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Vocabulary Instruction Practices of Highly Effective Kindergarten Teachers

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Vocabulary Instruction Practices of Highly Effective Kindergarten Teachers

Vocabulary Instruction Practices of Highly Effective Kindergarten Teachers

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ABSTRACT

The purpose of this qualitative study was to investigate vocabulary instruction in kindergarten classrooms by exploring and describing highly effective kindergarten teachers' practices. The fundamental question that guided this study was how do highly effective kindergarten teachers teach vocabulary? The study focused on five areas: teachers' methods, techniques to select vocabulary, assessment approaches, use of technology and whether their practices in the previous four areas were consistent with recent research. The study involved nine highly effective kindergarten teachers from nine elementary schools within one school district in Northwest Arkansas. The sample teachers were selected based on principals' recommendations, using specific criteria including knowledge, responsibility and experience. Data were collected from the participant teachers through observations, interviews and document analysis of their vocabulary lesson plans to gain insight into their practices. The data were analyzed using coding steps in grounded theory and an evaluation checklist developed by the researcher. The findings show that all participant teachers provide adequate time to teach vocabulary directly every day using several methods that are consistent with recent literacy research. The methods include introducing vocabulary in context, providing definition with examples, engaging students with target vocabulary, and expanding repeated exposure to vocabulary. The vocabulary selection is based on teachers' choices and school district recommendations. They assess children's vocabulary development using informal assessments including observation and end-of-unit tests; however, they do not use formal assessments for vocabulary. Most of the participant teachers use technology to visually represent vocabulary. They all provide various software programs for literacy skills; however, only a few teachers reported providing software designed specifically for vocabulary. The discussion of these findings suggests implications for practices and

recommendations for future research to improve vocabulary instruction in kindergarten

classrooms.

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CHAPTER I

INTRODUCTION

Many researchers have indicated that early vocabulary development is a significant

element for promoting reading skills and school success (e.g., Beck, McKeown & Kucan, 2002;

Biemiller & Boote, 2006; Biemiller, 2012; Farstrup & Samuels, 2008; Kaiser, Roberts, &

McLeod, 2011; McKeown, Beck, & Sandora, 2012). The increase of the support for teaching

vocabulary in schools indicates that vocabulary is the most fundamental skill all students need to

be successful and to foster their academic, intellectual and social development. All formal

literacy reports include vocabulary as a key component to enhancing reading achievement. For

example, in 2001 the No Child Left Behind legislation established *The Reading First Initiative* to

provide effective literacy instruction to all primary grade students in the United States. This

legislation defines vocabulary as a fundamental block to teach reading to children (U.S.

Department of Education, 2002a). In 2000, at the request of Congress, a team of literacy experts

and researchers developed the National Reading Panel report (NRP) (National Institute of Child

Health and Human Development [NICHD], 2000). The NRP report concluded that effective

reading programs must include direct instruction of vocabulary in addition to the other literacy

skills including phonemic awareness, phonics, reading fluency, and comprehension strategies

(NICHD, 2000). After the publication of the NRP report, many subsequent literacy studies have

included reference to these five literacy skills, with a particular focus on vocabulary. Also, in the

final report of *Early Reading First*, Jackson and his colleagues (2007) identified vocabulary

development as one of the crucial skills for children's early successful reading. The National

Early Literacy Panel's report (NELP) (2008) found that vocabulary development of young

children had a significant and predictive relationship with later literacy development. Another

important report conducted by Snow, Burns and Griffin (1998) for the National Academy of Sciences emphasizes that early vocabulary knowledge results in early reading achievement and prevents many reading problems. Hence, these reports provide evidence that vocabulary development is a successful component in fostering reading achievement in students from kindergarten to twelfth grades.

According to Biemiller (2005), it is estimated that the vocabulary size for children at the beginning of kindergarten ranges from 2,200 root meanings for children with low vocabularies to 4,700 root meanings for children with high vocabularies. If this vocabulary gap among students continues and educators do not make any effort to increase students' vocabulary size in primary years, it will result in problems in reading and school achievement in their future school career (Beck & McKeown, 2007; Biemiller & Slonim, 2001). To narrow the reading achievement gap among children, vocabulary experts suggest focusing on vocabulary instruction during the first year of school (Beck & McKeown, 2007; Biemiller, 2012; Marulis & Neuman, 2010; McKeown et al., 2012; National Association for the Education of Young Children [NAEYC], 2009).

Although the practices of vocabulary instruction mentioned in the literature hold great potential to enhance vocabulary growth in kindergarten children, such potential can only be realized when it is actually used in an effective way by kindergarten teachers. Thus an understanding of the productive practices to deliver effective vocabulary instruction benefits both kindergarten teachers and children. By focusing on practices used by highly effective teachers in literacy, the ultimate goal of this study is to enhance kindergarten teachers' understanding of the most appropriate and effective practice of vocabulary instruction.

Background of the Study

Vocabulary refers to the knowledge of word meanings (Biemiller & Boote, 2006). There are four familiar types of vocabulary: listening, speaking, reading, and writing. Listening vocabulary is words we need to understand what we hear; speaking vocabulary is the words we use for speaking; reading vocabulary is words we need to understand what we are reading; and writing vocabulary is the words we use in print. Listening and reading comprise receptive vocabulary, which is children's ability to recognize word meanings, while speaking and writing comprise productive vocabulary, which is children's ability to use words in different contexts (Vasilyeva & Waterfall, 2011). Researchers indicate that receptive vocabulary is larger than productive vocabulary, and students can understand more words through listening and reading than in speech or writing (Pearson, Hiebert, & Kamil, 2007). In addition, other literacy experts often describe vocabulary as oral vocabulary and reading vocabulary. Oral vocabulary refers to words we use and recognize in speaking and listening; reading vocabulary refers to words we use and recognize in print (Armbruster, Lehrer, & Osborn, 2006). To expand both oral and reading vocabulary in students, teachers need to use effective methods to teach vocabulary directly. However, before teachers can effectively implement strategies to support students' vocabulary growth, they must first understand early vocabulary development in children (Justice, Meier, & Walpole, 2005).

Children enter kindergarten with different levels of performance and background. However, researchers have identified certain traits of vocabulary development shared in common by kindergarten children generally. First, the process of learning words is gradual. Justice et al. (2005) state that children pass through three processes to learn vocabulary, from immature, when they hear the word for the first time, to incomplete representations, when they understand the

word but cannot produce it in their speech, and finally to accurate representations, when they completely understand the word and use it in different circumstances. Second, most of the time children learn new words without being taught directly. According to Nagy and Herman (1987), children can learn nine to ten words each day, and Snow et al. (1998) show that children can learn almost 3,000 words per year during elementary school and continuing through high school. Most of the meanings of the learned words can be understood by children with a few incidental exposures without any direct feedback (Bloom, 2000). However, many researchers clarify the notion that children need guidance and feedback while learning vocabulary to help them build the needed vocabulary to become effective readers (Scanlon, Anderson, & Sweeney, 2010). Third, children depend on learning and recognizing vocabulary by hearing words (e.g., through stories and discussion) more than by reading (Beck et al., 2002). Nevertheless, a great amount of vocabulary acquisition happens before children can read (Biemiller, 2001). Fourth, kindergarten children at this age learn by doing and through experience. Thus, providing meaningful experiences helps children effectively learn the reading skills (Snow et al., 1998). Fifth, children use their background knowledge or "schema" as a framework to grasp or assimilate the new information (Piaget & Inhelder, 2000). Consequently, children learn words easily that connect to their life. For example, children who live on a farm can identify many words related to farm life. Finally, not all children receive the same support from their environments to acquire vocabulary (Shanahan, 2006). Indeed, Biemiller (2005) indicates that the main cause of the differences in acquiring vocabularies among children is the language support and sources the children are exposed to in their home environment.

