding after completion of the auditory training. Smith et al. (1995) recommended the "strategic integration" of phonological awareness and alphabetic skills, which is the carefully planned inclusion of letter-sound correspondences once phonological awareness skills are learned.

The sound-related skills teachers most often cited as contributing to reading success were rhyming and phoneme blending and segmentation. This finding is consistent with other research indicating that performance on oral segmentation tasks at the phoneme level are highly predictive of early reading success (Bradley & Bryant, 1983; Lundberg, Olofsson, & Wall, 1980; Mann & Liberman, 1984). The impact of this phonological skill on children's reading development is significant. According to Ball and Blachman (1988), children with deficient segmentation skills are likely to be "among our poorest readers" (p. 210). Additionally, research confirms that rhyming and blending skills are considered to have an important role in reading acquisition (Bradley & Bryant, 1983, 1985; Gillam & van Kleeck, 1996; Lundberg, Frost, & Petersen, 1988). Although the predictive value of these skills is not as strong, Bryant (1990) suggested that rhyme may be the initial point at which phonological awareness develops in children.

Several teachers reported that manipulating sounds is an important phonological skill; however, they gave no further explanation, and the cognitive skill and linguistic level to which they were referring could not be determined. Sound manipulation covers a

wide range of skills, such as deletion and substitution of various linguistic units. Only one first grade teacher specifically cited manipulation skills involving phoneme deletion and substitution. Adams (1990) considers this task type to be the most difficult and may be more of a product of reading rather than a necessary component for learning to read.

DISCUSSION OF FINDINGS: RESEARCH QUESTION THREE

Research Question Three: How do kindergarten and first grade teachers teach phonological awareness in the classroom context?

To adequately develop phonological awareness within the classroom context, teachers should possess requisite knowledge of salient instructional practices which foster children's understanding of the internal structure of spoken words. These activities purposefully engage children in reflecting on the ways oral language can be broken down into smaller units as well as actively manipulating these units within speech.

Both kindergarten and first grade teachers in this study reported a variety of activities which they believed developed children's phonological awareness. Seven teachers described activities pertaining solely to sounds. An additional four teachers included phonological skills, such as identifying or deleting linguistic units at the onset-rime or phoneme level, in combination with print-related activities involving letter-sound correspondences. However, the activities most often described focused predominately on letter-sound correspondence skills. For example, approximately 60% of kindergarten teachers reported teaching "High Hat" lessons or "Letter of the Week."

Although teachers' descriptions of these lessons were frequently brief, making it difficult to determine how the skills were incorporated within the lesson, other teachers explained that these activities involved the introduction of a sound and symbol and "putting symbols together to make words." This type of decoding activity was reported by the majority of first grade teachers as well. Although the materials and form of instruction varied, most teachers conducted the lessons in a similar manner: 1) introducing a letter or letter pattern and its accompanying sound, and 2) providing practice activities with the letter or letter pattern in the context of reading and writing experiences.

Considering these findings, it appeared that most of the teachers in the present study were instructing children in letter-sound correspondence skills and the application of these skills to the exclusion of auditory activities emphasizing how speech can be segmented into constituent sounds. Thus, their perception of appropriate instructional practices to foster phonological awareness involved alphabetic understanding (i.e., written words consist of individual letters which correspond to speech sounds) and phonics (i.e., using letter-sound correspondences for reading words) rather than the analyzation and manipulation of oral language.

Although research has yet to determine the optimal combination of phonological awareness and letter-sound instruction sufficient for children with varying phonological awareness levels, increasing children's phonological awareness through instruction which focuses on the linguistic structure of speech is a critical initial step toward children's literacy acquisition. According to Olson and Griffith (1993), "...in order to use their phonics knowledge, children must be able to manipulate phonemes. That is, to

successfully sound out unrecognizable words as they read, or spell words as they write, children must be able [to] distinguish individual phonemes. Most important, even though children acquire phonological awareness without a knowledge of phonics information, they need phonological awareness to use their phonics knowledge to read words they have never seen before” (p. 353). The consensus of phonological experts is clear. Phonological awareness is an important foundational element in the initial stages of reading. Thus, if teachers do not create opportunities to develop this awareness, they are severely limiting the potential benefits to be gained from three decades of research.

