

USING SCAFFOLDING TO TEACH
PHONOLOGICAL/PHONEMIC AWARENESS SKILLS
TO ENGLISH LANGUAGE LEARNERS

by

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*To my Mom and Dad,
to Grandpa Wicklund, who would have been proud,
to Jim, Melissa, and Jen for your friendship and support*

TABLE OF CONTENTS

Chapter One: Introduction 1

Chapter Two: Literature Review 10

Introduction 10

Models of Reading and Reading Instruction 10

The Importance of Phonemic Awareness in Reading 13

Phonemic Awareness and English Language Learners 20

Stages of Phonemic Awareness Instruction 23

Assessment of Phonemic Awareness 28

Implementation of Phonemic Awareness Instruction 30

Scaffolding in Instruction 37

Scaffolding and English Language Learners 39

Implementation of Scaffolding Techniques 40

Scaffolding and Phonemic Awareness 44

Conclusion 45

Chapter Three: Methods 48

Introduction and Research Question 48

Setting 48

Participants 49

Research Methodology 51

Data Collection 52

Instruction 53

Data Analysis 57

Conclusion 57

Chapter Four: Results and Discussion 58

Introduction 58

Assessment Procedure 58

Discussion of Assessment Procedure 59

Assessment Results 62

Discussion of Assessment Results 63

Discussion of Instruction 64

Conclusion 69

Chapter Five: Conclusion 70

Introduction 70

Reflections 71

Implications 73

Limitations and Future Study 74

Conclusion 75

Appendices

Appendix A: A Continuum of Scaffolding Strategies 77

Appendix B: MN-SOLOM 79

Appendix C: Journal Entry Form 81

References 82

LIST OF TABLES AND FIGURES

Table 3.1	Oral English Proficiency of Students	50
Table 3.2	Interpretation of Oral Language Component of the pre-LAS2000 Scores	50
Table 4.1	Phonemic Awareness Assessment Results	62
Figure 1.1	Visual Representation of the Phonological Structure of the Word <i>Pencil</i>	2

CHAPTER ONE: INTRODUCTION

Teaching can be an immense challenge, but working with my students every day is one of my greatest joys. I have always had a soft spot in my heart for English Language Learners (ELLs). I began teaching English when I was five years old, when my family helped a Laotian family resettle in our community. Vilayphone and I became friends and we spent countless hours playing as I taught her English - as only a five-year-old could! I love teaching English more and more every day.

As a teacher, I am constantly examining my teaching to make sure I am meeting the varying needs of my students. I often meet with other teachers to collaborate and get my questions answered. Two years ago, I found myself frequently speaking with the speech and language teacher at my school because it seemed to me that many of my students struggled with articulation, and other staff and students had trouble understanding them when they spoke English. I went to him to get ideas for how to help my students with their articulation. That is when I was first introduced to the topic of phonemic awareness.

Phonemic awareness is the ability to hear and manipulate sounds in spoken language. Each unit of sound is called a phoneme. The word *spot* has four phonemes, /s/ /p/ /a/ /t/. Counting phonemes is difficult because it is tempting to count the letters of the words instead of counting the phonemes. For example, the word *school* has six letters, but it only has four phonemes, /s/ /k/ /uw/ /l/. Yopp and Yopp (2000) define phonemic awareness as "the awareness that the speech stream consists of a sequence of

sounds - specifically phonemes, the smallest unit of sound that makes a difference in communication” (p. 130). See Figure 1.1.

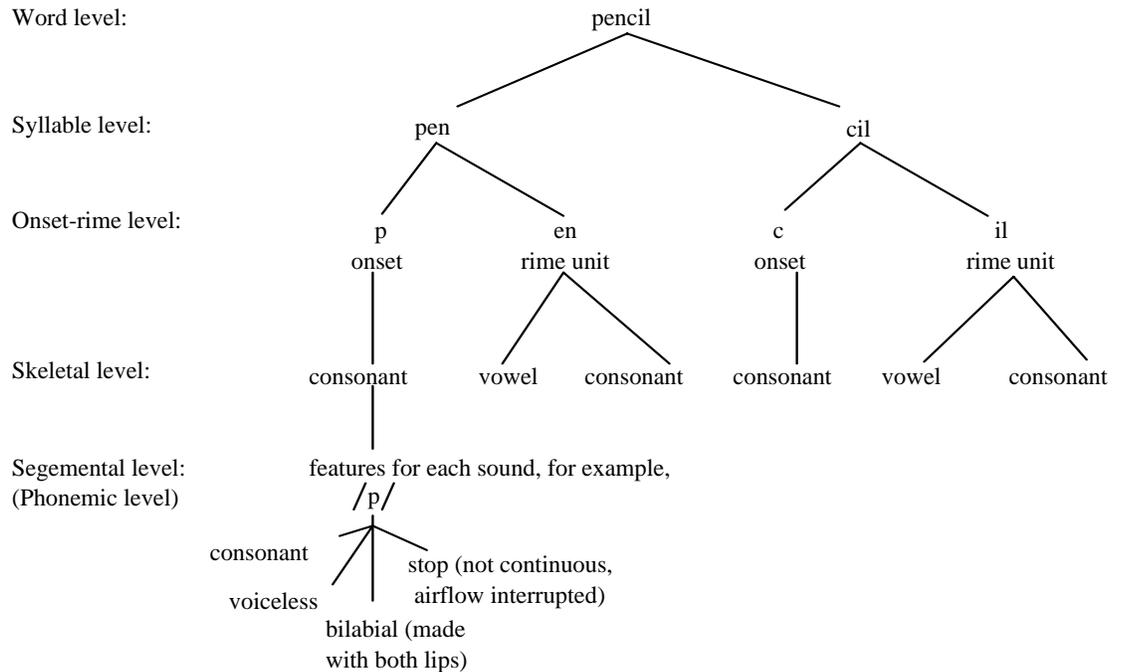


Figure 1.1. Visual representation of the phonological structure of the word *pencil*. Adapted from Gillon (2004, p. 4).

Phonemic awareness tasks include: (1) being able to isolate individual sounds in words ("Tell me the first sound in *cat*." -- /k/), (2) recognizing the common sound in different words ("Tell me the sound that is the same in *car*, *cat*, and *cap*." -- /k/), (3) categorizing words based on phonemes ("Which word does not belong? *car*, *cat*, *pig*" -- *pig*), (4) blending sounds together ("What word is /s/ /p/ /a/ /t/?" -- *spot*), (5) breaking up

a word into sounds ("How many phonemes in the word *school*?" -- four: /s/ /k/ /uw/ /l/), and (6) being able to delete sounds in a word ("What is *spot* without the /s/?" -- *pot*) (Ehri & Nunes, 2002).

The speech and language teacher gave me information to read and told me about the project he had started with the first graders in our school. During the school year, he gradually introduced phonemic awareness lessons in the first grade classrooms, and by the end of the year he was able to report significant gains in phonemic awareness skills. After much discussion and research on my part, I decided to become involved. During the next school year, the speech and language teacher and I planned to implement various phonemic awareness activities in a kindergarten classroom and all the first grade classrooms. Still being fairly new to the topic, I was given the opportunity to informally observe his teaching of a phonemic awareness lesson in a kindergarten classroom. I was impressed with the lesson and how engaged the students were. The only problem was that not all of the students were engaged. My ELLs sat silently watching the other students eagerly participate in the lesson. Why? Were they too shy? Did they not understand the language? I considered the structure and delivery of the lesson, but concluded that because of this teacher's knowledge and experience with phonemic awareness instruction, this most likely was not the main factor. I then began examining my own teaching. What could I do to help these students be better prepared for the lesson? I wondered if they did not understand the vocabulary or if they did not understand the directions. I then spent time with the ELLs in a small group later that day. I taught them the vocabulary used in the lesson. I made sure they understood the

directions. The next day when the speech and language teacher continued his lesson, the ELLs who were previously silent could hardly contain their enthusiasm and participation. This is where my research questions began to take shape. Spending only a small amount of time providing the needed scaffolding enabled my ELLs to eagerly participate. I wondered if continuing to provide this type of scaffolding would make the lessons more accessible to my ELLs and increase their phonemic awareness skills.

Phonemic awareness is often confused with phonics, but it is not synonymous with phonics (Griffith & Olson, 1992). Phonics instruction is a method used to teach children to gain meaning from the basic symbols of alphabetic languages (Adams & Bruck, 1995). For example, when a child is asked to identify the first letter in the word *bike* (i.e.,), s/he is being asked to focus on a phonics skill. Phonics is the written component (i.e., is the first letter in the word *bike*), while phonemic awareness refers to spoken language (i.e., /b/ is the first sound in the word *bike*). Phonics instruction draws attention to word parts and helps children move from the sounds to the written letters. It is a tool that enables children to "attack" words to figure out the pronunciation (Beck & Juel, 1995). Being able to "attack" words is a necessary part of decoding. Juel, Griffith, and Gough (1986) found that phonemic awareness is a necessary precursor to effective phonics instruction.

Phonemic awareness is also different from phonological awareness. Phonological awareness refers to the awareness of many levels, not just phonemic awareness, but also larger spoken units like syllables and onsets and rimes (Ehri & Nunes, 2002). The onset consists of the consonant sounds found before the vowel in the

beginning part of a word. A word may or may not have an onset. For instance, the word *at* does not contain an onset. The rime is the vowel and any consonant sounds that come after it. For example, in the word *cat*, /k/ is the onset and / t/ is the rime. Phonemic awareness specifically refers to the ability to hear and manipulate sounds in spoken language. Phonological awareness is the broader term which encompasses all units of speech from the word level, to the syllable level, down to the phonemic level (McCormick, Throneburg, & Smitley, 2002). Phonemic awareness is a set of skills that falls under the umbrella of phonological awareness and refers specifically to individual sounds (phonemes). In most of the literature, the term “phonemic awareness” is used to include all units of sound. For the purposes of this paper, the term “phonemic awareness” will be used as it is in most literature, even when some skills may better fall under the term “phonological awareness.”

Research has shown that phonemic awareness is extremely important. Students who lack phonemic awareness may struggle with learning to read and may even be at risk for developing reading difficulties. The research showing the importance of phonemic awareness in reading acquisition is impressive. There is strong evidence that phonemic awareness is one of the predictors of future reading ability (Adams & Bruck, 1995; Ehri & Nunes, 2002; Ehri et al., 2001; McCormick et al., 2002; Share, Jorm, Maclean, & Matthews, 1984; Snow, Burns, & Griffin, 1998; Stanovich, Cunningham, & Cramer, 1984). In fact, Adams and Bruck (1995) state that a child's level of phonemic awareness when beginning school is held to be the strongest single predictor of the success s/he will experience in learning to read. Many children may have difficulty developing phonemic

awareness because of the abstract nature of thinking about words broken up into units of sound with no meaning on their own (Griffith & Olson, 1992). The sounds are difficult to distinguish because there are no definable boundaries between them in spoken language. This difficulty may also be an issue for ELLs. Ehri and Nunes (2002) remind teachers of ELLs that students may misunderstand some English phonemes because of their pre-programmed categorization of phonemes in their first language, and this pre-programmed first language categorization may conflict with the categorization of English phonemes.

Krashen (2003) provides an alternative view. Phonemic awareness often develops without training as a result of the development of reading skills, and the most effective way to learn to read is by actually spending time reading (Krashen, 2003). Gunderson (1991) cautions against implementation of reading instruction until ELLs have developed some oral English proficiency, making the point that some level of oral English proficiency is needed in order to learn to read in English.

As will be discussed in the literature review, phonemic awareness instruction is only a part of a balanced literacy program. Although phonemic awareness is not the only factor in learning to read, it is an extremely powerful way to provide students with the needed skills to help them become proficient readers. Learning to read can be extremely difficult for many children, especially those who have limited English language proficiency and those from low socioeconomic environments. This describes the children in my classroom. I want to do whatever I can for these children to help them have a

successful future. There is not a single minute to waste, and I want to make sure that I am using every minute effectively in my classroom.

When children are able to develop strong reading skills early in their education, they find reading more enjoyable and less time consuming and are more likely to spend time reading (Adams & Bruck, 1995). Juel's (1988) research shows a "vicious cycle" in which children who do not develop good reading skills early on begin to dislike reading, and, as a result, they read less and less. Consequently, this contributes to their becoming continually poorer readers. In order to thrive in school and in life, it is essential for children to be successful readers (Lane & Pullen, 2004). If children are unable to read in our society, they often miss out on opportunities for a fulfilling life academically, financially, professionally, and personally ("Learning to read," 1995). The opportunities are slimmer - practically non-existent - for children from low-income and disadvantaged families. These are the children who are less likely to come to school having had exposure to print and valuable oral conversational skills and have not, at times, had access to language that plays with language, such as nursery rhymes ("Learning to read," 1995).