Statement of the Problem

According to the National Center for Education Statistics (2011), almost one third (33%) of fourth grade students in the United States experience reading difficulty. Murnane, Sawhill and Snow (2012) attribute this reading difficulty to each child's vocabulary acquisition by clearly stating that "one major difference between children likely to become good readers and those likely to struggle is vocabulary knowledge" (p. 7). Many studies indicate that vocabulary knowledge in primary grades correlates to students' reading achievement in future school grades. According to Biemiller (2005), children's vocabulary size in kindergarten affects students' reading achievement in future school grades. Further, in a longitudinal study, Cunningham and Stanovich (1997) found that vocabulary knowledge of first grade students can predict eleventh grade students' reading success and general knowledge. As such, one of the effective approaches to prevent reading difficulties is enhancing vocabulary development in primary grades (Beck & McKeown, 2007; Biemiller & Boote, 2006; Snow et al., 1998). In spite of the considerable amount of studies that emphasize the importance of providing rich vocabulary instruction in primary grades, large amounts of research provide evidence that vocabulary instruction is often overlooked in literacy teaching (Berne & Blachowicz, 2008). For example, Brabham and Villaume (2002) posted a question regarding vocabulary instruction concerns in an online conversation hosted in the International Reading Association (IRA); from analyzing teachers' conversations, Brabham and Villaume (2002) declared that "vocabulary has received less emphasis than other reading program components in our own classrooms" (p. 264). Similarly, Biemiller (2001) stated that "vocabulary is the 'missing link' in reading/language instruction in our school system" (p. 25). In addition, Juel et al. (2003) observed kindergarten teachers during their literacy period and found that most of the time teachers focus on phonological awareness

and decoding skills without attention to the meaning of words. Results from recent research conducted by Wright (2011) and Kent, Wanzek, and Al Otaiba (2012) corroborate the results of earlier research. Wright (2011) observed vocabulary instruction as it occurred in 55 kindergarten classrooms. The researcher found that there were no lessons devoted to vocabulary instruction; instead, the word meanings were taught as "teachable moments" which represented teacher's day-to-day discourse rather than a planned program of vocabulary instruction. Kent et al. (2012) observed 109 kindergarten students at risk for difficulty reading. They found that most literacy instruction time is related to phonemic awareness, letter-sound correspondences, and word reading, while minimal time is spent for vocabulary instruction, consisting only of approximately three percent of the average time allocated to literacy instruction during the reading period.

In short, although research supports the need to address vocabulary instruction in the first year of school to promote reading success and school achievement, the previous studies clearly indicate that there is little emphasis on vocabulary development in kindergarten classrooms. Therefore, there is a need to address vocabulary instruction in this study, to look at vocabulary instruction from different dimensions, and to provide a complete picture on practices used by effective teachers to teach vocabulary in kindergarten classrooms.

Purpose of the Study

The purpose of the study was to explore and describe highly effective kindergarten teachers' practices in vocabulary instruction in order to provide other teachers sufficient information and an in-depth understanding of how to teach vocabulary effectively. The teachers' understanding of the best practices to teach vocabulary will enhance kindergarten students' vocabulary development and lead to reading achievement and academic success.

Research Questions

The main research question guiding this study was:

How do highly effective kindergarten teachers teach vocabulary?

The five sub-questions within this research question are:

1. What are the methods they use to teach vocabulary?

2. How do they select vocabulary worth teaching?

3. How do they assess vocabulary development in their students?

4. How do they use technology to teach vocabulary?

5. To what extent do their practices align with the recent research on vocabulary instruction?

Significance of the Study

There are several reasons this study is significant. First, as mentioned earlier, vocabulary is considered a successful key in reading achievement especially in primary grades. Building on the findings of many years of scientific research regarding literacy instruction, the NRP report provided valid evidence that vocabulary is one of the essential components of successful reading (NICHD, 2000). Second, there are limited studies about vocabulary instruction at the kindergarten level. There is plenty of research on vocabulary instruction in grades two through twelve ; however, there is little research to provide data on how to teach the meaning of vocabulary in kindergarten through second grade (Biemiller 2005; Coyne, Capozzoli-Oldham, & Simmons, 2012; Justice et al., 2005). Third, kindergarten teachers have to take advantage of the early years to introduce children to new vocabularies. According to Sousa (2011), researchers agree that early childhood is the best time to acquire language skills because the brain development of young children makes these years a prime time for learning oral vocabulary. In

the kindergarteners' critical year, kindergarten teachers need to emphasize every opportunity for developing children's vocabulary knowledge (Neuman, Copple, & Bredekamp, 2000). Teachers in early primary grades have a good chance to develop students' vocabulary to help students who are behind catch up on what they need for academic success (Biemiller & Boote, 2006; Neuman et al., 2000). In fact, researchers asserted that waiting until children can read to systematically address vocabulary development may make it less likely that children will be able to later reach the appropriate level (Biemiller & Boote, 2006; Coyne et al., 2012). Fourth, it is obvious that children learn many words incidentally from the environment they live in (e.g., parents' conversation, media, and reading); however, not every child gets the same amount of support which affects his or her vocabulary acquisition (Shanahan, 2006). Therefore, there is a need to address vocabulary instruction to provide direction and insight on how to implement effective methods of teaching vocabulary in kindergarten classrooms. Finally, the findings and recommendations of the study will increase kindergarten teachers' understanding of the role they have to support kindergarteners' vocabulary growth. By using effective methods and materials to deliver vocabulary instruction teachers can improve students' reading achievement. These data will be especially useful because they will be based on practices that highly effective kindergarten teachers use in their classrooms.

Scope of the Study

The study took place in nine elementary schools within one school district located in the northwest part of the state of Arkansas. Classroom observation, interview and document analysis of vocabulary lesson plans were employed to explore and describe highly effective kindergarten teachers' practices in vocabulary instruction. The participants were nine highly effective kindergarten teachers currently working in elementary schools. The participants were selected

for participation in the study after they were identified as highly effective teachers by the principals in their schools. Their identification was based on three major criteria: (a) teacher's score in the evaluation instrument used to assess the teacher's best practices and performance, referred to in this study as the teacher's knowledge; (b) teacher's professional development hours in one year, referred to in this study as the teacher's responsibility, and (c) teacher's experience in teaching kindergarten students extending for more than three years. The participant teachers were interviewed and observed, and their lesson plans were reviewed. This varied approach to data collection helped the researcher to understand in-depth the practices of participant teachers in vocabulary instruction.

Definitions of Terms

The following section defines relevant terms as they apply to this study:

Vocabulary: In this study vocabulary is defined as the knowledge of word meanings (Biemiller & Boote, 2006).

Vocabulary instruction: Vocabulary instruction includes the strategies and materials teachers use to teach word meanings (Shanahan, 2006). The goal of vocabulary instruction is to help students learn the meanings of many words so they can communicate effectively and achieve academically (Butler et al., 2010).

Direct vocabulary learning: Students learn vocabulary directly when they are explicitly taught both individual words and word-learning strategies (Armbruster et al., 2006).

Indirect vocabulary learning: Students learn vocabulary indirectly when they hear and see words used in many different contexts; for example, through conversations with adults, through being read to, and through reading extensively on their own (Armbruster et al., 2006).

Assessment: Assessment is the process of gathering, synthesizing, and interpreting information about the student's performance and progress to aid classroom decision making (Epstein et al., 2004).

Technology: In this study, technology is the tool that teachers integrate in their classroom to support and enhance vocabulary instruction. Examples of technology tools are computers, iPods, interactive whiteboards, electronic games, the Internet, electronic books, and software programs.

Kindergarten students: In this study kindergarten students are children whose age is between four to six years and who attend full-day programs in regular elementary schools.

Highly qualified teacher: According to the No Child Left Behind act (NCLB), highly qualified teachers should have (a) earned a bachelor's degree, (b) completed an approved licensing program, and (c) completed a rigorous exam in the subjects being taught (U.S. Department of Education, 2002b).

Effective teacher: After reviewing and analyzing an extensive amount of research, policy, and standards that addressed teacher effectiveness, Goe, Bell, and Little (2008) developed a five-point definition of teacher effectiveness. Based on the five-point definition of teacher effectiveness, effective teachers should: (a) have high expectations for all students and help students learn, (b) contribute to positive academic, attitudinal, and social outcomes for students, (c) use diverse resources to plan and structure engaging learning opportunities, (d) contribute to the development of classrooms and schools that value diversity and civic-mindedness, and (e) collaborate with other teachers, administrators, parents, and education professionals to ensure student success (p. 8).