Because teacher’s activities often involved a specific letter or letter combination, children were most frequently instructed at the linguistic level of the phoneme. However, there are several sizes of phonological units (i.e., word, syllable, onset-rime, phoneme) in which children should demonstrate proficiency. Earlier work has demonstrated that skills involving larger linguistic units are essential to learning phonological skills which include smaller linguistic units (Busink, 1997; Catts, 1991). Liberman et al. (1974) found that only 48% of kindergarten children could successfully segment words into syllables, and as few as 17% could segment words into phonemes. Additionally, at the end of first grade, 10% of the children still could not segment syllables successfully. Hence, Mann and Liberman (1984) suggested that phonological awareness instruction begin with skills which develop word awareness, then syllable awareness, and eventually phoneme awareness. Similarly, Catts (1991) recommended that children be introduced to segmenting and blending at the syllabic level, and develop a certain proficiency with these skills, before segmenting and blending individual phonemes.

Teachers perceived they encountered difficulties instructing phonological awareness skills to children with varying ability levels. Most teachers attributed children's differential abilities to a lack of developmental readiness, limited linguistic experiences, various learning styles, and special populations of students, such as those with speech and hearing impairments, learning disabilities, or second language learners. Teachers believed these specific factors contributed to the difficulties children exhibited in oral/aural or print-related skills such as hearing and discriminating speech sounds, general listening skills, blending phonemes, letter-sound recognition, decoding, and sight word recognition. This finding is consistent with the literature identifying risk factors associated with children's reading difficulties. For example, Gillam and van Kleeck (1996) posited that children with language disorders and learning disabilities frequently exhibit difficulty with a variety of phonological awareness skills. Snow et al. (1998) emphasized, "Children from poor neighborhoods, children with limited proficiency in English, children with hearing impairments, children with preschool language impairments, and children whose parents had trouble learning to read are particularly at risk of arriving at school with weaknesses in these areas and hence falling behind from the outset" (p. 5).

Because environmental and biological influences are known to hinder children's development of phonological awareness, it is imperative that effective phonological awareness instruction be provided for at-risk children. The National Reading Panel (2000) posited that phonological awareness instruction benefits children with these identified risk factors as well as children following a normal course of reading development. Additionally, with efficient phonological awareness training in

kindergarten, many children become proficient readers in first grade (Scanlon & Vellutino, 1997). However, to improve weak or deficient phonological awareness skills, carefully planned and implemented lessons which include systematic, explicit activities, with a high degree of repetition, are necessary. According to Snider (1995), “Many of these at-risk children may end up being labeled as learning disabled unless effective intervention occurs early” (p. 453).

Four teachers reported that their own limited knowledge of phonological awareness and its component skills hindered their ability to instruct children effectively. However, as previously stated in the findings, most of the teachers in this study believed phonological awareness to include alphabetic understanding, decoding, or encoding abilities. Additionally, all but six teachers believed that phonological awareness skills involved print rather than speech sounds exclusively. Thus, it appeared that most teachers were not cognizant of their limited knowledge of phonological awareness; therefore, they were not able to accurately determine or identify the difficulties instructing children in these skills effectively. Several teachers reported that some of their students had difficulty understanding the relationship between letters and sounds and that this lack of understanding persisted throughout the year. These same teachers described lessons that supported letter-sound correspondences and decoding skills rather than activities that fostered the understanding of the segmental nature of oral language, which is a prerequisite for understanding the decoding process. For example, one first grade teacher stated, “We review sounds at the beginning of the year for each letter. Then, we introduce and review blends and digraphs throughout the year... We point out blends, etc. while reading and sounding out new words.” Although teachers

were aware of these difficulties, they still continued to practice letter-sound correspondence skills and decoding, possibly not realizing that an essential key to successful decoding involves children's ability to hear and process individual speech sounds in words. If teachers do not possess sufficient theoretical and practical knowledge to adequately instruct children in these foundational skills, it is highly probable that children will continue to have reading difficulty (Juel, 1988) and that the gap between good and poor readers will continue to widen (Stanovich, 1986).

In addition to student ability levels and pedagogical issues, three teachers perceived administrative requirements such as curriculum mandates and testing policies as difficulties. The concerns of these teachers were that the mandated curriculum, including the county-adopted reading series, and testing practices were not developmentally appropriate. Additionally, the requirement to teach the curriculum left little instructional time for developing children's phonological awareness. The concerns of these teachers were consistent with the literature. For example, the Learning First Alliance (1998) noted that instructional practices and materials, including basal reading series, were frequently inconsistent with current reading research, particularly in first grade. Who, then, is responsible for the improvement of the content found in basal reading programs? More importantly, what can be done to improve the quality and relevance of basal reading programs on which so many teachers rely?