The "Matthew effect" is an idea developed by Stanovich (1986) that describes how good readers continue to be good readers and poor readers continue to be poor readers. For example, children who are good readers will have positive experiences with reading, will gain vocabulary through reading, will understand more of what they are reading, and will continue to read more and become continually better readers. Poor readers may have negative experiences with reading, may not enjoy reading, may not

develop vocabulary through reading, and therefore, will not grow as quickly in their reading ability. In his research, Stanovich (1986) finds evidence that phonological awareness tasks are more closely related to reading acquisition than other measures, such as IQ testing or reading readiness tests. Having these skills early in the development of reading acquisition is very important because without them, the "Matthew effect" may come into play. This is certainly possible, but I think it is too negative to think "once a poor reader, always a poor reader." I want to believe that every child can become a good reader, perhaps with varying degrees of intervention. As a teacher, I can provide the necessary interventions to help students enjoy reading and become better readers.

As an English as a Second Language (ESL) teacher in an inner-city neighborhood elementary school in the Midwest, each day is spent striving to inspire students to learn. Many of my kindergarten ELLs are struggling to learn the English language concurrently with academic content and skills. I have noticed that many lack phonemic awareness skills, which may put them at a disadvantage. There is a greater chance that they will struggle with becoming proficient readers. I want to give students the best tools to develop skills that will make them excellent readers in order to be successful. This is where my research questions become important. How do I provide scaffolding to teach phonemic awareness? As a result of providing the necessary scaffolding and making phonemic awareness instruction accessible, will my ELLs increase their phonemic awareness skills, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams, Foorman, Lundberg, & Beeler, 1998)? Yopp and Yopp (2000) state that phonemic awareness instruction needs to be child appropriate,

deliberate and purposeful, and an important part of a literacy program. I am going to strive to implement scaffolding to make phonemic awareness training effective, purposeful, and child-centered. My hope is that other teachers will be able to use my research in order to most effectively provide scaffolding for ELLs during phonemic awareness instruction.

In the next chapter, reading models, the importance of phonemic awareness in learning to read, and information on the stages of phonemic awareness will be explored through a review of the literature. Assessment of phonemic awareness and implementation of phonemic awareness instruction will also be highlighted. The instructional tool of scaffolding will be defined and the topic of scaffolding and ELLs will be explored. Implications for implementation of scaffolding will be discussed, along with the interaction of scaffolding and phonemic awareness instruction.

Chapter three will discuss various aspects of the research study including the setting, participants, research methodology, as well as data collection information. The results of the assessment, and information about the assessment procedure and instruction will be presented in chapter four. Chapter five offers reflections, implications and conclusions of the study, as well as limitations and recommendations for future study.

CHAPTER TWO: LITERATURE REVIEW

Introduction

How do I effectively provide scaffolding to teach phonemic awareness? As a result of providing the necessary scaffolding and making phonemic awareness instruction accessible, will my ELLs increase their phonemic awareness skills, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998)? This review of the literature will discuss reading models, the importance of phonemic awareness in learning to read, especially for ELLs, and provide information on the stages of phonemic awareness. It will also highlight the topics of assessment of phonemic awareness and implementation of phonemic awareness instruction. The instructional tool of scaffolding will be defined and the topic of scaffolding and ELLs will be explored. Implications for implementation of scaffolding will be discussed, along with discussing the interaction between scaffolding and phonemic awareness instruction.

Models of Reading and Reading Instruction

The process of how reading occurs has been heavily debated (Cowen, 2003; Pressley, 1998), and three main models of reading have emerged. Teachers use these models of reading to make instructional decisions regarding the teaching of reading (Gunderson, 1991; Reutzel & Cooter, 1996). The three models of reading, i.e., bottom-up, top-down, and interactive, will be defined and approaches to instruction will be described for each model.

The bottom-up model focuses on the print in the text. The letters are put together to make words, the words are made into sentences, the sentences are put together into paragraphs, and finally, meaning is gained from the text. In essence, this is referred to as going from part-to-whole (Reutzel & Cooter, 1996). The focus of this approach is the text itself and the process of decoding the text.

Teachers who focus on this model of reading make phonics instruction a large part of the curriculum. It is believed that once decoding is mastered, the focus can then turn to comprehension. Phonemic awareness instruction fits into the bottom-up approach because of the focus on sounds and putting the sounds together to make words, which is part of the decoding process.

On the other end of the spectrum, the top-down approach focuses on the background knowledge the reader brings to the text and the meaning engendered through this knowledge (Reutzel & Cooter, 1996). The focus is on the meaning, not necessarily the print in the text, and the process is viewed as whole-to-part.

In this model of reading instruction, teachers present students with authentic literature while teaching reading and writing, teaching specific skills only on an as needed basis when they come up in the context of reading or writing (Pressley, 1998). The instruction is focused on meaning and comprehension, and it is believed that students develop decoding skills while practicing reading and writing. Whole language instruction is often practiced in classrooms where teachers focus on the top-down approach. This approach is often practiced in ESL classrooms because the background knowledge of the students may exceed their linguistic skills and vocabulary in English.

As researchers looked more deeply into the reading process, it became apparent that neither one of these approaches, top-down or bottom-up, sufficiently explained the intricacy of the process of reading, and that a combination of the approaches was the most beneficial (Reutzel & Cooter, 1996). This combination is often called the interactive model, which focuses on combining the strengths of the bottom-up and top-down models. Eskey and Grabe (1988) point out that the interactive model is the most appropriate for second language readers because the development of both bottom-up and top-down skills and strategies is important for successful reading comprehension.

Teachers who strongly believe in the interactive reading model promote balanced literacy when making instructional decisions regarding the teaching of reading. The heart of balanced literacy is teaching students to read and write by providing them with genuine reading and writing experiences, including shared, guided, interactive, and independent reading and writing (Reutzel & Cooter, 1996). The focus is on creating a balance between whole language and phonics or skills-based instruction. Cowen (2003) describes multiple facets of a balanced reading program, including providing students with authentic literature with ample opportunities to read, incorporating a phonics program, engaging students in supportive decoding and comprehension strategies, and ongoing assessment of the students. Phonemic awareness is one facet of a balanced reading program (Cowen, 2003). Balanced literacy is important because it is believed that students who are deficient in decoding skills - a possible risk of the whole language approach - will struggle, and students who have not been provided with authentic

literature - a possible risk of phonics or skills-based instruction - may also struggle (Pressley, 1998).

The Importance of Phonemic Awareness in Reading

As defined in the introduction, phonemic awareness is the ability to hear and manipulate sounds in spoken language. Research involving the topic of phonemic awareness and its interaction with reading has become increasingly prevalent in the last two to three decades. The research has shown that there is a powerful correlation between phonemic awareness and success in learning to read (Yopp, 1992). Being able to hear the sounds of the language and to connect the sounds to the letters helps students to decode the print (Beck & Juel, 1995). If students are able to connect the sounds to the letters quickly and effortlessly, they are more able to direct their attention to the meaning of the text (Adams & Bruck, 1995; Kozminsky & Kozminsky, 1995). When students can direct their attention to the meaning of the text, reading becomes pleasurable and they will be more likely to read, which further promotes their reading ability (Stanovich, 1993/1994). Phonemic awareness is very important at the beginning phases of reading (Cunningham, 1990).

There is solid evidence that phonemic awareness is one of the predictors of future reading ability (Adams & Bruck, 1995; Ehri & Nunes, 2002; Ehri et al., 2001; Lane & Pullen, 2004; McCormick et al., 2002; Share et al., 1984; Snow et al., 1998; Stanovich et al., 1984). Adams and Bruck (1995) state that when students enter school, their level of phonemic awareness may be the most compelling predictor of achievement of learning to read and may determine their success. Phonemic awareness as a predictor of future

reading ability has been shown to be more compelling than many other measures such as IQ scores, age, or language proficiency (Griffith & Olson, 1992; Juel et al., 1986; Stahl & Murray, 1994; Stanovich, 1986)

Although the relationship between phonemic awareness and reading is well established and documented, it is not yet fully understood which occurs first and how they impact each other (Stahl & Murray, 1994). In a 1992 article, Yopp asserts that the relationship between phonemic awareness and reading acquisition can be construed in multiple ways. These include (1) phonemic awareness as an outcome of learning to read, (2) phonemic awareness as a required skill needed before learning to read, and (3) phonemic awareness fostering learning to read and learning to read fostering the development of phonemic awareness, or “reciprocal causation.”

One way researchers view the interaction between phonemic awareness and reading includes phonemic awareness only as an outcome of learning to read. It has been found that higher levels of phonemic awareness (e.g., omitting phonemes from words - "What is *spot* without the /s/?" -- *pot*) may be a result of rising reading ability (Byrne & Fielding-Barnsley, 1993; Durgunoglu, Nagy, & Hancin-Bhatt, 1993; Griffith & Olson, 1992; Krashen, 2003). This view, although recognized, does not have much of a research base. Bus and van IJzendoorn (1999) articulate the need to consider phonemic awareness as a consequence of reading acquisition, while describing stronger evidence for other views. The results of Cunningham's (1990) study directly contradict the suggestion that phonemic awareness is only a result of learning to read because it was shown that prior knowledge had an effect on reading acquisition.

Other researchers have come to the conclusion that phonemic awareness is a prerequisite for learning to read. This view is very widely held and has a strong research base. Phonemic awareness is first developed, and then learning to read becomes possible (Lundberg, Frost, & Petersen, 1988). The process of learning to read is very intricate and requires many competencies, one of which is phonemic awareness (Cunningham, 1990). Phonemic awareness is the foundation for reading acquisition (Stanovich, 1993/1994) and children must have some level of phonemic awareness to profit from reading instruction (Yopp, 1992). Children need phonemic awareness to blend sounds, to segment words into phonemes and match them up to the correct letters, and to make connections between the phonemes and the letters (Ehri & Nunes, 2002), thereby facilitating the decoding process (Kozminsky & Kozminsky, 1995; Olson & Griffith, 1993). Phonemic awareness is vital in learning to read and write (Ehri & Nunes, 2002; Griffith & Olson, 1992).

A third view of researchers is that phonemic awareness fosters learning to read and learning to read fosters the development of phonemic awareness, or “reciprocal causation.” Perfetti, Beck, Bell, and Hughes (1987) designed a longitudinal study to discover how phonemic awareness develops while first graders received beginning reading instruction. They found evidence that some level of phonemic awareness is needed to begin learning to read, although the developed reading skills then enable the child to deepen their phonemic awareness skills. The study clearly indicated some level of reciprocity. Ehri and Nunes (2002) agree with Perfetti et al. (1987) that phonemic awareness and learning to read are reciprocal. In their 1984 article, Stanovich et al. draw

attention to “reciprocal causation,” but clearly give credence to the causal role of phonemic awareness in reading acquisition. “Reciprocal causation” is envisioned as the most probable view although there is not enough research for it to be substantiated (Bus & van IJzendoorn, 1999; Cunningham, 1990).

Although there are multiple ways to view the interaction between phonemic awareness and reading acquisition, research clearly draws a positive link between the two. A number of studies report this positive link between phonemic awareness and reading (e.g., Ball & Blachman, 1991; Blachman, Ball, Black, & Tangel, 1994; Byrne & Fielding-Barnsley, 1991, 1993, 1995; Juel, 1988; Kozminsky & Kozminsky, 1995; Lundberg et al., 1988). The studies include children from many parts of the world (e.g., Denmark, New Zealand, United States), with diverse language backgrounds (e.g., English, Danish, Swedish, Spanish), of various ages (e.g., preschool through fourth grade), and from various socioeconomic levels (e.g., low, middle, and high socioeconomic status). The research has been experimental and longitudinal and concludes that there is a positive link between phonemic awareness and reading acquisition.

One well-known study was done by Lundberg et al. (1988) with Danish preschool children. Daily phonological training was implemented for eight months. The long-term effects of the training on the children's reading and spelling was then assessed in first and second grades. Lundberg et al. (1988) reported evidence of a positive connection between phonological awareness and reading all the way through second grade and that it is possible for phonological awareness to be developed before reading instruction.

Blachman et al. (1994) studied the efficacy of phoneme awareness instruction in low-income, inner-city kindergarten classrooms. The teachers and teaching assistants from ten kindergarten classrooms were trained in implementing the instruction. The instruction consisted of 15 to 20 minute daily lessons for 11 weeks. The study found that the instruction had a positive effect on the reading skills of the students who received the instruction, even though the amount of instruction was fairly brief (ten to 13 hours). This study provides evidence that phoneme awareness instruction can be effectively implemented in classrooms and can have a positive effect on emergent reading skills (Blachman et al., 1994).