Components of an effective teacher: The district within which this research is being conducted has adopted Danielson's four domains from a Framework for Teaching to measure effective

teachers (Danielson, 2007). The evaluation process is based on four domains: Planning and Preparation, Classroom Environment, Instruction, and Personal/Professional Responsibilities. For the purpose of this study, the effective teacher will be defined based on three categories: knowledge, responsibility and experience. First, participant teachers must have four types of knowledge: specific content knowledge of literacy (e.g., knowledge of different literacy skills including vocabulary), pedagogical knowledge on how to plan and teach literacy (e.g., knowledge of appropriate strategies and techniques to teach different literacy skills and knowledge about using education technology in classrooms), knowledge about the learning processes of kindergarten students (e.g., knowledge of literacy development of kindergartners), and knowledge of what the school, district, or state has determined as essential outcomes for students education (e.g., knowledge of standards and curriculum goals). For this study, the knowledgeable teachers can be identified by asking the school principals to select teachers who possess sufficient knowledge of content, pedagogy, learning processes and outcomes based on the classroom observation form that they use to evaluate teachers. Second, participant teachers should demonstrate responsibility. Effective teachers aim at promoting student learning and success. They focus on presenting effective instruction to all students and value students as unique individuals (Stronge, 2002). Responsible teachers should monitor student progress throughout the school year (e.g., use formal and informal literacy assessment) and they should work to improve their teaching skills (e.g., pursue professional development to strengthen their teaching practices). In this study, responsible teachers can be identified by looking at the records that teachers maintain of students' progress, comparing the professional hours that the teachers have in the past year, and using students' assessment score data to estimate the effectiveness of the participant teachers. Third, participant teachers should have kindergarten teaching

experience. Experience makes a difference in teaching effectiveness, and teachers can be identified as experienced when they have more than three years teaching experience (Stronge, Tucker, & Hindman, 2004). Therefore, the participant teachers in this study must have at least three years of experience teaching at the kindergarten level.

Summary

Recent research has placed great significance on vocabulary development as an influence on children's reading achievement and school success. Researchers provide evidence that demonstrates the importance of addressing vocabulary instruction in the early years of school to prevent reading difficulty and close the achievement gap among students. However, this premise has not been clearly implemented in kindergarten classroom practice.

The overarching goal of this study was to explore and describe the practices used by highly effective kindergarten teachers to teach vocabulary. Effective teachers were observed, interviewed and their lesson plans were analyzed to answer the main question of this study regarding how highly effective kindergarten teachers teach vocabulary. The findings of the study contribute to an increased understanding of the methods and resources used to deliver vocabulary instruction and consequently support children's vocabulary knowledge to move them forward to succeed in their future grades. The following chapter highlights the review of literature upon which this study is founded.

CHAPTER II

LITERATURE REVIEW

There are numerous amounts of research that support the importance of including effective vocabulary instruction in primary grades (Beck & McKeown, 2007; Biemiller & Boote, 2006; Biemiller, 2012; Farstrup & Samuels, 2008; Kaiser et al., 2011;Vacca et al., 2012). However, studies provide evidence of the lack of transfer of these ideas about vocabulary instruction from literature to classroom practice (Brabham & Villaume, 2002; Juel et al., 2003; Kent et al., 2012). Teachers must be aware of the importance of delivering effective vocabulary instruction in addition to other literacy skills to promote children's reading comprehension and school achievement.

The major focus of this chapter is to provide a comprehensive review on recent practices of vocabulary instruction that kindergarten teachers can use to deliver instruction effectively. The chapter begins with a review of research that investigates the principles of effective vocabulary instruction. Then, the chapter continues with a review of practices utilized to teach vocabulary. Finally, in light of the literature review, several components of effective vocabulary instruction for kindergarteners that teachers can use in their classrooms are provided.

Principles of Vocabulary Instruction

Many respected researchers in literacy (Blachowicz & Fisher, 2010; Graves, 2009; Marulis & Neuman, 2010; Neuman, 2011; NICHD, 2000; Stahl & Kapinus, 2001; Vacca et al., 2012) identify several principles of effective vocabulary instruction, which provide insight and direction to teachers to use effective practices that improve students' vocabulary development. A careful examination of the various principles reveals several common principles of effective vocabulary instruction:

- Vocabulary should be taught directly. To ensure success in learning to read, instruction should include direct teaching of vocabulary (Kamil et al., 2008). Literacy experts (Butler et al., 2010; NICHD, 2000) conclude, after reviewing a considerable number of studies related to teaching vocabulary, that direct vocabulary instruction has a positive impact on reading achievement. In their meta-analysis, Marulis and Neuman (2010) found that direct and explicit instruction fosters vocabulary knowledge in students better than implicit vocabulary instruction.

- Vocabulary instruction should be enriched with a word-rich environment. A high-quality language environment is an environment that provides opportunities to children to expand their vocabulary knowledge (Jackson et al., 2007). Moreover, Brabham and Villaume (2002) state that the "experience-rich environment creates the necessary grounding for vocabulary development" (p. 267).

- Vocabulary instruction should be meaningful and engaging. Teaching vocabulary must be related to students' experience and real lives. This helps students to appreciate the vocabulary they study. Vacca et al. (2012) consider the key feature of vocabulary instruction to be relating new words to students' background knowledge to make learning vocabulary meaningful to students. In addition, vocabulary instruction must be planned carefully to be interesting and meaningful to students in order to keep them engaged.

- Vocabulary instruction should introduce useful words to students. The type of words teachers select is as significant as the methods that teachers use to deliver the words (McKeown et al., 2012). According to the NRP report, vocabulary instruction must include teaching vocabulary that students will encounter in their future reading (NICHD,

2000). Neuman (2011) indicates that identifying the words that are useful to children is important to achieve high quality vocabulary instruction.

- Vocabulary instruction should draw on several teaching strategies. Literacy experts (Farstrup & Samuels, 2008; Marzano, 2009) clarify the notion that there is no guaranteed strategy or a single effective method of teaching vocabulary. Therefore, to ensure growth of vocabulary development during vocabulary instruction time, teachers have to use various effective strategies of vocabulary instruction suggested by literacy experts and have to use strategies that fit the needs of all students.

- Vocabulary instruction should be enhanced by using technology in classrooms. The NRP report considers using technology to teach vocabulary as one of the features of effective vocabulary instruction (NICHD, 2000). Many researchers indicate that using technology in classrooms increases positive response in children and improves their vocabulary knowledge, comprehension and other literacy skills (Cohen & Cowen, 2011; Ringstaff & Kelley, 2002; Vacca et al., 2012).

- Vocabulary instruction should assess students' vocabulary progress frequently. Assessment is the process of gathering, synthesizing, and interpreting information about the student's performance and progress to aid classroom decision making (Epstein et al., 2004). Assessing students helps teachers to form suitable instruction that meets the students' learning needs and provides more realistic feedback about students' successes and challenges (Rief & Heimburge, 2007). Assessment must be implemented to serve as guidance for vocabulary instruction (Blachowicz & Fisher, 2010; NICHD, 2000).

These principles are provided as guidelines for effective vocabulary instruction. Therefore, teachers must be aware of the various vocabulary instruction principles and they must consider them as a foundation to provide effective practices for their students.

<center>**Practices of Vocabulary Instruction**</center>

The practices used by teachers should ensure the delivery of instruction that enhances children's vocabulary growth. Recent research (Blachowicz & Fisher, 2011; Butler et al., 2010; Kamil et al., 2008; Marulis & Neuman, 2010; McKeown et al., 2012; Stahl & Stahl, 2012) emphasizes the importance of delivering vocabulary instruction in primary grades explicitly and directly, selecting words that benefit students' learning, using various strategies to teach vocabulary, and assessing children's vocabulary knowledge to plan effective instruction that meets their learning needs.

Explicit Vocabulary Instruction

Recent experimental and quasi-experimental research provides evidence that rich and explicit vocabulary instruction increases children's vocabulary learning. For example, Goodson et al. (2010) examined a vocabulary instruction program to see whether it improves the expressive vocabulary of kindergartners. The program was a 24-week in-class supplement to a school's core language arts program. This program was planned to be built around three components: (a) Explicit Vocabulary Instruction by choosing target words that align with the curriculum being taught in the school; (b) Interactive Book Reading by encouraging teachers to ask questions while reading aloud; and (c) Adult-Child Conversations through using or introducing new words. After implementing this program with 1,300 kindergarten students in 64 schools, the researchers found that the kindergarten students who received the program gained more vocabulary and performed better on expressive vocabulary tests than students in control

schools. Another study with similar results was conducted by Biemiller and Boote (2006) who investigated the effect of direct vocabulary instruction among students from kindergarten to second grade. The students in the sample were provided with explanations of word meanings during repeated storybook reading and then their vocabulary knowledge was tested. The authors found that children demonstrated a 22% gain in instructed vocabulary but only a 12% gain in non-instructed words. Similarly, Beck and McKeown (2007) conducted two studies to examine the effects of direct and explicit instruction vocabulary on the outcome of learning word meanings in kindergarten and first grade students. In the first study, they found that students who received direct instruction on specific words gained more understanding of the target words than those who did not receive direct instruction. In the second study, two groups of students received the same direct vocabulary instruction but differed on the amount of teaching time. The study found that the group who received more instruction gained more word knowledge than the other group with less instructional time.