To accommodate children's phonological awareness levels, teachers reported incorporating instructional strategies such as assessments, various instructional groupings, and modifications. The value of assessing children's phonological awareness abilities is evident throughout the literature on emergent reading (Chard & Dickson,

1999; Smith, Simmons, & Kameenui, 1995). However, only four kindergarten teachers stated that they administered assessments to children upon school entry. Moreover, these assessments involved skills relating to letter-sound knowledge and decoding skills rather than phonological awareness. A conclusion of these findings is that teachers were not assessing children on phonological awareness skills and may not have been accurately determining the appropriate instruction necessary for the differential ability levels of their students. Initial and ongoing assessment is central to effective instruction for the differential ability levels which exist within a classroom setting because it specifies the phonological level of children as well as the skills that require additional attention or emphasis. Although many commercial assessments are available, they can be costly and time consuming. However, children's level of phonological awareness can be evaluated using quick, efficient assessments (Yopp, 1995a).

The instructional strategies teachers most often employed involved specific groupings of children. Many teachers related that they taught specific skills to whole groups of children with modifications such as reteaching, review or enrichment activities, depending on children's abilities. These modifications often included review of letter-sound correspondence skills or additional opportunities for reading. For example, one teacher stated, "The phonics is just taught over and over-day after day-until the students begin to respond positively!" Other teachers began instruction by dividing children into small ability groups and teaching reading skills on that level. Although teachers agreed that children in their classrooms possessed differing ability levels, some children having difficulty with even the most basic phonological awareness skills such as identifying rhyming words, only three teachers specifically reported that

their instructional strategies included phonological awareness skills. For instance, one teacher stated, “I plan my whole group instruction based on the students with the weakest phonemic skills. I individualize for the more advanced students.” Another teacher explained how she engaged all of her students in phonemic skills the first six weeks of school and later in the year focused on phonological skills problematic for specific students during reading instruction with ability groups during small group reading instruction.

The instructional strategies necessary to accommodate children’s differential phonological awareness levels extends far beyond groupings of children and modifications such as reteaching letter-sound correspondences and additional reading opportunities. Children with low phonological awareness may indeed need more intense and explicit instruction than those who evidence higher levels of phonological awareness (Torgesen & Davis, 1996); however, teachers additionally should consider the dimensional aspects of phonological awareness, such as sizes of the linguistic units and task difficulty, when varying instructional strategies. For example, children low in phonological awareness may require instruction in rhyming skills rather than phonemic segmentation and blending. In contrast, children with higher levels of phonological awareness may benefit from instruction that focuses on adding, deleting, or substituting phonemes. The most effective strategies include the deliberate teaching of phonological awareness skills within the context of rich reading and writing experiences (Olson & Griffith, 1993; Yopp & Yopp, 2000). This integration provides higher rates of reading success for children with varying phonological abilities.

DISCUSSION OF FINDINGS: RESEARCH QUESTION FOUR

Research Question Four: To what extent do kindergarten and first grade teachers believe phonological awareness contributes to literacy acquisition?

Learning to read and write effectively are complex processes for young children and far more complex for some than others. To ensure success for all children, it is essential for teachers to integrate multiple components into daily reading instruction.

Most of the teachers in the present study reported a variety of instructional components which involved print, including the identification and application of letter-sound associations and multiple literacy experiences. Numerous researchers of emergent reading agree that these instructional components are essential to literacy acquisition (Foorman, Fletcher, & Francis, 1996; Griffith, Klesius, & Kromrey, 1992; Snow, 1998; Torgesen, 1998). According to Snow (1998), children's reading success is dependent on the following skills: 1), identifying printed words using spelling-sound connections, 2) reading for meaning which involves the application of existing knowledge and comprehension strategies, and 3) reading fluently. Snow further noted that accomplishing these skills requires an understanding of the alphabetic principle and frequent exposure to a wide variety of literature.