Another widely recognized study was conducted by Byrne and Fielding-Barnsley (1991, 1993, 1995). They designed a phonemic awareness program and trained 64 preschoolers for 12 weeks. The students were then reassessed every year for the next three years. Positive results occurred. Byrne and Fielding-Barnsley (1995) reported that as preschoolers the experimental group showed superior growth in phonemic awareness and that they were able to transfer the skills they had learned when they were given a phoneme-identity test. After kindergarten, the experimental group was considerably more advanced in its pseudoword decoding, although not on real word identification. After grades one and two, the experimental group was still showing more advanced decoding skills as shown on a pseudoword test, along with reading and listening comprehension tests. Kozminsky and Kozminsky (1995) completed a similar study. They provided phonological awareness training to kindergartners and assessed their skills

at the end of the kindergarten, first and third grade years. They also found a positive causal relationship between phonemic awareness and reading.

In a 1988 article, Juel reported on a longitudinal study focusing on the literacy development of 54 children from first to fourth grades. This study is particularly interesting because the children in the study were largely from minority populations and of lower socioeconomic status. Juel (1988) found that the poor readers in first grade were still poor readers in fourth grade, and that good readers in first grade were still good readers in fourth grade. The study concluded that the children who were poor readers began first grade with little phonemic awareness. The lack of phonemic awareness skills contributed to early difficulty in the development of decoding skills. Phonemic awareness appears to be the base from which decoding skills grow. The children with little phonemic awareness became poor readers and had poor decoding skills. By the end of fourth grade, they were only able to decode at a skill level achieved in second grade by the good readers in the study. It is extremely important for children to have early success with reading. As this study shows, early poor decoding skills may lead to many problems with literacy development, and the need for early remediation is imperative. Juel's (1988) research shows a vicious cycle wherein children who do not develop good reading skills early on begin to dislike reading, which leads to their reading less and less, and this lack of practice contributes to their becoming progressively poorer readers. This cycle illustrates the "Matthew effect."

As discussed in the introduction, the "Matthew effect" is an idea developed by Stanovich (1986) that describes how good readers continue to be good readers and poor

readers continue to be poor readers. Children who are good readers will have positive experiences with reading, will gain vocabulary through reading, will understand more of what they are reading, and will continue to read more and become even better readers. Poor readers may have negative experiences with reading, may not enjoy reading, may not develop vocabulary through reading, and therefore, will not grow as quickly in their reading ability. Having phonemic awareness skills early in the development of reading acquisition is very important because without them, the "Matthew effect" may come into play.

The amount of research in the area of phonemic awareness and reading is overwhelming, and numerous meta-analysis studies have been done to provide synthesis of the data. Some of the studies are affirmative (e.g., Bus & van IJzendoorn, 1999; Ehri et al., 2001), and some of the studies bring to light some limitations and cautions (e.g., Krashen, 2003; Troia, 1999).

After reviewing the available research, Bus and van IJzendoorn (1999) concluded that although phonological awareness is critical for learning to read, it is not the only important factor, thus showing the need for a balanced approach to reading instruction. Ehri et al. (2001) highlight evidence that the benefits of phonemic awareness instruction were replicated numerous times showing that phonemic awareness instruction is effective.

Krashen (2003) reviewed many of the same research studies, but was unconvinced regarding their relevance. He noted that many of the research studies combined phonemic awareness and phonics, so the results should not be reported for

phonemic awareness on its own. Phonemic awareness is a skill that can increase on its own, without specific instruction (Krashen, 2003).

Troia (1999) brought attention to some limitations and flaws in the available research. An example of a flaw is nonrandom assignment to groups. Troia (1999) makes a necessary assertion to be cautious regarding the quality of research in order to make informed decisions for instructional practices.

Phonemic Awareness and English Language Learners

Although there is a vast amount of research on phonemic awareness, primarily monolingual children are included in the studies. The research with monolingual children is fairly influential in pinpointing phonemic awareness as a critical piece in beginning reading, however, the effects of cross-language transfer of phonemic awareness have not been established (Durgunoglu et al., 1993). There is a limited amount of research on phonemic awareness and ELLs, although some research does exist. Whether or not phonemic awareness instruction is appropriate for ELLs has support on both sides. Some see phonemic awareness instruction as positive and necessary (Durgunoglu et al., 1993; Giambo & McKinney, 2004; Gibbons, 2002) while others prefer to focus on other aspects of language learning (Freeman & Freeman, 2004; Krashen, 2003).

Durgunoglu et al. (1993) investigated the development of phonemic awareness skills in Spanish-speaking students and how phonemic awareness is linked to word recognition in English. They studied 31 Spanish-speaking first graders who were more proficient in Spanish than in English as determined by their pre-LAS scores. The pre-

LAS is an oral proficiency assessment tool used for children between the ages of four and six, and it can be used to measure oral English and Spanish proficiency (Duncan & De Avila, 1986). The students had extremely limited English reading proficiency. The results replicated the positive correlation between phonemic awareness and reading found in the studies with monolingual children, only this time Spanish-speaking children with limited English proficiency were the subjects (Durgunoglu et al., 1993). It was also established that children who did well on phonological awareness tests in Spanish were more apt to be able to read words in English. Developing phonemic awareness in the first language will most likely help with word recognition in second-language learning and it is important to build on the phonemic awareness skills in the first language because the skills will transfer to the second language (Durgunoglu et al., 1993).

Giambo and McKinney (2004) also studied Spanish-speaking students. They wanted to find out whether phonological awareness instruction advanced oral English proficiency better than a program of story reading. Another point they wanted to explore was the extent to which the change in oral English proficiency could be linked to the development of phonological awareness. The level of oral English proficiency was measured by the IPT-I, Oral, Grades K-6, English, Form C (Ballard, Dalton, & Tighe, 1991), an oral language proficiency assessment. Eighty Spanish-speaking kindergarten ELLs were involved. Forty received phonological awareness instruction and 40 received story-reading instruction, in small group settings of five students. The students completed approximately 60 lessons of 20-25 minutes each. The outcome of the study indicated that phonological awareness instruction advanced oral English proficiency for

Spanish-speaking kindergarten students, but due to gains by the story-reading group, both phonological awareness instruction and story reading were indicated for a balanced reading program to promote increased oral English acquisition (Giambo & McKinney, 2004).

Gibbons (2002) supports phonemic awareness instruction when it is implemented from whole to part, moving from meaning to form, familiar to unfamiliar. Phonemic awareness instruction must be embedded in meaningful learning opportunities. While children learn a language, they must learn about it and through it (Gibbons, 2002).

Freeman and Freeman (2004) have recently written a book highlighting what teachers need to know about how to teach reading, ESL, spelling, phonics, and grammar. They draw attention to two views of reading and how phonemic awareness is defined in each view. The first view is the word recognition view which suggests that readers learn phonics rules and then use those rules to re-code written language into meaningful oral language. Phonemic awareness is seen as a skill that helps students learn the phonics rules. This view posits phonemic awareness as a skill that can be explicitly taught. The other view is the sociolinguistic view of reading, which focuses on making meaning. From this perspective, phonemic awareness is seen as subconscious, making it possible for readers to construct meaning. Phonemic awareness is developed naturally through being read to and through reading.

The Freemans (2004) direct attention to linguistic considerations for ELLs. The most important consideration is that there is a variation of phonemes across languages. Each language has its own set of phonemes. The Freemans (2004) agree with Ehri and

Nunes (2002), that students who are learning English as a second language may misunderstand some English phonemes because of their pre-programmed categorization of phonemes in their first language, and this pre-programmed first language categorization may conflict with the categorization of English phonemes.

The Freemans (2004) bring up some important concerns about phonemic awareness instruction. They notice the tendency to de-contextualize phonemic awareness activities which makes them very abstract for ELLs. The activities need to be in context through the use of language games, rhymes, and songs. They also observe that many phonemic awareness activities and assessments use nonsense words. This is not appropriate for ELLs because the nonsense words may be a source of confusion if they are trying to make meaning out of them.

Like Krashen (2003), the Freemans (2000, 2004) do not see the research on phonemic awareness as particularly compelling. The Freemans (2000, 2004) note that time spent on activities to teach phonemic awareness is time taken away from reading experiences, such as shared or guided reading, that promote acquisition. They believe that because a child is in the process of learning English, phonemic awareness activities are not an appropriate use of time.

Stages of Phonemic Awareness Instruction

Although there is considerable agreement regarding the positive link between phonemic awareness and learning to read, and the importance of phonemic awareness instruction in a balanced literacy program, there is some disagreement regarding the order in which to teach phonemic awareness skills. It is generally agreed that children are able

to understand larger units of sound before they are able to comprehend smaller units of sound, but there is some disagreement as to the exact order of the stages (Adams, 1990; Adams et al., 1998; Fredericks, 2001; McCormick et al., 2002; O'Connor, Notari-Syverson, & Vadasy, 1998; Yopp & Yopp, 2000).

Adams (1990) lists five stages of phonemic awareness. The first stage includes developing an ear for the sounds heard in oral language. This includes discriminating pairs of rhyming words. The second stage involves rhyme and alliteration and looking for similarities and differences in how words sound (i.e., noticing sounds that are the same at the beginning, middle, or end of words). Next, the children develop skills to blend sounds and break words into syllables. In the fourth stage, the children are able to segment words into phonemes and to pronounce each phoneme. Finally, in the fifth stage, children are able to manipulate phonemes further and can now add, delete, or move phonemes to create new words.

Adams et al. (1998) describe seven stages of phonemic awareness, which begin with instruction in listening skills, familiarizing the children with the need to listen actively before other, more advanced, skills are taught. During the second stage, the children move on to the skill of rhyming where they begin to listen to language and find out it has meaning, as well as beginning to find out that the alphabet plays a part in language. The third stage includes introducing the children to the concept that language is made up of words and sentences. When the children have this base, they are introduced to the fourth stage -- listening for syllables. The fifth stage is directing the children to listen for the initial phoneme in a word, followed by listening for the final

phoneme in a word. When all of the preceding stages have been mastered, Adams et al. (1998) recommend moving on to the sixth stage, dividing words into phonemes using manipulatives such as blocks, cubes, etc. The last stage (seventh), according to Adams et al. (1998), is introducing letters and spellings, leading the children to transfer the skills they have worked on into reading.

Fredericks (2001) identifies five stages and begins with a focus on rhyming and alliteration to develop needed auditory discrimination skills. The children are directed to listen for similarities. In the second stage, the children begin listening for sound units within words. They begin noticing onsets and rimes as well as syllables. At this stage children are expected to understand the concept of blending. Stage three includes highlighting the position of sounds within a word. The children are not yet exposed to the names of the letters, just the sounds. This stage is dependent on the children knowing the positional words (such as beginning, first, middle, end, last, etc.). According to Fredericks (2001), stage four is the most challenging. It includes separating the word into parts (phonemes). Stage five, the last stage, includes sound manipulation. Children are encouraged to "play" with sounds and rearrange, delete, add, and move sounds around to create new words. Fredericks (2001) notes that although he lists the stages in a certain order, it is not necessary for children to master one stage before moving on to another.

In the curricula of games and small group lessons developed by O'Connor et al. (1998), children are first introduced to rhyming words. Then they move on to discriminating syllables. Noticing or generating word with the same initial sound, alliteration is the next step. Children are then directed toward activities where they

practice sound blending. Finally, children practice saying all of the phonemes in a word, segmenting it.

Yopp and Yopp (2000) devised a sequence of four stages. The basic sequence first focuses on rhyme. Second, the activities focus on syllable units. Third, the focus is on onset and rime. Last, the activities direct the children to focus on phonemes. During each stage, children are asked to match, isolate, substitute, blend, segment, and delete sounds. This is the main difference between Yopp and Yopp (2000) and the others. Children practice the same skills through each stage instead of waiting until the upper level stages to begin matching, isolating, substituting, blending, segmenting, and deleting sounds.

Griffith and Olson (1992) separate the stages into three levels, beginning, intermediate, and advanced. The beginning level is the easiest, and children are asked to distinguish rhymes as well as create words that rhyme. Breaking words into syllables and blending phonemes are skills found in the intermediate level. The most advanced level includes segmenting and manipulating phonemes. Similarly, McCormick et al. (2002) emphasize increasing awareness of words, rhymes, and syllables, moving to initial and final sounds in words, and finally focusing on phonemes within words.

Four levels are posited by Lane and Pullen (2004). The first is the word level. This level is seen as the base of all the other skills. Students then move on to the syllable level, as syllables may be the easiest units to differentiate within a word. The third level is the onset-rime level, where students work with onsets and rimes and also practice rhyming skills. The final level is the phoneme level.