In addition, Coyne et al. (2009) compared the effect of embedded vocabulary instruction and extended vocabulary instruction on kindergarteners. In embedded instruction children were taught vocabulary during storybook reading quickly and in a time-efficient way, while in extended instruction children were introduced to vocabulary in-depth, which provided them the opportunity to engage with the target words during and beyond the storybook reading. The results indicate that embedded instruction leads to partial word learning; on the other hand, the extended instruction leads to an increase in children's word knowledge and deep understanding of the target words. Another recent study conducted by Coyne et al. (2010) demonstrated the efficacy of direct vocabulary instruction in early primary grades. In this study, kindergarten children were provided with 36 half-hour lessons over 18 weeks. In each lesson, three words

were selected to be directly taught during storybook reading and extended discussion with rich activities. The results from the study showed that children who received direct vocabulary instruction had a greater gain in listening comprehension and receptive vocabulary compared to a control group who only received implicit instruction.

These findings clearly show that implementing explicit vocabulary instruction supports the growth of vocabulary in kindergarten and primary grade children. The evidence from these findings encourages teachers and educators to understand the significant role that explicit instruction plays in fostering students' vocabulary growth.

Selecting Words Worth Teaching

Teachers know that children need to learn a number of new words that enhance their reading achievement; however, some teachers might not know which words they should introduce (Lubliner & Smetana, 2005). To provide guidelines for teachers to select appropriate words to be taught, researchers in literacy provide productive strategies to select words by classifying words to levels or groups. Stahl and Kapinus (2001) argue that all words that students encounter tend to fall into three categories, and these categories can provide guidance for teachers to determine which words to teach. The first category includes the basic and high frequency words such as cat, red, and house; the second category includes low frequency words that are used with specific applications, such as crustacean or nova; the third category includes sophisticated words frequently encountered by informed language users, such as consistent and representative. Stahl and Kapinus (2001) recommend English and Language Arts teachers focus on sophisticated words, while content area teachers should focus on low frequency words.

Another widely used strategy to select the most productive words to be taught was proposed by Beck et al. (2002). The authors categorize words into three tiers. Tier one contains

words that are more frequent and familiar to children. Tier two represents complex concept words that are essential when using mature and academic language and frequently appear in spoken and written language. Tier three words are less frequent words and limited to specific fields of study. Beck et al. (2002) recommend that teachers focus primarily on tier two words since those words are most likely to be ones with which students need help and which students should be taught directly. The authors indicate that words in tier two represent concepts that can be identified in familiar words that young children can understand and are less likely to be learned by students themselves; for example, the word "community" can be defined using familiar words such as "group of people living together" and children are less likely to learn the word "community" independently.

Additionally, Armbruster et al. (2006) classify children's knowledge of word meanings into three levels. The first one is "unknown" which includes words that are completely unfamiliar to the child; the second is "acquainted" which refers to words that children have some basic ideas about; the third one is "established" which includes words that children can recognize immediately and use frequently. Armbruster et al. (2006) express the view that for children to fully understand the vocabulary, they need to acquire an established level of word knowledge.

Biemiller (2010) suggests a strategy that helps teachers to find the words to teach during vocabulary instruction. He divided the meanings of words into three categories: (a) word meanings known by most children by the end of second grade, which would not require instruction in the primary grades; (b) word meanings known by few children by the end of second grade, which are not worth teaching because they are not useful to children, and children may not encounter them in their future reading; and (c) word meanings known by some children by the end of second grade, which are worth teaching in primary grades and more likely known

by children with large vocabularies, while less likely known by children with smaller vocabularies. This strategy helps teachers to focus on the high-priority meanings for children that promote their vocabulary growth and decrease the gap in vocabulary size among children. In light of his strategy of selecting words worth teaching, Biemiller (2012) suggests that teachers should select a challenging book that contains words at least half of the class does not know. He believes that these kinds of challenging books enhance children's vocabulary leaning.

These various strategies that are suggested by literacy researchers focus on the importance of selecting words that align with students' levels of learning. Selecting words beyond the children's learning abilities will impact their learning negatively and selecting easy and too familiar words wastes instructional time (Stahl & Stahl, 2012). Teachers need to carefully plan activities and lessons that involve words that are useful to children, are less likely to be known without direct instruction and can be defined using familiar words.

Strategies for Vocabulary Instruction

Teachers have to provide students with a variety of vocabulary experiences by using different strategies that foster students' reading and writing skills. Research has identified many strategies to teach vocabulary. For example, teachers can implement reading aloud to enhance children's vocabulary growth. According to the International Reading Association (IRA) and the National Association for the Education of Young Children (NAEYC) (1998), reading aloud to children is considered the best strategy teachers can use to improve language and vocabulary knowledge. Reading aloud to children has many benefits, such as expanding children's vocabulary, developing their knowledge, engaging them in active processing of the text, developing phonemic awareness and knowledge of letter names and sounds, and increasing their motivation in reading (Coyne et al., 2012; Scanlon et al., 2010). Brabham and Lynch-Brown

(2002) investigate the impact of reading aloud on primary students' vocabulary acquisition and comprehension. The researchers studied three styles of reading aloud including just reading, interactional reading, and performance reading. In just reading, the researchers asked the teachers to just read the story without asking questions or providing comments of the story being read and then let the children draw what they learned from the story. In performance reading, the teachers were instructed to encourage students to discuss the story and target words before and after reading. In interactional reading, the teachers were asked to encourage asking questions, discussion and interaction among students before, during and after reading aloud. The results indicated that both performance and interactional reading styles were more effective to increase students' learning vocabulary and comprehension than the just reading style. The study also indicated that interactional reading was the strongest style in enhancing word acquisition in the early elementary grades. This suggests teachers of young children should focus on reading aloud as a powerful method to teach vocabulary.

Another strategy teachers can use to foster children's vocabulary knowledge is repeated reading. Literacy experts encourage teachers to read the book aloud multiple times because of its benefits to children's vocabulary growth. In their experimental research, Biemiller and Boote (2006) clearly state that "kindergarten children gained 23% of instructed word meanings when stories were read four times but only 16% when stories were read twice" (pp. 50-51). Moreover, Graves (2008) notes that reading the book several times provides an opportunity for children to use the words actively with more understanding.

In addition, Carnine et al. (2010) identified three procedures to teach vocabulary during the beginning reading stage. The first procedure is modeling. The teachers use modeling when it is difficult to use language to explain the meaning of a new word. Modeling works to convey the

correct names for every day actions and items with which students are likely already familiar, even if they do not know the right word. Modeling is considered the simplest and most powerful approach that kindergarten teachers can use to teach vocabulary (Lane & Allen, 2010). The second procedure is synonyms. The teachers can use synonyms when students know words that can explain the meaning of a new word. For example, the teacher can explain the word "observe" with a known word like "see." The third procedure for teaching vocabulary is definitions. The definitions are used when students have adequate vocabulary size to understand long explanations for new words and when it is difficult to explain the words using a synonym. Teachers also can provide examples of the new vocabulary, use context clues, present pictures of new words, support learning with wordplay and provide opportunities to use newly learned words (Christ & Wang, 2010). Teachers must be aware of a variety of strategies that can be used to enhance children's vocabulary development.