In addition to print-related skills, these same literacy experts, as well as researchers in the fields of cognitive psychology, speech pathology, and child development, posited that phonological awareness is a critical component for successful reading acquisition. Torgesen, Wagner, and Rashotte (1994) stated, "Children who are relatively strong in phonological awareness in kindergarten, before reading instruction begins, typically learn to read more easily than those with relatively delayed

development in this area” (p. 276). Similarly, Stanovich (1986) noted, “Evidence is mounting that the primary specific mechanism that enables early reading success is phonological awareness” (p. 362).

As previously stated in the findings, only 17 teachers in the present study cited phonological awareness as an essential instructional component for literacy development. However, the importance of phonological awareness has been demonstrated in many studies. For example, Juel (1988) found that children deficient in phonological awareness at the beginning of first grade were the poor readers at the end of their first grade year. Additionally, there was an 88% probability that these poor readers would remain poor readers at the end of fourth grade. If teachers do not consider phonological awareness to significantly contribute to early reading acquisition, it is highly probable that they will not incorporate this essential component within a broad instructional plan in reading. At best, teachers may include only minimal training, which may not be sufficient to impact children’s reading achievement.

Several teachers in this study reported that children develop phonological awareness when provided with early oral language and literacy experiences by parents. The literature confirms this finding (Bradley & Bryant, 1983, 1985; Bryant, Bradley, Maclean, & Crossland, 1989; Juel, Griffith, & Gough, 1986; Snow, 1998). However, children who have not developed a proficient level of phonological awareness before entering school must receive quality phonological awareness instruction by skillful teachers if they are to progress successfully in learning to read.

In addition to instructional components which foster literacy acquisition, teachers reported their perceptions of the relationship between phonological awareness

and reading. As previously stated in the findings section for Research Question One, teachers perceived phonological awareness to involve letter-sound correspondences or to be synonymous with phonics instruction. Because teachers generally lacked a thorough understanding of the term phonological awareness, most teachers reported the relationship between letter-sound correspondences and reading rather than phonological awareness and reading. For example, some teachers used the term *phonological awareness* when reporting their understanding of the relationship, but their explanations clearly focused on letter-sound associations and the application of these skills for reading words. Other teachers used the terms *phonological awareness* and *phonics* interchangeably. For instance, one teacher commented, “Phonics is a ‘key’ component toward reading success. I strongly believe that students should know and understand phonics rules in order to progress in reading...Phonics allows students to be able to ‘sound out’ and learn new words that he/she may be unfamiliar with. This promotes positive reading experiences!”

Considering these findings, it appears that many of the teachers in this study did not possess a sufficient knowledge base in phonological awareness necessary to understand its role in the initial stages of reading. Thus, a consequence of limited understanding of the relationship between phonological awareness and reading may be delayed literacy acquisition.

Although many teachers reported on the relations between letter-sound associations and reading, approximately one-third of the teachers perceived phonological awareness to be causally linked to reading or to be a facilitator of reading acquisition, which is a slightly weaker relationship. This finding was consistent with the

research literature (Bradley & Bryant, 1983; Ehri, 1979; Lundberg, Frost, & Petersen, 1988; Perfetti, Beck, Bell, & Hughes; Stahl & Murray, 1994). A review of reading research by the National Research Council (1998) indicated that this relationship persists throughout schooling.

Teachers' understandings of the relationship between phonological awareness and reading have specific implications for instruction. Whether teachers view phonological awareness as a prerequisite for reading acquisition, a cause and consequence of reading, or a facilitator of reading development, it is evident that effective reading instruction should include instruction that develops children's understanding of the segmental nature of speech.

DISCUSSION OF FINDINGS: RESEARCH QUESTION FIVE

Research Question Five: From what sources do kindergarten and first grade teachers construct their perceptions of phonological awareness instruction?

Advocates of phonological awareness (Learning First Alliance, 1998; National Reading Panel, 2000) stress the importance of teachers possessing theoretical and practical knowledge of phonological awareness in order to provide children with optimal classroom instruction. Teachers in this study reported they gleaned important instructional practices concerning phonological awareness skills from a variety of sources. One salient source cited by more than 50% of teachers was teacher education coursework. Most of these teachers did not report the degree to which coursework aided their understanding. However, of the eight teachers that commented on coursework effectiveness, five teachers strongly believed that teacher education