The five stages provided by Adams (1990) are prevalent in the research of phonemic awareness. Many researchers cite Adams' stages in their own research (e.g., Stahl & Murray, 1994; Wasik, 2001). It is apparent that Adams made some changes between the first leveling of the stages in 1990 and the more recent leveling in 1998. More work has been completed in the field, and this is evident in the changes of the stages. Adams goes from five to seven stages. Also, training with written letters was added. As will be discussed later, phonemic awareness training programs where written letters and words are included may be more effective (Ball & Blachman, 1991; Blachman et al., 1994; Bus & van IJzendoorn, 1999; Byrne & Fielding-Barnsley, 1991; Ehri et al., 2001; Gillon, 2004; McCormick et al., 2002). In Adams' later work (1998) more groundwork is laid, e.g., focusing on listening, breaking sentences into words, etc., before moving on to the more difficult tasks.

It is apparent that the stages, regardless of how many are included, are leveled from easiest to most difficult and seem to begin with rhyming. Adams et al. (1998) provide the most detailed sequence of stages and include a focus on listening skills. Yopp and Yopp (2000) agree with Fredericks (2001), that it is not necessary to master one stage in order to move on to the next. It is essential to provide children with opportunities to practice many different skills. Wasik (2001) points out that children are at their own unique level of development and it is important not to expect certain skills to be mastered right away.

Assessment of Phonemic Awareness

The level of phonemic awareness a student has attained may be challenging to measure (Stahl & Murray, 1994). Researchers have used a number of different ways to assess the level of phonemic awareness, although long-term effects are unclear. Children can be assessed directly through a phonemic awareness assessment or indirectly through observation and game-like tasks. Any assessment that occurs should be brief and enjoyable in order to minimize frustration and ensure accurate results (Griffith & Olson, 1992).

There are both formal and informal phonemic awareness assessments. A standardized test is an example of a more formal assessment. One common standardized phonemic awareness assessment is the Test of Phonological Awareness (TOPA) developed by Torgesen and Bryant (1994).

Griffith and Olson (1992) include four short, more informal types of assessments to analyze phonemic awareness. Their assessments look at rhyming, blending sounds into words, isolating sounds, segmenting phonemes, and deleting phonemes. They include a formula for teachers to create their own assessments for each phonemic awareness skill, as well as information on how to place importance on the results.

In 1988, Yopp compared the reliability and validity of ten phonemic awareness assessments. Yopp (1988) tested 100 fluent English-speaking kindergartners and found that rhyming and blending phonemes are easier phonemic awareness tasks, and that phoneme deletion is the most difficult task. The key finding of the study was the importance of combining two tests, rather than relying on one test. This would give a

well-rounded view of the phonemic awareness skills of the student and would provide more reliable and valid data.

In a 1995 article, Yopp provides teachers with a quick tool for assessing their students' ability to segment words into phonemes. Students are given a word that they are directed to orally segment into phonemes. For example, the student is given the word *dog* and responds with the correct phoneme segmentation - /d/ / / /g/. The test takes five to ten minutes and each student is tested individually. Students who are able to segment all or almost all of the 22 words on the Yopp-Singer Test of Phoneme Segmentation show good phonemic awareness, while students who are unable to segment the words display poor phonemic awareness and may experience greater difficulty learning to read and write (Yopp, 1995). The Yopp-Singer Test of Phoneme Segmentation was developed for use with English speaking children. No data are available on the use of this test with ELLs.

Another less formal assessment tool that is available is found in *Phonemic awareness in young children: A classroom curriculum* created by Adams et al. (1998). This assessment can be used to identify children who may struggle with phonemic awareness. There are six subtests: Detecting rhymes, counting syllables, matching initial sounds, counting phonemes, comparing word lengths, and representing phonemes with letters. The test takes about 30 minutes and children should be tested in small groups of two to three, no more than six, for optimal results.

Similar to Adams et al. (1998), McCormick et al. (2002) provide an informal assessment included with their curriculum, *A sound start: Phonemic awareness lessons*

for reading success. Three subtests are included in this assessment. They are (1) rhyming judgment and production, (2) blending syllables, onset-rime, and phonemes, and (3) initial and final sound identification. McCormick et al. (2002) also provide three optional subtests. These subtests evaluate sound-letter skills, the ability to read words, and the ability to write words. Adding the optional subtests will give a clearer picture of the phonemic awareness skills. This test should be given individually, and a pre- and post-test are recommended.

Lane and Pullen (2004) assert that assessment of phonological awareness should be used in three ways. First, it should be used to screen students to identify those who may need more assistance. Second, phonological awareness assessment should be used to diagnose specific skills where more training is needed. Third, this type of assessment should be used to monitor the response of the students to the phonological awareness instruction.

Assessment of phonemic awareness is important so teachers will know what skills their students have already attained and, based on the results of the assessment, can make appropriate instructional decisions (Adams et al., 1998). Identifying students who lack phonemic awareness skills and providing them with the needed training may help students overcome many of the reading difficulties they might otherwise encounter (Stanovich, 1986).

Implementation of Phonemic Awareness Instruction

The role of phonemic awareness in reading implies that phonemic awareness instruction is an essential part of a balanced literacy program. There is much research

regarding when phonemic awareness instruction should begin, how the instruction should be implemented, and how much time phonemic awareness instruction requires.

Because phonemic awareness is the base from which decoding skills and other reading strategy skills grow, many researchers suggest that phonemic awareness instruction should begin as early as possible. They maintain that this type of instruction is clearly appropriate, in fact, essential, during the early years to better prepare students for reading instruction (Bus & van IJzendoorn, 1999; Griffith & Olson, 1992; Juel, 1988; Juel et al., 1986; Kozminsky & Kozminsky, 1995; Lundberg et al., 1988; Stanovich, 1986). The study done by Juel (1988) shows the importance of instruction before children are already failing to read. Without this key instruction, the "vicious cycle" of the "Matthew effect" is set into place. Juel et al. (1986) see phonemic awareness training as an essential precursor to reading instruction. The study by Lundberg et al. (1988) asserts that the evidence suggests that it is possible for phonological awareness to be developed before reading instruction occurs. Not only is it possible for young children to develop these skills, but providing the training at a young age has a prolonged effect on reading comprehension skills (Kozminsky & Kozminsky, 1995). Ehri et al. (2001) suggest that phonemic awareness instruction may be most influential for children in preschool and kindergarten, and that the impact may become less significant after first grade.

There are many ways to implement phonemic awareness instruction. It can be taught explicitly as well as implicitly. Cunningham (1990) studied two forms of instruction in phonemic awareness: a "skill and drill" approach in which children were

expected to implicitly gain knowledge, and a more explicit approach in which children were taught how to use the skills. It was found that the kindergartners in the study made progress with both forms of instruction. However, for first-grade children, the form of instruction was more important. They clearly benefited from instruction that explicitly taught them detailed strategies for using phonemic awareness skills when decoding. They also profited from instruction that accentuated the connection between phonemic awareness and reading. These types of instruction were more valuable than skill and drill activities taught in isolation (Cunningham, 1990). Lundberg et al. (1988) agree with Cunningham (1990) and found that training needed to be explicit.

There are many resources to aid in the implementation of phonemic awareness instruction. There are many books that contain entire programs to teach phonemic awareness (e.g., Adams et al., 1998; Lane & Pullen, 2004; McCormick et al., 2002). In addition, books providing various lessons and activities that can be implemented through curriculum already in place are also available (e.g., Fitzpatrick, 1997; Fitzpatrick, 2002; Fredericks, 2001).

Phonemic awareness instruction can successfully be implemented in the classroom (Blachman et al., 1994; Ehri et al., 2001; Griffith & Olson, 1992; McCormick et al., 2002; Olson & Griffith, 1993; Wasik, 2001; Yopp, 1992; Yopp & Yopp, 2000). The study by Blachman et al. (1994) puts forth evidence that better reading skills can be developed through phonemic awareness instruction in the classroom. Phonemic awareness instruction is most effective when it is provided to students in small groups, focusing on one or two phonemic awareness skills at a time (Ehri et al., 2001).

In a 1992 article, Griffith and Olson discuss ways to incorporate phonemic awareness instruction into everyday teaching. Activities can include exposing children to a variety of literature, especially literature that plays with the sounds of the language. Literature with rhyming, alliteration, or assonance can help children learn to play with language. Repeating readings can also enhance the ability of the children to hear sounds in spoken language. Griffith and Olson (1992) point out that phonemic awareness instruction needs to be surrounded by real reading and writing opportunities in order to be useful.

Olson and Griffith (1993) add information regarding classroom activities that promote phonological awareness. Through these activities, children can develop the ability to hear and manipulate parts of words in a more enjoyable manner. These activities include focusing on rhymes by reading rhymes and poetry daily, and playing games with rhyming words. Reading aloud is another effective classroom activity. During read-alouds, children are exposed to the knowledge, skills, and vocabulary they will need to become successful readers (Olson & Griffith, 1993). Trelease (2001), in his book, *The read-aloud handbook*, also clearly articulates the colossal importance of read-alouds in the development of children and their emerging reading ability. Olson and Griffith (1993) also outline the importance of providing activities to help children segment sentences into words and words into syllables through word games; of including training in onset and rimes; and finally, of providing instruction in segmenting and blending phonemes. They stress the need to include countless opportunities for children to read and write.

Wasik's 2001 article offers similar recommendations for the implementation of phonemic awareness instruction. The article plainly states the importance of avoiding phonemic awareness drilling, instead drawing focus to integrating instruction in a more developmentally appropriate manner that is fun and motivating. Wasik (2001), like Olson and Griffith (1993) and Trelease (2001), promotes storybook reading as a powerful strategy to develop phonemic awareness skills and future reading skills. Nursery rhymes, jingles, poems, and finger plays can also be used to introduce the rhythm of language. Creating natural opportunities for children to write and making connections across the curriculum with the ultimate goal of helping children attend to sounds and integrate new information into what they already know will facilitate the development of phonemic awareness (Wasik, 2001).

In order to put phonemic awareness instruction into practice, teachers need to isolate a task to focus on, and then locate a developmentally appropriate activity that is playful and game-like to give children the opportunity to practice the task (Yopp, 1992). In the same article, Yopp provides examples of playful and game-like activities that can be implemented to practice phonemic awareness tasks. For example, to practice sound isolation activities, children can sing about a sound to the tune of "Old MacDonald Had a Farm" ("What's the sound that starts these words: *Pencil, pig, and park?* /p/ is the sound that starts these words: *Pencil, pig, and park.* With a /p/, /p/ here, and a /p/, /p/ there. Here a /p/, there a /p/, everywhere a /p/, /p/. /p/ is the sound that starts these words: *Pencil, pig, and park.*"). Yopp (1992) also includes general suggestions for the implementation of phonemic awareness activities. The activities should be fun and

playful, conducted in social group settings, and should encourage children to be curious about language. Individual differences need to be accounted for, and the activities should always be entertaining and more informal. All phonemic awareness activities are supposed to be supplementary in nature and only a part of a balanced literacy curriculum (Yopp, 1992).

Yopp and Yopp (2000) state that phonemic awareness instruction needs to be child appropriate, deliberate and purposeful, and an important part of a literacy program. The activities need to focus attention on the sound units of spoken language. Phonemic awareness activities can be easily integrated into a curriculum because they are playful and come from music, games, and literature that are already being used with children. Yopp and Yopp (2000) also include many playful and fun activities that focus on rhymes, syllables, onset and rimes, and phonemes. They advise teachers to be observant and keep an eye on students who may be having difficulty in order to provide additional support. The importance of focusing on a balanced curriculum with phonemic awareness instruction as one piece of the program is emphasized.

It has been shown that combining knowledge of the alphabet letters to phonemic awareness instruction is especially effective (Ball & Blachman, 1991; Blachman et al., 1994; Bus & van IJzendoorn, 1999; Byrne & Fielding-Barnsley, 1991; Ehri et al., 2001; Gillon, 2004; McCormick et al., 2002). Ball and Blachman (1991) studied 90 kindergarten students and concluded that combining training in phonemic awareness along with letter-name and letter-sound instruction positively influenced early reading and spelling acquisition.

Gillon (2004) emphasizes the need for guidelines when planning phonological awareness intervention. Linking phonological awareness intervention with explicit letter-sound training is important. The focus of intervention should be on the phoneme level. Instruction can focus on one skill at a time or a multiple-skill approach. When children experience difficulty with the instruction, individual or small group training may be required. Being flexible with the instruction is important. Also, it is apparent that some general language instruction (i.e., a variety of written and spoken language experiences) is needed in order for phonological awareness instruction to be beneficial.