Technology and Vocabulary Instruction

Technology tools such as computers, iPods, interactive whiteboards, electronic games, the Internet, and electronic books can promote effective learning and development when they are used intentionally by educators (National Association for the Education of Young Children [NAEYC], 2012). Today many classrooms in the United States are provided with technology tools available for students' use (Rief & Heimburge, 2007). According to the National Center for Education Statistics (NCES) (2010), in 2009, 97 % of teachers had one or more computers located in the classroom every day and access to the Internet had increased from the previous years to include 93% of the classroom computers. In addition, an increasing number of teachers reported having different technology devices, such as projectors, interactive whiteboards, and digital cameras, available as needed or in the classroom every day (NCES, 2010). With the

increase of technology access in the classrooms, teachers have begun to integrate technology in their lesson plans and are more aware of the importance of technology to create meaningful learning for children (NAEYC, 2012). In addition, research indicates that using technology to teach reading and writing specifically makes a powerful difference in children's literacy development (Vacca et al., 2012), and, particularly, enhances their vocabulary learning (Blachowicz, Fisher, & Ogle, 2006). There are several different technologies that support teaching vocabulary in the classroom; some examples include:

- *Electronic books*: an electronic book or e-book is a digital version of a book that is being displayed on a computer or handheld device such as a laptop or cell phone. The use of e-books has increased in recent years and there are many advantages of using them in the classroom (Cohen & Cowen, 2011): (a) the information in an e-book can be searched easily; (b) e-books take up little space; (c) hundreds of e-books can be stored on one device or CD-ROM; and (d) many e-books are available for free on the Internet. Many e-books provide color illustrations and audio features which enhance children's motivation to read or listen to text more, thus supporting their vocabulary knowledge.

- *Software programs*: in recent years, publishers have provided many innovative software programs that support reading and writing skills of children. Today, teachers can enrich the classroom by using highly interactive multimedia CD-ROM software that meets their learning goals. According to McManis and Gunnewig (2012), when teachers support children's learning with appropriate software programs in literacy, children will make greater gains in learning and literacy development. Many software programs are based on motivation and interaction that engage students with new vocabulary, concepts and literacy skills where students can practice and reinforce new word meanings.

- *Educational games*: play is central to children's development and learning; play in learning enhances children's creativity and imagination (NAEYC, 2012). Using educational games is fundamental in the classroom. The educational games help students to practice new skills, review word meanings and reinforce literacy skills in a fun way. Many commercial programs for wordplay are available; for example, some educational games ask children to associate the vocabulary words with visual images and create a crossword or semantic mapping for vocabulary (Cohen & Cowen, 2011).

- *Internet*: the Internet is a powerful resource for teachers to look at recent research on vocabulary instruction (Cohen & Cowen, 2011). Many lesson plans, activities and teaching ideas are available on the Internet for free. Also, teachers can download many educational games and software programs and use them in the classroom.

- *Video*: many studies provide evidence of the importance of using videos as visual tools to promote literacy and vocabulary instruction in classrooms. For example, Xin and Rieth (2001) investigate the use of video to enhance vocabulary knowledge and comprehension. The researchers divided participant students into two groups. One group received word meanings instruction with video while the other group was taught using traditional instruction without using video technology. The findings show that students in the video instruction group made significant gains in number of vocabulary words learned compared to those in the nonvideo instruction group.

- *Smartboard*: the Smartboard consists of a touch-sensitive white board connected to a projector and computer (Rief & Heimburge, 2007). In recent years, Smartboards have become increasingly common in classrooms (NCES, 2010). Smartboard is a flexible teaching and learning tool. Teachers can use a Smartboard with educational software

programs and activities to share them with students. With a Smartboard, teachers can

reach students with different learning styles and engage students in learning.

Technology can be used as a powerful learning tool to enhance students' literacy skills.

Educational technology plays an important role in children's learning of literacy when it is based

on recent research, appropriate to children's age and ability, and aligns with lesson plans and

activities' goals.

Assessing Students' Vocabulary Development

Investigating students' strengths and weakness in literacy helps teachers to plan

appropriate whole-group, small-group, and individual instruction (Teale & Gambrell, 2007).

Reutzel and Cooter (2011) identified five principles of literacy assessments that help teachers

remain focused, systematic and purposeful in their teaching of literacy. First, literacy

assessments should help teachers to discover where students are in reading development.

Teachers must focus on what students can do, not what they cannot do; when the teachers gather

the assessment information for a student, the teachers will be able to plan lessons and activities

that meet the student' learning needs. Second, literacy assessment should inform instruction.

Effective teachers cannot begin teaching until they have sufficient knowledge about the reading

ability of students. Assessments must help teachers avoid teaching the literacy skills that students

already know and avoid skills that are beyond their ability. This process will ensure not wasting

instructional time. Third, assessment tools should be prepared in advance. Teachers have to

identify the appropriate assessment tools for students. There are many assessment tools to assess

reading and writing, such as benchmark skills, audio recorder and observation checklists;

therefore, careful preparation of these different tools helps teachers to use them effectively.

Fourth, students' assessment results can be analyzed by involving an approach called "if-then

thinking." After gathering the assessment results for each student, teachers can analyze the findings of the assessments by using if-then thinking. The purpose of this approach is to predict which reading skills the student will learn next. For example, if the results from the assessment of phonemic awareness indicate that the student is able to count the number of syllables in words, then he or she is ready to learn using the picture box sound counting strategy. This approach of analyzing helps teachers to translate the results of assessments into effective lesson plans. Finally, assessment should be an ongoing part of instruction. Assessment should not be given only at the beginning of the year or at the end of the year; instead, assessment should take place in daily teaching and learning. The ongoing assessments help teachers gain more knowledge of students' progress in literacy development and plan effective instruction.

To plan effective vocabulary instruction in classrooms, the first step teachers need to implement is to determine students' vocabulary knowledge. There are four types of formal literacy assessments teachers can use throughout the school year: screening, diagnostic, progress monitoring, and outcome assessment (Carnine et al., 2010). The screening assessment, usually done at the beginning of the school year, is a first step in identifying children who are at risk and need further support and intervention. The diagnostic assessment allows teachers to gain in-depth information about students' literacy skills. The progress monitoring assessment helps teachers to determine the students' ongoing progress and their learning levels. The outcome assessment is usually done at the end of the school year to determine the students' achievements and check for the effectiveness of the instruction provided.

Besides using formal assessments, teachers should use informal assessments to provide a complete picture of students' vocabulary knowledge (Schumm, 2006). A widely used informal assessment is observation; teachers should regularly observe students to determine their reading,

writing, speaking and listening skills and document their progress during the year. For example, during observation, teachers can use running records or checklists to record a student's understanding of the words while reading by asking questions about the meaning of the words in the passage context (Rog, 2011). Assessments enable teachers to demonstrate their students' growth over time and develop a better sense of what students need to succeed (Tomlinson, 2003).

Research on Best Practices in Kindergarten Classrooms

The research reviewed demonstrates several uses of vocabulary practices which ensure success in the students' reading performance and academic achievement. Literacy experts (Biemiller, 2010; Marulis & Neuman, 2010; McKeown et al., 2012) equally stress the importance of starting vocabulary instruction in kindergarten. Indeed, Coyne et al. (2012) clearly state that "waiting until third grade to systematically address vocabulary development may be too late for children" (p. 54). Block and Israel (2005) also argue that instruction to build vocabulary should begin in kindergarten. Therefore, kindergarten teachers are encouraged to plan effective vocabulary instruction by using practices that align with recent research on vocabulary. Research confirms that the practices of teachers in the classroom affect students' achievements (Stronge, 2002). Kindergarten teachers have to be aware that teaching vocabulary to kindergarten children requires advance planning, as does any lesson. The purpose of this section is to provide several components of effective vocabulary instruction that kindergarten teachers can use to enhance children's vocabulary development.

Provide a Word-Rich Environment

Researchers (Blachowicz & Fisher, 2012; Rog, 2011) indicate that kindergarten teachers can enrich the physical and social environment in their classrooms to enhance vocabulary

development in children. For the physical environment, teachers can put a poster in the classroom of interesting words that students encountered while reading aloud, in media or in conversation; afterwards, teachers can allocate a time to talk about the new words in the poster, where students heard it and how they can use it (Blachowicz & Fisher, 2012). Teachers can also use classroom labeling to foster vocabulary development. Blachowicz and Fisher (2012) consider labeling the materials and objects in the classroom an effective way to teach new vocabulary. Teachers can also support students' literacy by providing space for showing students' own writing. This environment enables students to behave and view themselves as readers and writers (Rog, 2011). For the social environment, teachers should provide children with opportunities to talk and listen. According to Graves (2008), listening and speaking are essential to increase children's vocabulary knowledge. Teachers should also enhance children's interaction and conversation with the teacher and with other students. In his Social Development Theory, Vygotsky (1978) argues that the social interaction of children with adults and others has a fundamental role in developing children's knowledge and language. Thus, kindergarten teachers should provide opportunities to use the new words in conversation in classrooms, on the playground or in the lunch room (Rog, 2011).