coursework did not sufficiently prepare them to teach phonological awareness skills. One teacher stated that she had received “very very few courses in college” and another commented, “College didn’t prepare me for this!!!!” The research literature confirmed this finding (Moats, 1994b; Troyer & Yopp, 1990). According to Liberman (1987) and Moats and Lyon (1996), many teachers who have completed certification programs lack sufficient knowledge about phonological awareness and effective instructional practices necessary to foster it. Often teachers are aware that they do not possess the skills to facilitate children’s phonological awareness. In a study by Bloome-Sweeny (2000), novice teachers reported that they could neither develop children’s phonemic awareness nor apply their teacher education coursework to the classroom situation. Several teachers in this study expressed similar concerns about their lack of practical and theoretical knowledge of this construct. For example, one teacher reported that she knew “little, if anything, about phonological awareness.” Another teacher stated that she had difficulty instructing children because she lacked “knowledge in this field and expertise in current trends.” Although a third teacher perceived she had a “working knowledge in isolation,” she experienced difficulty “bridging the gap to phonics application.”

The National Reading Panel (2000) reported that the instructional methods and strategies teachers acquire through training strongly influences their classroom instructional practices. A disturbing reality is that many universities and colleges require only minimal coursework in reading, sometimes as few as one or two courses for certification (Hall & Moats, 1999). Findings of this study indicated that 12 of the 64 primary teachers had taken two or less reading courses, and another 11 teachers stated

that had taken three or less courses in college. Thus, it is not surprising that a substantial number of teachers often lack adequate knowledge and training to provide instructional strategies which support children's literacy growth (see Moats, 1994b).

Liberman (1987) asserts that "many teachers of beginning reading are being trained to teach reading in an alphabetic orthography without ever being taught how an alphabetic orthography represents the language, why it is important for beginning readers to understand how the internal structure of words relates to the orthography, or why it may be hard for children to understand this" (p. 7). However, teachers with phonological awareness training can teach phonological awareness effectively. Thus, a restructuring of teacher education programs, including the number of courses and specific methodological changes that reflect current reading research, may bridge the gap between teacher knowledge and research-based effective reading instruction.

Thirty-one teachers in this study perceived professional development programs as salient sources for developing their understandings of phonological awareness and its component skills. Teachers additionally reported attending a total of 107 professional development programs involving phonological awareness. However, only six of these teachers believed that phonological awareness skills pertain exclusively to sounds. Thus, it appears that professional inservice activities were not providing teachers with the conceptual and instructional knowledge, specifically on phonological awareness, consistent with current research. This conclusion was substantiated by recent literacy on reading acquisition (Learning First Alliance, 1998; National Reading Panel, 2000). For example, in a response to an analysis of empirically based reading research, the National Reading Panel (2000) reported that teacher education efforts are in need of

extensive and continuing support, in the form of both money and time, at the inservice level. Because teachers use the instructional methods acquired in both preservice and inservice programs (National Reading Panel, 2000), it is essential that professional development programs be designed to adequately train teachers in a variety of instructional strategies, including phonological awareness, which support children's reading development.

Not only do teachers receive minimal theoretical and practical knowledge of phonological awareness in teacher preparation and professional development programs, but also many basal textbooks are deficient in important research-based instructional approaches. Of the 30 teachers who considered professional readings as an instructional source, ten of these teachers reported they learned about phonological awareness instruction from textbook reading manuals. An analysis of basal reading programs by Simmons et al. (1995) reported that oral blending and segmenting of phoneme units, two phonological skills strongly related to reading achievement, were absent in the series. The National Academy of Sciences report states, "Publishers' decisions about which objectives to emphasize in each new addition are strongly guided by market research (1998, p. 190).

Other teachers in this study cited colleagues, such as fellow teachers, specialized educators, or primary supervisors, as an important source for understanding phonological awareness instruction. This finding was confirmed in the research literature. According to Catts (1991), speech-language therapists can be particularly important sources because their specialized training in phonology and phonetics enables them to develop and implement phonological awareness programs.

CONCLUSIONS

CONCLUSION ONE

All teachers are familiar with the term “phonological awareness”; however, most of them have simply substituted it for the term “phonics” without any further changes in knowledge or understanding.

All the teachers in the present study have heard of the term *phonological awareness*. However, it is clear from their definitions and even more so from their teaching practices that most of them do not understand what phonological awareness means, nor how it relates to literacy acquisition. All but a few of these teachers are in fact conducting phonics lessons rather than building the foundation of phonological awareness on which successful phonics instruction depends.