Research varies as per the amount of time needed for phonemic awareness instruction. A number of studies concluded that it did not matter if more or less time was spent on instruction, the children still made progress. Some studies included daily instruction, and some included instruction two or three times a week. The time varied between ten and 30 minutes for each session. As very few studies included sessions lasting more than 30 minutes, that should be the upper limit (Ehri et al., 2001). Programs of longer duration, however, may be more effective (Bus & van IJzendoorn, 1999), although it has been shown that significant progress can be made, even if the duration is brief (Blachman et al., 1994; Ehri et al., 2001). Yopp and Yopp (2000) maintain that high quality instruction that is reactive to the needs of the students is more important than the amount of time. Therefore, the time allotted for instruction should be dependent on decisions made by the teacher after careful assessment and observation of the children.

Scaffolding in Instruction

In *Scaffolding: Teaching and learning in language and literacy education*, Hammond and Gibbons (2001) look at the term “scaffolding” both literally and metaphorically. The term “scaffolding” literally refers to a structure that is temporarily placed around a new building while it is being constructed. Without the scaffolding, the building would not be able to stand on its own. When the new building is able to support itself, the scaffolding is then removed. Metaphorically, “scaffolding” is the temporary support that teachers provide learners as they expand their knowledge and gain new skills. When the learner has a secure understanding of the new knowledge or skill, teachers are then able to remove the scaffolding. This is a continual process that will move the learner to higher levels of knowledge.

Wood, Bruner, and Ross (1976) were the first to introduce the metaphor of scaffolding to illustrate the practices observed during parent and child interaction (as cited in Gibbons, 2002). The idea of scaffolding is drawn from the work of Vygotsky and his model of the zone of proximal development (ZPD). According to Vygotsky (1978), the zone of proximal development is “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86). Scaffolding can occur between a teacher and a student or a student and other students. When scaffolding is provided within the zone of proximal development, learning is facilitated. The zone of proximal development varies for each child and is constantly changing.

There are many important attributes of scaffolding. Raphael and Hiebert (1996) stress that scaffolding must be supportive (assist learners to do what they could not do independently), adjustable (support can be added or lessened), and temporary (support will eventually not be needed). In a 1997 study, Roehler and Cantlon investigated the role of scaffolding in two classrooms, one multi-age suburban classroom and one suburban ESL classroom. They found that the initiation and removal of scaffolding varied to meet the needs of individual students. Some children need high levels of support while others require nominal assistance, even within the same task (O'Connor et al., 1998). The teacher must ascertain the amount of support each student requires, provide the necessary scaffolding, and slowly remove it as the student becomes more independent. Effective scaffolding must have a balance of support and challenge (Roehler & Cantlon, 1997). Mariani (1997) explores this concept further (as cited in Hammond & Gibbons, 2001). When there is high challenge with little support, students may become frustrated and will probably fail. Low challenge with little support may result in lack of enthusiasm and learning is less likely to occur. Similarly, low challenge with high support will make the task too effortless and little learning is likely. However, when there is high challenge and high support, learning becomes more probable. The teacher must be aware of the intensity of the task as well as the proficiency of the student in order to determine the need for scaffolding (O'Connor et al., 1998).

Berk and Winsler (1995) include many attributes of effective scaffolding. The attributes are (1) joint problem solving, (2) intersubjectivity, (3) warmth and responsiveness, (4) maintenance of appropriate ZPD, and (5) promotion of self-

regulation. Joint problem solving includes participating in an appealing and meaningful activity where reaching a goal is a joint effort. Intersubjectivity is the common ground where the participants have a shared understanding of the goal. Warmth and responsiveness is when the adult is responsive to the needs of the child and is supportive and encouraging. Keeping the child in the appropriate ZPD is the most important goal of scaffolding because that is where the greatest learning occurs. This is accomplished when there is a balance between challenge and support. The last attribute, promotion of self-regulation, entails removing the scaffolding and allowing the child to work independently.

Effective scaffolding occurs when the adult and child work together within the child's ZPD with a shared understanding of the goal, in an atmosphere that is supportive, encouraging, and which allows the child to become independent (Berk & Winsler, 1995). The possibilities for beneficial and exciting learning are unlimited when teachers are able to provide effective scaffolding that is adjustable, flexible, and dependent on the needs of the children, and when the scaffolding is gradually removed, the children are able to become independent (Elicker, 1995).

Scaffolding and English Language Learners

Scaffolding can be beneficial, especially in classrooms that contain students with a wide range of backgrounds and capabilities (Graves, Graves, & Braaten, 1996). ELLs inevitably come from a wide range of backgrounds and capabilities. When investigating scaffolding and ELLs, it is important to remember that the focus is not on simplifying the

task but on providing scaffolding that is responsive to the needs of the students (Gibbons, 2002).

Boyle and Peregoy (1990) examined the research and observed in classrooms in order to find the most successful reading and writing activities for ELLs. They apply the term “literacy scaffolds” to express the kind of scaffolding provided to students to make reading and writing more accessible. “Literacy scaffolds” use whole texts, repetitive and predictable speech and language patterns, offer a model for written language patterns, encourage students to construct written language slightly above what they could do on their own, and, finally, are temporary and can be gradually reduced as the student becomes more independent (Boyle & Peregoy, 1990).

Implementation of Scaffolding Techniques

Even before providing scaffolding, teachers must verify whether or not students are cognitively ready to learn the new knowledge or skill (Rosenshine & Meister, 1992). Effective scaffolding requires teachers to identify each student’s zone of proximal development and then to provide instruction with the appropriate amount of scaffolding (Roehler & Cantlon, 1997). There are many types of scaffolding strategies and various ways they can be implemented.

While investigating the role of scaffolding, Roehler and Cantlon (1997) identified five types of scaffolding. First, they found that teachers provided explanations to enhance what was being learned, and when, why, and how the new knowledge could be used. Second, teachers invited the students to participate. Third, the teachers verified and clarified the students’ emerging knowledge. Fourth, modeling (e.g., think-aloud and

talk-aloud) was provided by the teachers. The teachers modeled the thought processes as well as explicitly talking through the steps during an activity. The fifth type of scaffolding was to invite students to become active learners by having them offer ideas to help complete the activity. In summary, the teachers invited the students to participate and contribute ideas, while modeling, providing explanations, verifying and clarifying information when needed, and ultimately reducing the scaffolding as students were able to take on more responsibility (Roehler & Cantlon, 1997).

O'Connor et al. (1998) describe six scaffolding strategies. See Appendix A for a continuum of these scaffolding strategies. The first is open-ended questioning where the adult asks questions to elicit a response from the child. The adult guides the child to describe things or events, to make predictions and to plan for the future, to make explanations, and to relate new knowledge to previous experience. The second strategy is to provide feedback that is encouraging, evaluative, clarifying, acknowledging, informational, and interpretive. Third, the adult provides cognitive structuring which assists in problem solving and reasoning. This includes explicitly teaching rules and helping the child become aware of relationships between objects and events. It also includes helping the child to sequence events and identify irregularities. The fourth strategy is called holding in memory. In this strategy, the adult takes some of the responsibility for memory so that the child can concentrate on the activity. Adults can restate the goals, summarize what has already happened, and offer significant information that will be helpful to the child. Fifth, the adult can regulate the task by matching interests and experiences, rearranging an activity to make it more simple and concrete, or

reducing the number of choices. Sixth, the adult provides direct instruction through modeling, suggesting strategies, questioning the child, asking for a particular action, or completing the activity together. O'Connor et al. (1998) offer two guidelines for choosing suitable strategies. The first is to be responsive to the child's needs. The second is to begin with the lowest level of support and gradually provide more support if needed. Often a variety of strategies are used during a single task.

Rosenshine and Meister (1992) notice that although students are expected to attain higher levels of thinking, instruction of these skills is often insufficient. After looking at studies in which students learned higher-level cognitive strategies, they concluded that instructors who were successful in teaching the strategies used scaffolding. Rosenshine and Meister (1992) then presented how the instructors used scaffolding effectively. First, the new cognitive strategy was presented through modeling and think-alouds. Second, the instructors developed guided practice that began on an easier level and then became progressively more difficult. Students were given cue cards and the instructor provided ideas, suggestions, and hints when students struggled. Possible student errors were also anticipated by the instructor so additional support could be provided. Third, the instructors varied the context for practice, including teacher-guided, reciprocal teaching, where students and the instructor share the teaching role, and small groups. Fourth, the instructors provided direct feedback as well as self-checking procedures and access to expert work. Fifth, student responsibility was increased while the scaffolding was gradually diminished. Finally, students were provided with

independent practice time as a whole class, then individually with other student or teacher assistance, and ultimately, completely independently.

In a classroom setting, one-on-one interaction between a teacher and a student may not be possible or appropriate for the situation. Applebee and Langer (1983) bring “instructional scaffolding” to light because it can occur through the structure of the lessons and activities, in the interactions between the teacher and an individual student, or within a larger group of students in a classroom setting. The teacher must predict the obstacles the new task may pose, select scaffolding strategies to meet the needs of the students, and then structure the lesson such that the scaffolding strategies will be the most helpful for the students (Applebee & Langer, 1983). Applebee and Langer (1983) propose five criteria for teachers to determine if the scaffolding strategies are appropriate. These include intentionality, appropriateness, structure, collaboration, and internalization. Intentionality means that each task has a purpose that moves the student towards independence. Appropriateness means that the scaffolding is provided in the student’s zone of proximal development. The structure of the modeling and questioning activities are appropriately sequenced. The role of the teacher is one of collaboration. Finally, the students internalize the new knowledge or skill and the scaffolding is progressively removed.

In order to effectively implement scaffolding, a teacher must predict where students may have difficulties and then structure the lesson using appropriate strategies (Applebee & Langer, 1983). Useful strategies include asking open-ended questions, providing supportive feedback, regulating the task, and offering instruction through

modeling (O'Connor et al., 1998). In order to select appropriate scaffolding strategies, Applebee and Langer (1983) provide five criteria to keep in mind including intentionality, appropriateness, structure, collaboration, and internalization. When presenting new knowledge to students, the teacher should present the knowledge through modeling, provide guided practice, vary the contexts for practice, provide encouraging feedback, and gradually diminish scaffolding as students become increasingly more responsible and independent (Rosenshine & Meister, 1992).

Research offers cautions related to scaffolding when it is used as an instructional tool. The idea of scaffolding and how it should be implemented varies across cultures and should be an important consideration (Berk & Winsler, 1995). The concept of scaffolding was originally developed based on observation of parent-child relationships, and it is difficult to transfer this to a teacher-student relationship in the context of a classroom (Maybin, Mercer, & Stierer, 1992). Searle (1984) displays concern when scaffolding is applied in classroom teaching and students are unable to initiate their own learning or influence the instruction. "Too often, the teacher is the builder and the child is expected to accept and occupy a predetermined structure" (Searle, 1984, p. 482). Scaffolding will only be effective if students are able to take control (Searle, 1984).

Scaffolding and Phonemic Awareness

Scaffolding has been used as an instructional tool to teach in many areas related to literacy instruction, including reading (e.g., Graves et al., 1996), writing (e.g., Wollman-Bonilla & Werchadlo, 1999), oral language (e.g., Hadaway, Vardell, & Young, 2001),

and even when choosing appropriate texts for students (e.g., Brown, 1999/2000).

Research on scaffolding of phonemic awareness activities is particularly limited.

A 2000 study by Ukrainetz, Cooney, Dyer, Kysar, and Harris demonstrated that scaffolding could be successfully implemented in phonemic awareness instruction. They studied the effects of teaching phonemic awareness instruction that was integrated into shared reading and writing. Children, some of whom had lower levels of literacy, participated in seven weeks of small group “sound talks” where books were read, writing activities occurred, and students talked about sound segmentation and deletion as well as first and last sounds and rhyming, all with appropriate scaffolding. Physical scaffolding was provided through the use of printed letters and manipulatives. Social scaffolding was provided through teacher modeling and imitation. The amount of scaffolding varied depending on the needs of the students. Ukrainetz et al. (2000) found that all students in the treatment group showed improvement on all four tasks (initial/final sounds, segmentation, deletion), even students who had lower levels of literacy at the beginning of the study. It is apparent that effectively using scaffolding strategies may facilitate phonemic awareness instruction (Ukrainetz et al., 2000).

Conclusion

A review of the literature identified reading models, discussed the importance of phonemic awareness in learning to read, drawn attention to phonemic awareness and ELLs, and provided information on the stages of phonemic awareness. It also highlighted the topics of assessment of phonemic awareness and implementation of phonemic awareness instruction. Scaffolding was defined and the topic of scaffolding

and ELLs was explored. Implementation of scaffolding was discussed, along with the interaction of scaffolding and phonemic awareness instruction.

Although there is some controversy regarding whether or not phonemic awareness instruction is appropriate for ELLs, research clearly shows that enhancing a student's phonemic awareness skills has a positive effect on their reading acquisition. It is apparent that when phonemic awareness instruction is embedded in meaningful learning opportunities, ELLs can benefit. Scaffolding, when used as an instructional tool, can be particularly effective for ELLs. Therefore, implementing scaffolding strategies to teach phonemic awareness skills may increase the effectiveness of this type of instruction for ELLs.