Engage Children in Word Meanings

Kindergarten teachers need to encourage children to participate in conversation and express their ideas to develop their vocabulary knowledge. Teachers also might ask children to act out the new words and provide several examples of how to use the words to strengthen children's word understanding (Beck et al., 2002). For example, the teacher can introduce the word "delightful" to children by connecting the word to their experience, asking them these kinds of questions: "When do you feel delightful? Can you give some examples of when you felt

delightful? If your arm is hurting, do you feel delightful?" Moreover, kindergarten teachers can use a process called dialogic reading developed by Whitehurst et al. (1994). The dialogic reading process allows the children to retell the story and respond to the adults' questions. The purpose of this process is to help the children to be active participants rather than passive listeners, support them to use the new vocabulary and provide them with necessary feedback to promote their oral language development. When using the dialogic reading process, teachers ask open-ended questions, follow the children's responses by adding more questions, give feedback and assistance by repeating the children's answers, encourage and praise the children, and make the process interesting to the children.

To clarify the meanings of the words, literacy experts suggest teachers use illustrations, such as pictures and videos, use new words in questions which encourage children to use the words in their answers, inspire children to draw an image of the new words, and provoke students to reread the book with their parents (Blachowicz & Fisher, 2010). To increase children's engagement in word meanings, kindergarten teachers should make learning interesting to children. One of the teaching strategies that makes learning vocabulary interesting is wordplay. According to Blachowicz and Fisher (2012), "word play proved to be a powerful learning and motivation tool" to bolster teachers' practices (p. 218). There are several games kindergarten teachers can use to support children's vocabulary development, such as guessing games, list and label, descriptions and narrative (Rog, 2011). The guessing games involve asking yes/no questions to guess objects. In a list and label game, children brainstorm words to fit categories, such as "things that are square." The descriptions game encourages children to describe objects by asking them questions such as what color is it? Or what is it used for? In the narrative games the teacher asks children to retell stories, create new stories or role-play story's

characters. These are a variety of strategies that teachers can use to enhance children's vocabulary development. Using these strategies in classrooms engages children in word meanings and has a positive impact on the children's vocabulary and language growth (Blachowicz & Fisher, 2008).

Plan and Present Vocabulary Instruction Effectively

To plan effective lessons and activities teachers must be aware of the objectives of the lesson plan, while also considering the current literacy status of all students (McEwan, 2002). Teachers should plan the instruction prior to the vocabulary lessons and present the vocabulary words by using several teaching strategies. For example, in reading aloud, teachers should select target words prior to reading and plan instructional support on those words (Kindle, 2010). Kindergarten teachers must be aware that reading books aloud as children sit passively is not enough to improve vocabulary development (McGee & Schickedanz, 2007). Therefore, literacy experts have suggested several approaches to introduce new words actively while reading aloud. One of these approaches is the magic words approach developed by Coyne et al. (2012). A teacher using this approach begins the story by introducing target words before reading, asking children to pronounce them and referring to them as magic words. The teacher encourages the children to raise their hands if they hear one of the magic words during the story; here the teachers can provide children with a short explanation and replace the magic word with simple definitions or synonyms. For example, the kindergarten teacher could introduce the word "regretful" to children. After they repeat the new word together, the teacher will tell the children that they will encounter the word in the book that will be read aloud and encourage them to raise their hands when they hear the word. During reading, the teacher points to the magic word in the sentence, reads it again, and says "regretful means sorry." Then the teacher says the sentence

again, "the llama felt regretful about going so far up the mountain," and then says the sentence again with the meaning of the target word, "the llama felt sorry about going so far up the mountain" (see Coyne et al., 2010 and 2012 for more examples).

In addition, McGee and Schickedanz (2007) developed a repeated interactive read-aloud technique that helps kindergarten teachers to repeat reading aloud effectively. During the first reading, teachers get the more active role by introducing the author, illustrator and the characters in the story and introduce the new words with a few questions. During the second reading, children participate more actively and answer more questions and the teachers can provide more examples and definitions of the target words. During the third reading, children take a highly active role and engage in a more extended discussion; they can retell the story with minimal help from the teachers. The three repeated readings of a book is a powerful technique for extending children's vocabulary (McGee & Schickedanz, 2007). Another strategy kindergarten teachers can use is word sorts (Vacca et al., 2012). The process of sorting words requires children to classify words into different categories by looking for shared characteristics among their meanings (e.g., shapes, animals, foods). Through such strategies, the vocabulary development will be enhanced in kindergarten children.

Consider Explicit Explanation

Kindergarten teachers should introduce new words in clear explanations. Block and Israel (2005) indicate that direct vocabulary instruction should be delivered for 10 to 20 minutes daily in grades K-3. Researchers recommended that selecting 10 to 12 word meanings to be taught in each week is suitable for children in primary years (Biemeller, 2012); thus about 2 to 3 words each day is suitable for kindergarteners (Block & Israel, 2005). Literacy experts (Beck et al., 2002; Biemeller, 2010) developed word lists for primary grade levels which kindergarten

teachers can use to determine words that are worth teaching. Kindergarten teachers are encouraged to use child-friendly definitions when introducing new words by using familiar words that all children in the classroom know. In addition, kindergarten teachers should select words that are useful to children in their lives and correct words for the children's level, not too easy and not too difficult (Neuman & Roskos, 2012; Stahl & Stahl, 2012). Moreover, kindergarten teachers are prompted to teach academic vocabulary that enhances children's learning success. According to Grossman, Reyna and Shipton (2011), in 2010, 46 states, including the state in which the research is being conducted, had adopted the Common Core State Standards (CCSS). The standards in English language arts require kindergarten teachers to focus on providing children nonfiction books and academic vocabulary.

Blachowicz, Fisher and Watts-Taffe (2005) offer several questions that teachers should consider to help select words worth teaching. The questions include: how important is the word to the reading or theme of study? How useful is the word outside of the selection or theme? Is this a word that students might learn independently? Is this a word that will heighten students' enthusiasm for word learning? (p. 6). In addition to examining these questions before selecting vocabulary, kindergarten teachers are encouraged to review the words to meet the three criteria that are suggested by Beck et al. (2002). Kindergarten teachers have to make sure that the words demonstrate: (a) importance and utility: Words that are characteristic of mature language users and appear frequently across a variety of domains; (b) Instructional potential: Words that can be worked with in a variety of ways so that students can build rich representations of them and of their connections to other words and concepts; and (c) Conceptual understanding: Words for which students understand the general concept but need precision and specificity in describing

the concept (p. 19). In short, teachers have to explicitly teach useful words that are critical to understanding contexts and are likely to be encountered in children's school careers.

Enhance Vocabulary Instruction with Technology

Today's children are exposed to advanced technology at an early age, and kindergarten children are growing up in a rapidly changing digital age. Young children are spending an increasing number of hours with screens of all kinds, including televisions, computers, smartphones, tablets, and handheld game devices (McManis & Gunnewig, 2012). The wise use of technology and media in classrooms plays an effective role to support children's learning and development (NAEYC, 2012). Kindergarten teachers must be aware of the broad range of digital technology tools such as computers, multitouch screens, interactive whiteboards, mobile devices, electronic games, and e-book readers. Moreover, they must work to integrate these tools to support vocabulary development in children, especially since many studies indicate that instruction is more effective when teachers have the ability to integrate technology in their classrooms (Blachowicz et al., 2006).

Technology use is particularly important in literacy and development. Many researchers in literacy instruction (Cohen & Cowen, 2011; Labbo & Reinking, 1999; Rief & Heimburge, 2007) and in early childhood education (McManis & Gunnewig, 2012; NAEYC, 2012) provide criteria of using and integrating educational technology in classrooms to gain effective results. This literature provides a full picture of the knowledge, beliefs, understanding and teaching practices that teachers must acquire to ensure success in integrating technology in classrooms. From this research a number of criteria for effective use of technology to enhance vocabulary instruction have emerged.