CONCLUSION TWO

Teachers want to know about phonological awareness; however, the sources available to them are insufficient.

It is evident that many of the teachers in the present study have actively sought information regarding phonological awareness. Teachers reported attending numerous professional development programs, searching internet sources, and talking with colleagues in an attempt to acquire knowledge of this construct. Thus, it appears that teachers' limited knowledge of phonological awareness is not attributable to their disinterest, but to inadequate sources, which often fail to clearly differentiate between phonological awareness instruction and phonics instruction, or to the complexity of the construct.

Reading research clearly indicates that phonological awareness plays an essential role in children's literacy growth; however, it is not sufficient for reading acquisition in and of itself. Thus, phonological awareness instruction should be integrated in a complete reading program which not only strengthens other critical literacy skills but also promotes a love and enjoyment of reading. The inclusion of explicit phonological awareness instruction, within the context of rich literacy experiences, provides the balance necessary for children to become skilled readers. Professional development activities for teachers must support them in their abilities to provide this balanced instruction for all children.

My own experience of phonological awareness was similar to the teachers in this study. Exasperated by my inability to help a struggling first grade student attending a summer school program learn to decode words with relative ease, I sought the advice of a former school psychologist. The psychologist suggested that I may want to include some phonological awareness activities during reading instruction. Somewhat surprised by his recommendation, I immediately retorted, "John, I've had two of your own children in first grade. You know I've always taught phonics."

During the course of the conversation, John clarified the difference between phonological awareness and phonics. He further explained how instructing children in oral language skills helped them understand the alphabetic principle and, in turn, would aid their decoding skills. With piqued interest, I set out on a quest to gather information on the topic from internet sources, research articles, and teacher resource books. Many of the sources were beneficial, but several internet sources and teacher resource books often contained vague or conflicting information concerning the types of skills and

activities which helped children become more phonologically aware. For example, these sources contained ways to instruct children in segmenting and blending with letters and sounds but seldom made the distinction that these were phonic activities. From my own frustrating attempts to gain knowledge of this construct, I can readily understand the confusion that many teachers have regarding the terminology, skills, and instructional methods necessary to foster children's phonological awareness.

RECOMMENDATIONS FOR PRACTICE

To reach a sufficient level of pedagogical expertise in phonological awareness, early childhood and primary grade teachers need theoretical and practical training concerning the relationship between reading and spoken language. Both preservice and inservice teachers must be conversant with quality reading research findings and be able to incorporate this knowledge in their classroom instruction.

INSERVICE TRAINING PROGRAMS

An important recommendation at the school-district level is to increase teachers' "research awareness" by providing inservice training programs that facilitate the application of phonological awareness for the improvement of literacy instruction. Such inservice training should occur over an extended period rather than the typical "1-day" workshop, which results in minimal long-term changes in teacher practices (Miller & Lord, 1993), in order for teachers to develop a solid research foundation in the structural basis of language and the essential phonological skills that contribute to early reading success.

To translate research knowledge into pedagogical knowledge, the inservice training program should include three significant features: 1) demonstrations of instructional activities by qualified educators, 2) construction of self-developed phonological awareness activities, and 3) implementation of these activities with children of differential phonological awareness proficiency levels. All of these components should be based on research-validated instructional approaches for effectively teaching critical phonological skills to emerging readers.

The inclusion of such onsite training would enable teachers to more effectively assess children's progress, make informed decisions regarding the appropriate skills for individual students, and refine future lessons to accommodate children's various phonological awareness levels. Further, these opportunities would allow teachers the time and resources to develop ways of implementing research-based instructional practices rather than relying on sources which may not address the instructional needs of many students.

SCHOOL-WIDE WORKSHOPS

The information teachers glean from attending the inservice program could be useful in designing school-wide workshops to inform fellow colleagues about phonological awareness and the instructional approaches that most effectively and efficiently improve this awareness in young children. For example, the workshop could include sessions in which trained teachers disseminate literature concerning recent research findings in phonological awareness as well as appropriate instructional methods and materials.