Many of the kindergarten ELLs I work with at school seem to lack phonemic awareness. This may put them at a disadvantage. There is a greater chance that they will struggle with becoming proficient readers. I want to give students the best chance to develop skills that will make them excellent readers so they will be successful. Phonemic awareness is a valuable piece of a balanced literacy program. How do I provide scaffolding to teach phonemic awareness? As a result of providing the necessary scaffolding and making phonemic awareness instruction accessible, will my ELLs increase their phonemic awareness skills, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998)? Yopp and Yopp (2000) state that phonemic awareness instruction needs to be child appropriate, deliberate and purposeful, and an important part of a literacy program. I am going to

strive to implement scaffolding to make phonemic awareness training effective, purposeful, and child-centered for all my students.

In the next chapter, I will discuss the setting and the participants of my research study. I will also provide information on research methodology and data collection techniques. Analysis of the data will also be discussed.

CHAPTER THREE: METHODS

Introduction and Research Question

Research has shown that phonemic awareness is extremely important for emergent readers. Students who lack phonemic awareness may struggle with learning to read and even be at risk for developing reading difficulties. I have noticed that many of the kindergarten ELLs I work with seem to lack phonemic awareness. This may put them at a disadvantage. There is a greater chance that they will struggle with becoming proficient readers. I want to give students the best chance to develop skills that will make them excellent readers so they will be successful in school and in life. How do I provide scaffolding to teach phonemic awareness? If I provide the necessary scaffolding and make phonemic awareness instruction accessible, will my ELLs increase their phonemic awareness skills, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998)? Yopp and Yopp (2000) state that phonemic awareness instruction needs to be child appropriate, deliberate and purposeful, and an important part of a literacy program. The focus of this study was on implementing scaffolding to make phonemic awareness training effective, purposeful, and child-centered. My hope is that other teachers will be able to use my research to effectively provide scaffolding for ELLs during phonemic awareness instruction.

Setting

The setting of this study was an inner-city neighborhood school in the Midwest. There were 438 students attending the school, 52% male and 48% female. Of the 438 students, approximately 83% received free or reduced lunch. The ethnic background of

the student population was approximately 37% Asian, 34% African American, 16% Hispanic, 13% Caucasian, and .01% American Indian. Approximately 47% of students at the school received ESL services. One focus of the school was balanced literacy. ESL teachers and classroom teachers collaborated to provide students with a unified curriculum.

Participants

The participants in the study included 11 kindergarten students - nine Hmong, one Hispanic, and one Cambodian student. There were 59 kindergarten students in the school, 49% male, 51% female. The ethnic background of the kindergarten students was approximately 42% Asian, 33% African American, 15% Hispanic, 10% Caucasian, and .02% American Indian. Of the 59 kindergarten students in the school, 53% were in the ESL program.

The 11 participants were chosen because they were ELLs who exhibited weak phonemic awareness skills and were available to meet in a small group every afternoon. All of the participants were born in the United States, and were five or six years old during the research study. Students were divided into two small groups, five students in the first group, six students in the second group. The students were taught by me, half-hour sessions daily for six weeks. They were pulled out of their kindergarten classroom and met in the ESL classroom.

The 11 participants varied in their English language proficiency as determined by the MN-SOLOM and pre-LAS. The MN-SOLOM is a state mandated, informal rating tool for oral language proficiency. See Appendix B. On the MN-SOLOM, five of the

participants were at level one at the beginning of the school year, four participants were at level two, and two participants were at level three. See Table 3.1 for student data.

Table 3.1
Oral English Proficiency of Students

Student	MN-SOLOM Score	Fall pre-LAS Score	Spring pre-LAS Score
1	14	38	73
2	6	0	41
3	20	70	96
4	14	48	86
5	13	56	62
6	14	51	72
7	21	76	92
8	6	3	57
9	6	2	58
10	14	56	87
11	7	19	66

As stated in the literature review, the pre-LAS is an oral proficiency assessment tool used for children between the ages of four and six and can be used to measure oral English (Duncan & De Avila, 1998). See Table 3.2 for interpretation of the pre-LAS2000 results.

Table 3.2
Interpretation of Oral Language Component of the pre-LAS2000 Scores

Total Score (5- and 6-year-olds)	Proficiency Level	Interpretation of Numerical Levels
0-61	1	Non-English Speaker
62-71	2	Limited English Speaker
72-81	3	Limited English Speaker
82-91	4	Fluent English Speaker
92-100	5	Fluent English Speaker

On the fall pre-LAS, nine of the participants were at level one, one participant was at level two, and one participant was at level three. On the spring pre-LAS, three of the participants were at level one, two participants were at level two, two participants were at level three, two participants were at level four, and two participants were at level five. See Table 3.1 for student data.

Research Methodology

In order to investigate my research question, I chose to do teacher-research, a form of action research. Teacher-research occurs when teachers question their work as a teacher and strive to strengthen their teaching ability to ultimately benefit the students. Freeman (1998), in his book *Doing teacher research: From inquiry to understanding*, explains what teacher-research is and how it can help teachers consider their work from a different point of view. Freeman (1998) describes six elements of a teacher-research cycle. The six elements are inquiry, question/puzzle, data collection, data analysis, understandings, and publishing -- making public. Inquiry is questioning why something is occurring, or not occurring, in the classroom. The question/puzzle element is putting the line of inquiry into a researchable question. Data collection is the actual gathering of information or data. Data analysis is taking the data apart and reassembling it to answer the question/puzzle. Understandings include looking at the new information gained through the research, which may lead to more questions and further work. The last element, publishing, is sharing the understandings publicly. The six elements combine to create a cyclical process that can be entered into at any point. I used this teacher-research cycle to drive my research.

I began the teacher-research cycle at the inquiry phase. I noticed that many of the kindergarten ELLs I worked with at school lacked phonemic awareness. I wondered how I could provide scaffolding to teach phonemic awareness. I wanted to find out if providing the necessary scaffolding and making phonemic awareness instruction accessible would increase the phonemic awareness skills of my ELLs, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998). These wonderings turned into my question/puzzle and became the focus of my research study. The phases of data collection, data analysis, and understandings are discussed later in this chapter and in subsequent chapters.

Data Collection

Students

In order to determine if providing the necessary scaffolding and making phonemic awareness training accessible increases the phonemic awareness skills of my ELLs, I needed to test their phonemic awareness skills at the beginning of the research study, as well as at the end of the six-week period. Although there are many phonemic awareness assessments to choose from, I decided to use the assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998). I chose this assessment because it can be used to assess students at intervals of one to two months to determine growth. Also, I used the curriculum in the book in parts of my lessons during the six-week research study, so using the assessment provided in the book made sense. The assessment contains six subtests including detecting rhymes, counting syllables, matching initial sounds, counting phonemes, comparing word lengths, and representing phonemes

with letters. The maximum score on each subtest was a five, with a total maximum score of 30 on the assessment. The students also completed an additional assessment to provide further information regarding their ability to represent phonemes with letters. The advanced phoneme test had a maximum score of 17.

Teacher

In order to provide effective and appropriate scaffolding, I needed to research what scaffolding is and how it is best implemented. Then I planned my lessons with the research in mind. I collected my lesson plans and periodically looked them over to make sure I was providing effective and appropriate scaffolding.

During the six weeks, I wrote in a journal using a form that I created. See Appendix C for an example of the journal. I tried to document my thoughts and feelings about my lessons, as well as any questions, concerns, or ideas that came up during the process. I also included things that went well during the lesson, as well as things that needed improvement. I wrote in the journal every day. I reread the journal occasionally and looked for recurring questions or comments. Also, I used the journal to guide my lesson plans.

Instruction

The 11 kindergarten ELLs were divided into two groups, one with five students, and the other with six students, and seen for 30 minutes daily for two months. The instructional program consisted of 31 lessons. The lessons and activities included eight units, loosely based on the curriculum by Adams et al. (1998):

- (1) Listening skills
- (2) Identifying and creating rhymes
- (3) Segmenting words into syllables
- (4) Identifying beginning (initial) sounds
- (5) Identifying middle (medial) sounds
- (6) Identifying ending (final) sounds
- (7) Identifying sound positions
- (8) Segmenting and blending phonemes

The listening unit consisted of four lessons. The students began to develop active listening skills while actively listening to sounds around them, as well as following oral directions.

The rhyming unit consisted of ten lessons. The students began to attend to the sounds within words by hearing and appreciating rhyming words. They also began to both identify and create words that rhyme.

The syllable unit consisted of four lessons. The students began to see that words can be divided into smaller parts. They practiced dividing words into syllables, and counting syllables within words.

The beginning (initial) sound unit consisted of six lessons. The students began to focus on the phonemes found within words while they focused on the beginning (initial) sound in words.

The middle (medial) sound unit consisted of one lesson. The students continued to focus on the phoneme level of words while attending specifically to the middle (medial) sounds in words.

The ending (final) sound unit consisted of one lesson. The students again continued to focus on the phoneme level of words, this time attending to the ending (final) sound in words.

The sound position unit consisted of one lesson. The students were directed to the position of sounds within words.

The phoneme unit consisted of four lessons. The students began to focus on the phonemes in words by segmenting, blending, and counting phonemes.

The eight units were developed using multiple resources, primarily *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998) and *Getting ready to read: Independent phonemic awareness centers for emergent readers* (Fitzpatrick, 2002).

Each lesson was divided into three parts. The beginning of each lesson included an anticipatory set to engage the students. Then the students were engaged in activities to practice one or more phonemic awareness skills. Almost every lesson included reading a story. At the end of every lesson there was a closure activity.

The instruction centered on teaching phonemic awareness skills by effectively using scaffolding premised on the model of instructional scaffolding developed by Applebee and Langer (1983). The units were created to provide scaffolding in the structure of the lessons and activities. I tried to predict the obstacles each lesson or

activity might pose and then selected scaffolding strategies that would meet the needs of the students. I structured the lessons to avoid many obstacles, and integrated scaffolding strategies when obstacles could not be avoided. I chose to use many of the scaffolding strategies developed by O'Connor et al. (1998). See Appendix A for a more detailed look at the continuum of scaffolding strategies. I used the five criteria created by Applebee and Langer (1983) to determine if the scaffolding strategies I chose were appropriate. First, I made sure that each activity had a purpose (intentionality) and that each activity moved the student closer to being independent. Second, I thought about the zone of proximal development of each student and tried to make sure the lesson and the scaffolding were appropriate. Third, I spent time making sure that every lesson in each unit was structured in a sequential manner. Fourth, I made sure to initially focus on collaboration, rather than expecting students to be immediately independent. Finally, I ensured that the amount of scaffolding progressively decreased allowing the students to internalize the new skills.

Instructional planning also reflected the research Rosenshine and Meister (1992) completed regarding the use of scaffolding to teach higher levels of thinking. I presented each new skill by modeling and/or thinking aloud. I provided the students with guided practice. The guided practice began with high levels of scaffolding and collaboration and scaffolding was slowly removed as students became more independent. I provided the students with concrete cues and ideas, suggestions, and hints when they began to struggle. I provided extra support when students made errors. I began to turn the activities over to the students when appropriate. I had the students work in small groups

and in pairs. The students were able to practice the skills as a whole group, in small groups, and independently, while scaffolding was slowly added or removed, depending on the students' needs. The scaffolding was kept in place until the students were able to take total responsibility and become independent in the activity.

Data Analysis

I collected the data from the phonemic awareness pre-test and post-test to determine where the students needed more instruction. I used this information to guide my lessons. I looked for patterns in the data. I also looked for growth in the students' phonemic awareness. I analyzed the lesson plans and journal entries for themes that could inform my teaching and reveal reflections, implications, and limitations of the study. I also had someone else read the journal entries to identify additional themes. We then met and discussed the recurring themes found in the journal.

Conclusion

This chapter described the setting and participants of the study. It also emphasized research methodology, data collection techniques, and analysis of the data. In the next chapter, I will present the results of my data collection and information on the assessment results, assessment procedure, and instruction information. There will also be a discussion regarding these topics. In the last chapter, I will discuss the reflections, implications, and limitations of the study. I will focus on whether the implemented phonemic awareness instruction was effective, deliberate, and child-centered for ELLs. I will look at all of the data I have collected and try to make recommendations for others

who may want to use scaffolding during implementation of phonemic awareness instruction in their classroom.