▪ Teachers should ensure that technologies such as computers, iTouches, tape-recorders, and iPods are available for students' use and meet the learning goals. As mentioned earlier, the recent statistics prove that different technological tools are accessible and affordable in every classroom. Teachers have to provide opportunities for children to use the different kinds of technology tools with guidance and make sure that every child can access these materials. In addition, the technology tools must be used to support the goals of lesson plans. For example, if teachers plan to teach new word meanings they can load technology tools in the classroom with software programs that support the target words being taught.

▪ Teachers should gain the knowledge and skills to select and use technology in appropriate ways with children. Research indicates that there can be negative impacts on children's learning and development if teachers lack the needed knowledge and skills to integrate technology in classrooms (McManis & Gunnewig, 2012). Kindergarten teachers should have the ability to evaluate and select the appropriate technology tools to accomplish the goals of instruction. For example, teachers should have the ability to consider the content of software programs before using them in the classrooms. To evaluate the software programs, teachers should consider many criteria to assess their quality. The criteria includes whether the software programs achieve the learning goals and promote the vocabulary knowledge, are appropriate for the kindergarten level and are easy for children to use, and engage and motivate children in learning and have the ability to monitor children's progress (Cohen & Cowen, 2011). It is very important for teachers to evaluate technology tools such as sites, e-books and software programs before using

them in the classrooms by using the previous criteria or using reliable resources that are recommended and approved by school districts.

▪ Teachers should use technologies to support literacy instruction and deliver instruction positively. Teachers must be aware that technology will not replace the activities of the instruction. According to the NAEYC (2012), to achieve the potential benefits of integrating technology in classrooms, teachers must focus on the activity or lesson plan itself not on the technology tool being used. There are many activities that are important for children's vocabulary development such as social interactions, outdoor experiences and conversation. Thus, teachers should limit the use of technology in classrooms and provide it to support learning to increase children's motivation and interest, and to extend their knowledge of new concepts.

▪ Technologies should be used to prepare and empower students for learning new vocabulary in the future. Using technology can maximize independence and success in children and introduce them to other technology resources that children are likely to use in the future (Labbo & Reinking, 1999). Therefore, teachers should provide children with easy to use technology that can represent information easily, so children will have the ability to access and use technology independently. Teachers should use technology that introduces children to new ways of thinking and working. For example, children will be able to use an electronic dictionary to search for unfamiliar words or can look for more information about certain word meanings via the Internet using an image, video, and audio to support their understanding of the new concepts.

According to Ringstaff and Kelley (2002), there are numerous studies that provide evidence of the positive impact of technology use in classrooms on student outcomes. When kindergarten

teachers consider these criteria to use and integrate technology in the classroom, this can strengthen the benefits of technology to facilitate meaningful vocabulary instruction for kindergarten children.

Monitor the Progress of Individual Students

Assessing vocabulary might be a challenge, especially for kindergarten children who are pre-readers (Rog, 2011). Indeed, Biemiller (2010) attributed the little attention that vocabulary has received in elementary to the difficulty of assessing vocabulary in primary grades. Nevertheless, researchers provide many techniques that help teachers to assess children's vocabulary knowledge. Teachers can assess children's vocabulary knowledge informally during teacher-student interaction. According to Rog (2011), teachers can develop vocabulary checklists to examine children's vocabulary knowledge, such as if children use vocabulary appropriately or use new vocabulary when they retell stories. Another method of measuring children's vocabulary knowledge is observation. Teachers can note the way children use words in sentences and in different situations, then provide the appropriate instruction that children need. In addition, literacy experts have created several individually administered tests; examples of these tests are the Peabody Picture Vocabulary Test (PPVT) (Dunn & Dunn, 1997), the Expressive vocabulary tests (Williams, 1997) and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). These tests are widely used, and they are general measures of vocabulary development. The Peabody Picture Vocabulary Test (PPVT) requires children to select an appropriate picture that represents the spoken word from four pictures. The Expressive Vocabulary Test (EVT) involves asking children to label pictures and give definitions or synonyms for given words. The purpose of The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) is to measure phonemic awareness, alphabetic principles, accuracy and fluency with connected text, reading

comprehension, and vocabulary. Using several types of vocabulary assessment helps teachers to plan appropriate lesson plans and activities that meet their students' learning needs.

Summary

Many researchers have indicated that early vocabulary development is a significant facet for promoting reading skills and school success. Vocabulary instruction is an important element of reading instruction to extend students' knowledge of word meanings. In this literature review, seven principles of effective vocabulary instruction were presented. In vocabulary instruction, vocabulary should be taught directly and explicitly, classrooms should be enriched with a word-rich environment, instruction should be meaningful to students, target words should be useful, various strategies must be used, technology should be integrated in classrooms and students should be assessed frequently throughout the school year. The researchers have developed these principles to guide the practices of vocabulary instruction. For practices, several components suggested by the relevant literature were offered. The components included explicit vocabulary instruction, selecting words worth teaching, strategies for vocabulary instruction, technology use and vocabulary assessments. In light of the principles and practices of effective vocabulary instruction, several components of best practice in vocabulary instruction were provided for kindergarten teachers to enhance the growth of children's vocabulary development. Kindergarten teachers should provide a word-rich environment, engage children in word meanings, plan and present vocabulary instruction effectively, provide clear explanations of word meanings, enhance vocabulary learning with technology and monitor the progress of children's vocabulary development. The next chapter outlines the methodology of the study.

CHAPTER III

RESEARCH METHODOLOGY

The review of the literature indicates a need to gain a better and more comprehensive understanding of what kindergarten teachers do to provide effective vocabulary instruction. The study aimed to explore and describe highly effective kindergarten teachers' practices in vocabulary instruction. This description provided other kindergarten teachers sufficient information and in-depth understanding of effective vocabulary instruction for kindergarten children. The qualitative approach of data collection was utilized to investigate the following main research question and the five sub-questions:

How do highly effective kindergarten teachers teach vocabulary?

1. What are the methods they use to teach vocabulary?

2. How do they select vocabulary worth teaching?

3. How do they assess vocabulary development in their students?

4. How do they use technology to teach vocabulary?

5. To what extent do their practices align with the recent research on vocabulary instruction?

This chapter presents the research methods of the study. It is organized into several sections, which include description of the district setting and teacher participants, description of data collection procedures, description of data analysis methods and discussion of limitation and trustworthiness issues.

Setting and Participants

Participant Selection

For the purpose of this study, the participants were selected purposively utilizing a criterion sampling scheme. The goal of this type of sampling is to choose participants that are relevant to the research questions (Bryman, 2008). The use of criterion sampling allowed the researcher to select highly effective teachers to answer the main question of the study regarding how highly effective kindergarten teachers teach vocabulary. The selection of the participants was based on the following criteria:

- Participant teachers should demonstrate sufficient knowledge of content, pedagogy, learning processes and outcomes. This knowledge can be determined based on the classroom observations form that the principals use to evaluate teachers.

- Participant teachers should be responsible to enhance students' learning and development by presenting effective instruction that meets students' learning needs, as well as improve their teaching practices by pursuing professional development. The responsible teachers can be identified by looking at students' assessment score data to estimate the effectiveness of the participant teachers and comparing the professional hours that the teachers have in the past year to the professional hours of other teachers.

- Participant teachers should have at least three years experience teaching at the kindergarten level.

Setting and Participants Description

The study took place in nine elementary schools within one school district located in the northwest part of Arkansas. The school district serves students from prekindergarten through grade 12. The district has a total number of 8,838 students in 15 schools. Sixty percent of

students are eligible for free or reduced meals. There are nine elementary schools with a total of

4,540 elementary students. There are 38 kindergarten classrooms in these elementary schools. In

the school district, kindergarten student enrollment per class has been capped at 22 students.

Nine kindergarten teachers from the various elementary schools of this northwest Arkansas

school district were chosen to participate in this study. The reason for choosing teachers from

different schools, instead of from one school, is to examine the vocabulary instruction from

different perspectives and to avoid the possible influence of a single literacy specialist or the

environment of the school on the participant teachers. When the data collection started, all the

participants had teaching experience of over ten years, ranging from 11 to 32 years. All

participants teach full-day kindergarten and all are female. Of the nine participants, six had

obtained MA degrees in Education and one is completing work for an MA in Administration;

one had gained the National Board Certification for Teachers, and one held a certificate in

Teaching English as a Second Language. The class size for all participants is 22, except for one

classroom containing 20 students. To protect confidentially and anonymity, the participants were

identified by pseudonyms. Details of demographics describing each participant's school are

presented in Table 1, followed with a brief description of each participant teacher's teaching

experience, number of students in classroom and educational degree completed.