Colleagues could form groups to discuss ways to link this knowledge with the

joy of reading and writing within the context of read-alouds and other motivating literacy experiences. Lead teachers could share and demonstrate the instructional activities they designed while attending the extended inservice training. Additionally, lead teachers could offer support by periodically consulting with colleagues as they plan and implement research-based instructional practices in their own classrooms. Such workshop training activities on a school-wide level would provide a greater number of teachers with the knowledge, strategies, and materials needed to teach critical phonological awareness skills to beginning readers. Further, these well-informed teachers would have the foundational knowledge necessary to analyze prospective reading textbooks considered for county-wide adoption and to identify those that include phonological awareness activities grounded in quality reading research.

TEACHER EDUCATION PROGRAMS

As mentioned previously, many teachers lack the content information and depth of training necessary to provide appropriate instruction in phonological awareness. To effect change in classroom practices, early childhood and elementary teacher education programs should include coursework focusing on the structure of spoken and written language. Such coursework is needed to inform teachers of the theoretical understandings of children's language development and its relationship to reading acquisition. Additionally, coursework should be provided on the methodological practices of phonological awareness in order for teachers to learn effective instructional approaches for differential learners. The incorporation of practical training experiences followed by discussion groups with mentors and fellow practitioners would be essential components of such coursework.

STATE CERTIFICATION REQUIREMENTS

In addition to changes in teacher preparation coursework and inservice training programs, state certification boards should evaluate and modify requirements so that all prospective early childhood, primary, and reading teachers can demonstrate competencies in areas of emergent literacy. These state certification requirements should be sufficient to ensure the quality of both preservice and inservice teachers entering and advancing in the teaching profession.

A matrix of teacher competencies, such as those listed in the *Standards for Reading Professionals*, a publication by the International Reading Association (1998c), could be useful in guiding state certification requirements. The comprehensive list includes specific competencies that emphasize the relationship between the phonemic system and reading, the influence of relevant reading research on literacy education, and the relationship between phonological awareness and spelling achievement. Such competencies pertaining to phonological awareness would aid in assuring that teachers gain the foundational knowledge to implement essential reading strategies necessary for a range of learners.

RECOMMENDATIONS FOR FUTURE RESEARCH

Although much is known about language development and the phonological skills necessary for reading acquisition, future investigations should be employed in several specific areas. For example, research efforts should be undertaken to investigate the effectiveness of various instructional practices and the degree to which these

approaches integrate phonological awareness skills within a balanced literacy program.

According to Lyon and Moats (1997, p. 581),

Balance is one of the most important principles to emerge from reading research, yet intervention studies continue to overemphasize one component to the detriment of others. An example of this type of parochial intervention can be gleaned from studies that provide instruction in phonological awareness and decoding with insufficient attention to subsequent application of these skills in text reading.

Thus, it is important to investigate teachers' approaches to teaching phonological awareness skills in the context of authentic literacy activities. Such findings could be used by school districts to design professional development programs which focus on deficits in these areas and the most effective ways to teach critical literacy skills.

Another area of research that needs to be investigated concerns teachers' opportunities to participate in reading research-validated training programs on phonological awareness. Findings from such research would be beneficial for designing future state and local professional development and inservice training programs that incorporate current research-based literacy information in order to improve teacher effectiveness in the classroom.

An additional recommendation is to extend the present study to include in-depth interviews with participants who demonstrate understanding of phonological awareness and the ways to instruct it within the classroom context. Further investigation into the sources by which these teachers gained understanding of this construct would provide information to educators that could be of value in increasing their knowledge and practical expertise in this area.

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APPENDICES

APPENDIX A

SAMPLE COVER LETTER TO TEACHERS

February 2002

Name

Title

Street Address

City, State Zip Code

Dear [],

My name is Lou Ann Walker, and I am a doctoral candidate at the University of Tennessee, Knoxville. Currently, I am conducting research on teachers' understandings of phonological awareness and its role in the literacy acquisition of young children.

Because of your experience and expertise in the field of literacy, you are being invited to voluntarily participate in this research project. I would appreciate your time and effort in filling out the enclosed survey questionnaire. Your participation, input, and perceptions are vital in order to develop a valid study.

By completing and returning the study, you are giving me permission to use your responses in my final report. However, the survey instrument is not coded; thus, all responses are guaranteed to be anonymous and confidential. After completing the questionnaire, please return it in the enclosed, self-addressed envelope. Follow-up questionnaires will be sent to encourage non-respondents to participate. If you have responded previously, disregard the follow-up questionnaire.

I appreciate your consideration and help in responding to the survey. I am eager to learn what perceptions you have concerning phonological awareness. A summary of results will be made upon request.