CHAPTER FOUR: RESULTS AND DISCUSSION

Introduction

This research study focused on two questions. First, how do I provide scaffolding to teach phonemic awareness? Second, as a result of providing the necessary scaffolding and making phonemic awareness instruction accessible, will my ELLs increase their phonemic awareness skills, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998)? This chapter will present the results of my research on using scaffolding strategies to increase phonemic awareness skills. Assessment procedure, information about the assessment results, and instruction will be emphasized. There will also be a discussion regarding the results of the assessment, assessment procedure, and instruction.

Assessment Procedure

The 11 participants were given a pre-test of phonemic awareness skills in April 2004, using the assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998). The assessment contained six subtests. The subtests included detecting rhymes, counting syllables, matching initial sounds, counting phonemes, comparing word lengths, and representing phonemes with letters. The maximum score on each subtest was a five, with a maximum score of 30 on the assessment. Students also completed an advanced phoneme assessment, which had a maximum score of 17. The test was administered in both small groups and individually to determine which was the most effective testing environment. Students were given the

pre-test in one group of five, one group of three, one group of two, and one student was tested individually.

The 11 participants were given a post-test of phonemic awareness skills at the end of May 2004, after 31 lessons. They were again given the assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998), with the same subtests and a maximum possible score of 30. Students were tested in four small groups of two and one small group of three.

Discussion of Assessment Procedure

The pre-test was administered in both small groups and to individuals to determine which was the most effective testing environment. To determine this, students were tested in one group of five, one group of three, one group of two, and one student was tested individually. The pre-test situation seemed fairly new to the students, regardless of the testing group size. In the mainstream classroom, students participated in Writer's Workshop and used a pencil (or pen) and paper to write every day. Because of this, they were familiar with how to use these materials during the assessment. However, it was apparent that the students had little experience with pencil and paper assessments. They seemed uncertain about what to do, even with explanation, and were hesitant to write their answers, even if they felt they were the correct answers. During the testing of the group of five and the group of three, the students seemed focused on what other students were writing down, instead of focusing on their own test. Many of the students looked to other students to copy instead of trying to find their own answer. Some students even began the assessment before the instructions were given. During the pre-

testing of the group of two, the students did not look to each other for answers. This could be due to the fact that these students were better prepared for the test. However, I would argue that the testing situation, a small group of two, was more conducive to individual work. One student was tested individually and had no chance to look to others for assistance. Although this forced the student to do his own work, it seemed to be less comfortable for the student. Testing in groups of five and three was more chaotic and more difficult to keep the students' attention, and though the students seemed more comfortable, individual students often lost their place or struggled to stay with the group. Some students finished quickly while others took a longer time.

After observing various group sizes, it was apparent that testing in pairs was the ideal situation for this specific assessment. These students seemed the most comfortable, possibly because there was less pressure due to the fact they were not alone, yet not competing for attention either. Also, this group was the most efficient way to test. It was easier to keep students together even if they had differing styles of test-taking. The groups of five and three took much longer to test, perhaps because so much more time was spent on management and on keeping the students on the same part of the assessment.

During the pre-test, it was obvious that the students had some difficulty with the assessment itself. The test was made up of pictures, and students had to connect two pictures with a line. Much to my surprise, some students had difficulty with this. They were able to find the correct answer, but they either did not understand what to do, even after completing practice items, or they physically struggled with making a straight line.

Some students got lost in the sea of pictures and started making lines all over the place, not understanding the idea that one picture from the left connected to one picture on the right. Also, students were asked to make tally marks instead of using numbers when they were counting syllables and phonemes. Although there were practice items, some students were hesitant to use tally marks and focused on the numbers instead.

During the post-test, these difficulties were not evident. First, I developed a marker made from a rectangular-shaped piece of construction paper to help students keep their place in the assessment. Second, I provided the students with test-taking practice to develop the skill of connecting two pictures with a line and making tally marks. This was effective and students did not struggle with these skills during the post-test.

The post-test was given to students in small groups of two because of the evidence provided earlier. One group of three was tested so every student could be a part of a group instead of one student testing individually. The testing went much more smoothly. As stated earlier, the actual test-taking was better. This could be due to a number of factors. First, the students had taken the assessment previously and probably had a better understanding of what to do. Second, the small group testing environment of two to three students provided a more comfortable situation with more teacher attention. Third, students participated in test-taking practice which developed the needed skills. I think the test-taking practice was important because I was no longer testing the students' test-taking abilities, but their phonemic awareness skills.

Assessment Results

Gains were observed in all six sub-tests, as well as on the advanced phoneme assessment. See Table 4.1 for the assessment results.

Table 4.1

Phonemic Awareness Assessment Results (N= 11)

Sub-Tests	Mean Pre-Test Score	Mean Post-Test Score	Gain
Detecting Rhymes	1.55	3.73	2.18
Counting Syllables	3.18	4.82	1.64
Matching Initial Sounds	1.91	4.00	2.09
Counting Phonemes	1.45	2.09	0.64
Comparing Word Lengths	2.09	2.82	0.73
Representing Phonemes with Letters	1.18	2.09	0.91
Total	11.36	19.55	8.19
Advanced Phoneme Assessment	7.18	12.00	4.82

The mean pre-test score including all sub-tests was 11.36 and the mean post-test score including all sub-tests was 19.55, an increase of 8.19. The mean pre-test score for detecting rhymes was 1.55 and the mean post-test score was 3.73, an increase of 2.18, with seven out of 11 participants reaching the maximum score of five. The mean pre-test score for counting syllables was 3.18 and the mean post-test score was 4.82, an increase of 1.64, with nine out of 11 participants reaching the maximum score of five. The mean pre-test score for matching initial sounds was 1.91 and the mean post-test score was 4.00, an increase of 2.09, with eight out of 11 participants reaching the maximum score of five.

The mean pre-test score for counting phonemes was 1.45 and the mean post-test score was 2.09, an increase of .64. The mean pre-test score for comparing word lengths was 2.09 and the mean post-test score was 2.82, an increase of .73, with one out of 11 participants reaching the maximum score of five. The mean pre-test score for representing phonemes with letters was 1.18 and the mean post-test score was 2.09, an increase of .91, with one out of 11 participants reaching the maximum score of five. The mean pre-test score for the advanced phoneme assessment was 7.18 and the mean post-test score was 12, an increase of 4.82, with one out of 11 participants reaching the maximum score of 17.

Discussion of Assessment Results

Results indicate that the participants showed gains in all assessment areas. The greatest gains were made in detecting rhymes and matching initial sounds, the least gains were made in counting phonemes. This is consistent with research findings. Research has shown that detecting rhymes is one of the first phonemic awareness skills to develop. Skills dealing with phonemes are typically more difficult to acquire.

Also, it is important to note that the amount of instruction appears to have had a positive effect on scores. Ten days out of 31 (32%) were spent in the unit on rhyming. Also, rhyming skills were often practiced during other units. The unit on initial sounds lasted for six out of 31 days (19%). These were the two longest units. Therefore, it is apparent that the amount of time spent in instruction was directly proportional to the acquisition of that skill.

It is important to note that the gains on the assessment might also be attributed to increased awareness of test-taking skills. As stated earlier, the students exhibited better test-taking skills during the post-test. It is most likely a combination of better test-taking skills and increased phonemic awareness skills that created the gains shown on the phonemic awareness assessment.

Discussion of Instruction

As reviewed in chapter three, the 11 kindergarten ELLs participated in 31 phonemic awareness lessons. Eight units were covered including listening skills, identifying and creating rhymes, segmenting words into syllables, identifying beginning (initial) sounds, identifying middle (medial) sounds, identifying ending (final) sounds, identifying sound positions, and segmenting and blending phonemes.

The instructional units were developed to focus the students first on larger units of sound and then on smaller units, based on research (Yopp & Yopp, 2000). Research shows that more than one phonemic awareness skill can be developed at the same time (Gillon, 2004). I agree with the importance of focusing on the larger units of sound and then moving on to smaller units of sounds. During my research, the students were more successful with rhyming and segmenting syllables and had more difficulty with phonemes. It is important for students to be successful, and implementing instruction on larger units of sound first aids in this goal, and encourages them to try more difficult skills. As far as the order of presentation of stages, I would prefer a blend of all of the literature I have read. Adams et al. (1998) provide the most detailed sequence of stages. It is apparent that Adams made some changes between her first leveling of the stages in

1990 and the more recent leveling in 1998. This may indicate that more work completed in the field caused her to reassess her initial ordering. Training with written letters was added, most likely because phonemic awareness training programs where written letters and words are included may be more effective. In Adams' later work (1998) I noticed more groundwork being laid, e.g., a focus on listening, breaking sentences into words, etc. I think many children need to focus their attention on the skill of listening, and I agree wholeheartedly with beginning on that level. This provides the scaffolding many children, especially ELLs, need. I agree with Adams et al. (1998) in that I think children need to be trained to listen actively. When reviewing my journal, I noted that students struggled to pay attention in a noisier environment. After directly teaching active listening skills, students no longer had this difficulty. Also, my journal highlighted the importance of active listening skills in order for the students to participate effectively. If children are unable to focus on sounds and to listen attentively, it is impossible for them to attend to specific phonemes. I agree that teaching active listening skills is the place to start, and my journal supported this belief.

All of the literature generally supported the progression of first developing listening skills, then moving on to rhyming. Focusing on rhyming is advantageous because it encourages children to play with language, and children begin to realize that language is fun and exciting. I believe children need to be trained to hear rhymes by explicitly teaching them what rhyming is and how to listen for it. I also think children need to be read to a lot in order to begin to hear rhymes. After the stage of rhyming, I followed the stages sequenced by Adams et al. (1998), although I continued to highlight

portions of each stage while focusing on a particular stage. I agree with Fredericks (2001) and Yopp (2000) that children should be given the chance to practice many of the stages while focusing on one particular stage. My idea is to teach the stages in a cyclical fashion, focusing on one discrete stage but continuing to practice the other stages, providing the children with an introduction and time to practice and master each stage, while at the same time going back and practicing previously taught material to aid in retention of the skills. Also, students will be at a different stage in their unique development of phonemic awareness. Teaching in a cyclical fashion, returning to skills taught previously, will give me the best chance to meet the diverse needs of a whole group of students. In reviewing my journal, it was noted that students really enjoyed practicing previous skills. For example, even though the lesson focus was on segmenting syllables, students often pointed out rhyming words. Students also repeatedly asked to play games from earlier units of study.

The importance of reading aloud to children is clear. Due to substantial research about the effectiveness of read-alouds (Olson & Griffith, 1993; Trelease, 2001), I tried to implement a focus on literature. The literature portion of each lesson was obviously well-liked, and students often begged to hear a story again and again. The focus on read-alouds also provided a context for the phonemic awareness instruction. Providing phonemic awareness instruction in context is valuable for all students, especially ELLs.

Throughout the phonemic awareness instruction, I incorporated many different types of scaffolding. As noted in the literature review, Roehler and Cantlon (1997) identified five types of scaffolding. I tried to include all five types as often as I could in

my lessons. I provided explanations of the skills I taught and tried to explain when, why, and how the skills could be implemented. One of my biggest goals was to encourage the students to participate, even when they were unsure of their ability. I found that all of the students were eager and willing to participate, even when they were uncertain about their skills. During guided practice, I was able to compliment students on the gains they had made, while clarifying the skills they needed to develop. Modeling was a huge part of the instruction. I often thought aloud throughout the lesson. I encouraged the students to assist me when they were able. It seemed every lesson was spent jointly completing an activity, and slowly the responsibility was turned over to the students.

I also tried the scaffolding strategies described by O'Connor et al. (1998). See Appendix A for a review of the strategies. I found all six strategies to be highly effective and easy to integrate. I tried to include open-ended questions to encourage the students to communicate and to become more involved in discussions. I used open-ended questions to find out where the students were proficient and in what areas they needed more assistance. This was an effective strategy because there were no right or wrong answers, and, as a result, all students were able to participate. Students often related our activities and topics to their own personal experiences. I was able to provide feedback in many different ways. I found that if I encouraged the students during an activity, they seemed to become more involved. I discovered that using cognitive structuring to guide the students in their practice helped them to sequence the activities, as well as make connections and recognize relationships between words and sounds. Restating goals, summarizing, and providing reminders helped the students focus on the activity. I was

able to see when students were struggling and to offer assistance when needed. I often found myself regulating tasks by limiting the choices, as well as simplifying activities until students were able to master them. This was particularly effective for my ELLs because I was able to teach the vocabulary first, and students could then focus on the skill, rather than the vocabulary. It was apparent that the students needed a fair amount of direct instruction in order to understand and use the phonemic awareness skills. As stated before, modeling was extremely important, and I noticed that students carefully watched how I completed an activity and would then replicate my actions and thinking when they independently completed the activity.

It was interesting to see that each student needed a different level of scaffolding. Some required a high level, while others needed minimal assistance to complete a task. Although it was difficult, it was possible to provide different levels of scaffolding within the same small group. As stated earlier, Searle (1984) displays concern when scaffolding is applied in classroom teaching and students are unable to initiate their own learning or influence the instruction. During my research, the students were able to control the amount of scaffolding provided. For example, students were able to try activities on their own and could request assistance if needed by saying, "Give me a clue." Also, I made a point to allow students to select activities that interested them as much as possible. Allowing students to take some control is important because scaffolding will only be effective when this happens (Searle, 1984).

Conclusion

Research has shown that phonemic awareness instruction can be beneficial for students and aid in their reading acquisition. Research has also shown that scaffolding, when used as an instructional tool, can be particularly effective in teaching new knowledge and skills, even including higher level thinking skills. I noticed that many of my kindergarten ELLs seemed to lack phonemic awareness skills. During classroom phonemic awareness instruction, my students were often silent and did not participate. I wondered how to best help them. Linking phonemic awareness instruction and scaffolding seemed to be a good fit. After 31 phonemic awareness lessons employing scaffolding techniques, the students made positive gains on a phonemic awareness assessment. Using scaffolding techniques is particularly effective when teaching phonemic awareness skills, as evidenced by the student gains on the assessment.

In the last chapter, I will discuss the reflections, implications, and limitations of the study. I will focus on whether the implemented phonemic awareness instruction was effective, deliberate, and child-centered for ELLs. I will look at all of the data I have collected and try to make recommendations for others who may want to use scaffolding to implement phonemic awareness instruction in their own classrooms.

CHAPTER FIVE: CONCLUSION

Introduction

My research questions addressed the topic of how to provide scaffolding to teach phonemic awareness and, as a result, if providing the necessary scaffolding and making phonemic awareness training accessible would increase my kindergarten ELLs' phonemic awareness skills, as shown by an assessment from *Phonemic awareness in young children: A classroom curriculum* (Adams et al., 1998). Yopp and Yopp (2000) state that phonemic awareness instruction needs to be child appropriate, deliberate and purposeful, and an important part of a literacy program. I wanted to implement scaffolding to make phonemic awareness training effective, purposeful, and child-centered.

As stated in the literature review, research has shown the importance of phonemic awareness instruction within a balanced literacy program. Many types of scaffolding have also been proven to benefit students. As a teacher, I want to provide the best instructional tools and practices. I noticed that many of my kindergarten ELLs were deficient in phonemic awareness skills and were struggling to participate in the mainstream classroom phonemic awareness instruction. In order to best help them acquire phonemic awareness skills, I wondered if scaffolding was the answer. During the research, it was clear that scaffolding techniques and strategies were exceptionally effective with ELLs, and it was possible to effectively provide scaffolding during phonemic awareness instruction. Students were able to made gains in phonemic awareness skills, as shown by pre- and post-testing.

This chapter will include reflections and implications of the research for students and teachers. It will also stress limitations of the study, as well as future research needs.

Reflections

In order for instruction to be effective, it is essential to look at the environment and make changes when needed. It became immediately evident in my study that a quiet area for instruction was extremely important. This is necessary because the students need to be able to concentrate and focus in order to hear sounds clearly. Management of students is also an issue. When students are interrupting and calling out answers, it creates a chaotic atmosphere where only a few speak, and some students may be intimidated. It is important to create an environment that encompasses all learners, regardless of their learning styles. One way to do this is to use management skills to build a risk-free and comfortable setting where students receive assistance appropriate to their needs. This will encourage participation of all students, especially students who may be quieter and more hesitant to participate. Scaffolding techniques, such as open-ended questioning, will also involve more hesitant students.

Playful, game-like activities were the medium of instruction. It was clear that teaching phonemic awareness skills using fun activities and games increased participation and was motivating and exciting. It is important to remember that these games need to be played in the context of meaningful interaction, and not out of context. The intent is to help the students practice the skills and then to transfer them. The activities must be enjoyable in order for the students to make connections. It was also valuable to use familiar games to practice new skills. I noticed that when the students were already

comfortable with the game, they were much more able to focus on practicing the new skill.

Time became a big factor in my study. It seemed time was always running out and students were requesting more time to play the games. Although I felt it was important to include literature and story reading, the story often took time away from the phonemic awareness activities. Also, many phonemic awareness skills were introduced and practiced, but due to the short duration of the study, there was not sufficient time for students to practice and become proficient with the different phonemic awareness skills. It was evident that a slower, more progressive timeline would help students become more proficient.

Modeling was a highly effective scaffolding strategy that was used a great deal during instruction. I found it was effective while introducing a skill, when providing guided practice, as well as when helping students to develop strategies to use new skills independently. Modeling can be used in many different settings, including whole group, small group, and one-on-one. It was fairly simple to vary the amount of modeling needed for each student.

Another scaffolding strategy that worked particularly well in this study was the use of concrete cues. For example, when students were practicing the skill of segmenting syllables, they were provided with a picture of a frog to help them visualize the “hops.” Similarly, when practicing segmenting phonemes, students used a picture of a turtle and moved it slowly as they segmented the word into phonemes. Physically touching their head for the beginning of a word, their waist for the middle of the word, and their toes for

the end of the word, helped students to identify the sounds and their positions more easily. Also, using the alphabet letters and matching them with the alphabet sounds aided many students in making connections.

Although phonemic awareness instruction is beneficial, it is quite clear that it is only a part of the puzzle of learning to read. Other pieces, such as those found in a balanced literacy program, are just as important and should receive equal time.

Implications

There are implications of this study for teachers and students. One main implication of this study is that implementing scaffolding strategies is an effective tool to teach phonemic awareness skills. It is apparent that scaffolding made phonemic awareness instruction more accessible for ELLs. This is evidenced by increased participation of ELLs, as well as growth in phonemic awareness skills, shown by the pre- and post-testing results.

Phonemic awareness instruction is beneficial for ELLs; however, some level of oral English proficiency is probably necessary in order for the instruction to be of assistance. This is due to the fact that phonemic awareness instruction requires some level of vocabulary to participate. Although some vocabulary development may be a prerequisite, I think it is possible for language/vocabulary development to occur during phonemic awareness instruction. It may even lead to increased English language proficiency.

Another implication is that phonemic awareness instruction can be used to teach many social skills needed for students to work together, including taking turns, helping others, etc.

Limitations and Future Study

The largest limitation of my study was that it was unclear whether the phonemic awareness skills developed during the study transferred to reading ability. This was not assessed during my research. During the literature review, it was noted that the transfer of phonemic awareness skills to reading ability is challenging to assess. Future study in this area is necessary.

Another limitation of my study was lack of time. The students were only able to participate in 31 lessons. It is unknown if providing additional lessons to the students throughout the school year would further enhance their phonemic awareness skills. Further study with longer duration of instruction would provide this information.

The study did not investigate the possibility of connecting the instruction to home involvement. In the future, it would be of interest to study the connection between home and school in regards to the development of phonemic awareness skills. It is possible that implementing activities at home will further advance phonemic awareness skills.

Although it is possible that students made gains in their English proficiency, it was not a focus of my study. Additional study is needed to determine if phonemic awareness instruction increases English proficiency.

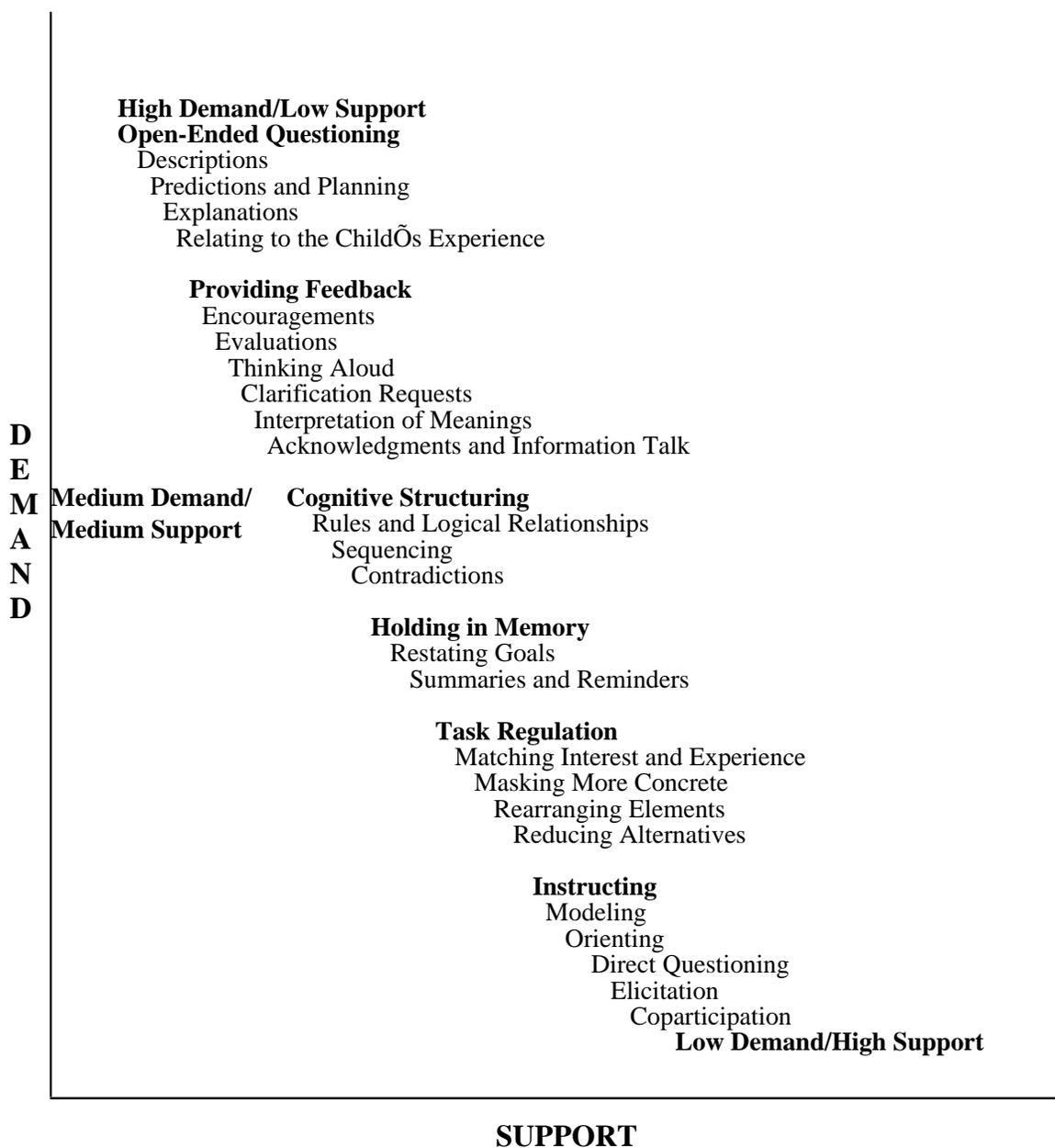
Conclusion

This study has taught me a lot about the topic of phonological/phonemic awareness. I hope to use the knowledge I have gained to guide my own teaching and to provide assistance to my colleagues. The Master's of Education in ESL has given me knowledge that will help me to engage in further collaboration with the speech and language teacher and other colleagues. Collaboration between staff is highly productive and working together can promote great academic gains for students.

One goal of education is to help children learn to read so they can read to learn. This may be a very difficult task for some children and I believe the role of the teacher is to provide the necessary support to help every child attain the skills they need. As a teacher, I have the capability to positively influence my students. I can encourage them to become risk-takers, help build their self-esteem, and provide them with successful experiences. Above all, I hope my students will triumph over the challenges they face and find their greatest joy in life.

APPENDIX A

A Continuum of Scaffolding Strategies



From O'Connor, Notari-Syverson, & Vadasy (1998, p.11)

APPENDIX B

MN-SOLOM

APPENDIX C

Journal Entry Form

Date: _____

Journal Entry

Lesson Information:

Thoughts/Feelings:

Questions:

New ideas:

+	-

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Using Scaffolding to Teach Phonological/Phonemic Awareness Skills to ELLs

Abstract

This study investigated the use of scaffolding to teach phonological/phonemic awareness skills to English Language Learners (ELLs). The purpose of the study was to find out how to effectively provide scaffolding as well as examine whether providing the necessary scaffolding and making phonemic awareness instruction accessible would increase phonemic awareness skills. Research on the importance of phonemic awareness skills in emergent reading ability was highlighted, along with a review of successful scaffolding strategies.

Eleven kindergarten ELLs from varying language backgrounds participated in 31 phonemic awareness lessons taught using scaffolding. A pre- and post-test was used to measure growth in phonemic awareness skills.

Students exhibited growth in a variety of phonemic awareness skills. This study supported the use of scaffolding to teach phonemic awareness skills to ELLs.