Sincerely,

Lou Ann Walker

Appendix B

SURVEY QUESTIONNAIRE

Part 1- Demographic Information

1. Years teaching experience
first year _____ 1-5 years _____ 6 or more years _____

2. Current teaching assignment
kindergarten _____ first grade _____

3. Years experience in your current position _____

4. Highest educational degree held _____

5. Number of college courses in reading _____

6. How many professional development programs or workshops on
phonological/phonemic awareness have you attended? _____

You may comment on any of the above questions in the space provided below or on the back of this paper.

APPENDIX B
SURVEY QUESTIONNAIRE

Part 2

1. In your opinion, what are the major instructional components necessary for the literacy acquisition of young children?
2. What does the term “phonological awareness” mean to you?
3. What do you consider to be the most important phonological skills that contribute to reading success?
4. Explain your understanding of the relationship between phonological awareness and reading.
5. Describe a recent lesson in which you taught your students to become more phonologically aware.
6. From what sources did you learn about phonological awareness and the ways in which phonological skills can be implemented in the classroom?
7. What difficulties have you encountered in teaching phonological awareness skills to your students?
8. How does the individual student’s level of phonological awareness affect your planning and instruction?

APPENDIX C

SAMPLE LETTER TO SUPERINTENDENT

December 2001

Name

Title

Street Address

City, State Zip Code

Dear [],

As a student at the University of Tennessee, I am currently involved in the research phase of the Doctorate of Education program in the Department of Theory and Practice in Teacher Education. My dissertation will address teachers' understandings and instructional practices of phonological awareness and its role in the literacy development of young children.

I would like your permission to survey the kindergarten and first grade teachers in [] County. The research instrument will consist of a written, two-part questionnaire concerning the demographic information and the topic of phonological awareness. All responses will be anonymous and confidential. Results of the study will be made available upon request.

In preparation for the study, I plan to contact primary and elementary school principals, request their permission with regard to the study, and discuss the means of survey distribution. Upon permission, letters of voluntary participation and survey forms will be distributed to teachers. Distribution and collection of data will be conducted in a manner as to not interfere with school activities.

Thank you for your cooperation.

Sincerely,

Lou Ann Walker

APPENDIX D

SAMPLE COVER LETTER FOR SECOND DISTRIBUTION

March 2002

Name

Title

Street Address

City, State Zip Code

Dear [],

In seeking information for my doctoral dissertation, I chose the kindergarten and first grade teachers of [] County because I have known and worked with many of you for over twenty years (my former name was Lou Copas). I highly respect your knowledge and experience regarding the education of young children. I recently sent you a survey questionnaire on phonological awareness. Your responses to these surveys will be the basis for my study.

To protect your anonymity, the surveys were not coded. Therefore, I have no way of knowing who has returned them and who has not. I realize this is a busy time for all of us, and I wish to express my sincere gratitude to those who have found the time to help me with this important study.

In a couple of weeks you will all receive another copy of the survey as a reminder. I request and encourage those who have not yet been able to get to it to complete and return the surveys as soon as you can. I am hoping to receive all the data by the first week in April, so I can begin the process of sorting and analyzing it.

When the dissertation is complete, hopefully in August, I will be happy to share my findings with you. If you would like a copy, call me at 453-1320 to let me know.

Again, I sincerely thank you for your help with this important project, especially during this busy season.

Regards,

Lou Ann (Copas) Walker

VITA

Lou Ann Walker was born March 27, 1953 in Memphis, Tennessee. She lived in Tiptonville, Tennessee from 1956-1969, where she returned to Memphis and graduated from a public school in 1971. She attended the University of Tennessee, Martin, for one year and transferred to the University of Tennessee, Knoxville. In 1976, she received a Bachelor of Science degree in Education, with certifications in special education and elementary education. In the summers of 1995 and 1997, she studied at the University of Edinburgh, Scotland, while pursuing a Master of Science degree through the College of Education at the University of Tennessee, which she earned in 1997. Lou Ann received a Doctor of Education degree from the University of Tennessee in May, 2003.

Her professional career began in 1976 as a teacher of hearing impaired children in Tifton, Georgia. For the past 24 years, Lou Ann has been a first grade teacher in Sevierville, Tennessee. In 1998, she received an award from Bell South for her work with young children.

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