Table 1

Demographic Information for Each Participant Teacher's School

School	Sarah	Eliza.	Rachel	Kathy	Jasmine	Morgan	Mary	Kelly	Erica
Students	448	549	538	412	388	618	528	691	361
free and reduced lunch	79%	41%	43.2%	49.3%	60.5%	67.7%	23%	12.2%	59.8%
White	46%	66%	72%	80%	62%	59%	88%	90%	72%
Hispanic	27%	16%	13%	12%	17%	20%	2%	3%	14%
African American	21%	13%	6%	6%	10%	16%	4%	2%	12%
Asian	5%	4%	7%	2%	10%	4%	5%	5%	1%
Native American	0%	1%	1%	0%	0%	1%	1%	0%	1%
Pacific Islander	1%	0%	1%	0%	1%	0%	0%	0%	0%

Note. Information based on 2012/2013 data obtained from Arkansas Department of Education at https://adedata.arkansas.gov

Ms. Sarah. Ms. Sarah has 14 years teaching experience. She was a first grade teacher for 6 years, literacy specialist for 2 years and kindergarten teacher for 7 years. The number of students in her classroom is 22. She earned a bachelor's degree in Elementary Education and a master's degree in literacy, and she holds a certification in Teaching English as a Second Language.

Ms. Elizabeth. Ms. Elizabeth has 28 years teaching experience. She taught first grade for one year and kindergarten for 27 years. The number of students in her classroom is 22. She holds

a bachelor's degree of Science in Education plus 12 hours majoring in Elementary Education. She has a National Board for Professional Teaching Standards certification.

Ms. Rachel. Ms. Rachel has taught in a kindergarten classroom for 11 years. The number of students in her classroom is 20. She has a bachelor's degree in Elementary Education and Master's Degree in Gifted and Talented Education. She is studying to take the National Board exam to get a certificate from the National Board for Professional Teaching Standards.

Ms. Kathy. Ms. Kathy has 11 years teaching experience in kindergarten. The number of students in her classroom is 22. She has a bachelor's degree in Elementary Education and a master's degree in Childhood Education.

Ms. Jasmine. Ms. Jasmine has 30 years teaching experience, including 6 years in pre-kindergarten, 20 years in first grade and 4 years in kindergarten. Her classroom size is 22 students. She earned a bachelor's degree in Elementary Education and a master's degree in Elementary Education with an emphasis on early childhood education.

Ms. Morgan. Ms. Morgan has 13 years teaching experience, including two years in first grade, six years in second grade and five years in kindergarten. She was assistant director in the preschool program in the district for two years, and she helped to prepare the preschool program for the district. The number of students in her classroom is 22. She has a bachelor's degree in Early Childhood Education and she is currently studying to get a master's degree in Educational Administration.

Ms. Mary. Ms. Mary has taught kindergarten for 32 years. The number of students in her classroom is 22. She has a bachelor's degree in Science Education. She has monitored many internship teachers, and she was honored as school teacher of the year.

Ms. Kelly. Ms. Kelly has 14 years teaching in kindergarten. The number of students in her classroom is 22. She holds a bachelor's degree of Science in Education and Mater of Arts in Teaching. She has a certificate in Early Literacy. Recently, she was honored in her school as a teacher of the year.

Ms. Erica. Ms. Erica has taught kindergarten for 18 years. The number of students in her classroom is 22. She has a bachelor's degree in Elementary Education. She is currently a member of the writing committee team for kindergarten in her school district.

Data Collection Procedures

The qualitative approach of data collection was utilized because the qualitative data provide thick descriptions and thorough explanations of the events and processes occurring in their context (Miles & Huberman, 1994). In this qualitative study, three methods, classroom observation, interview and document analysis of vocabulary lesson plans, were employed to explore and describe highly effective kindergarten teachers' practices in vocabulary instruction. Along with these methods, field notes were taken during and after each classroom observation and interview. This varied approach to data collection helped the researcher to understand in-depth the ways that participant teachers teach vocabulary and increased confidence in data analysis. At the beginning of the study, letters were provided to the principals of the nine elementary schools explaining the scope and the purpose of the study. The principals in each elementary school were asked to recommend one highly effective kindergarten teacher in teaching literacy based on the three criteria mentioned earlier. Each principal sent an email to the researcher containing the name and contact email of the identified teacher. The identified participant teachers were contacted with an email asking for their participation in this study with a letter detailing the requirements. All identified teachers were cooperative and agreed to

participate in the study. Before starting to collect data, 10 minute meetings were arranged with the nine chosen participant teachers. The purpose of these meetings was threefold. First, each participant teacher was informed of her rights as a participant and that all information will be deemed confidential and no participants will be identified by name. Second, the purpose of the observation and the interview was explained to the teacher participant. Third, the participants were asked to recommend the best times for their vocabulary instruction to be observed and provide a copy of their lesson plans for vocabulary. During this meeting, also, each participant signed a consent form approved by the Institutional Review Board of the University of Arkansas (see appendix A). A follow-up email was sent to each participant teacher to confirm the scheduled days for interview and observation.

Interview

This study employed face to-face semi-structured interviews. The purpose of the interview is to obtain a clearer picture of the practices highly effective teachers use to teach vocabulary in kindergarten classrooms. The design of interview questions was guided by the quality criteria suggested by Kvale (1996). According to Kvale (1996), the questions of the interview must be rich, specific and relevant to the interviewee, be designed to put interviewees at ease, allow them to express themselves, have brief questions and long answers, and encourage answers that are followed up and clarified by the researcher. Before conducting the interviews, the interview questions were reviewed by two experts in the field of early literacy who work as literacy specialists in elementary schools. Modifications to the questions were made as recommended by these experts. Prior to the interview, each participant teacher was provided with a copy of the interview questions; thus, participants would have the opportunity to give better and more focused answers.

Interviews were scheduled to last between 30 to 40 minutes, and all participant teachers were interviewed in their classrooms. This interview setting allowed teachers to provide some available examples of their practices and materials used to teach vocabulary. For example, during the interview, the participant teachers were able to show the vocabulary displayed on classroom walls and access their files to show the researcher their students' works.

The interviews were audio-recorded with the permission of the participants. Interviewees were asked the following questions, which are designed to complement the research questions (see Appendix B):

1. What strategies do you use in your classroom to teach vocabulary?

2. Which strategy do you believe is most effective? Why?

3. Can you give an example of an effective strategy that you used to teach vocabulary?

4. How do you select vocabulary worth teaching?

5. How many word meanings do you teach every day / week?

6. How many times do you repeat the new word to children?

7. Do you focus on academic vocabulary?

8. Is there any vocabulary list you use to teach vocabulary?

9. How do you assess children's vocabulary growth?

10. What types of assessment do you use to assess children's vocabulary development?

11. How many times do you assess vocabulary instruction during the school year?

12. Do you assess students' understanding of word meanings after the vocabulary lesson? How?

13. Do you think using technology is important to teach vocabulary?

14. Do you use technology to teach vocabulary? If so, what types of technology do you use?

15. Does technology help you to plan vocabulary lessons? If so, how?

16. What kinds of software programs do you use in your classrooms? Why?

The interview was accomplished by reminding the participant teachers that there are no incorrect responses, and the reason for the interview is to understand the effective teachers' practices to teach vocabulary in their classrooms. An interview protocol has been developed to help collect focused data to achieve the research's goals and to make the best use of the limited time available (see Appendix C).

Observation

The observation data can contribute to help triangulate emerging findings from interview and document analysis data (Greene, 2007). In this study, classroom observation served to provide greater understanding of the context in which vocabulary lessons occur in kindergarten classrooms and helped to gain a comprehensive picture of each participant's practices in vocabulary instruction. Each participant teacher was visited during their vocabulary lesson. Before observation, all participant teachers gave their permission to be part of the study and they were asked about the best time during the day to be observed. This helped the researcher to avoid wasting observation time. Based on the literature review, an observation protocol had been designed by the researcher (see Appendix D). This protocol served as a guide to help the researcher to focus on answering the main research question regarding how highly effective kindergarten teachers teach vocabulary. The audiotaped lessons ranged from 15 to 27 minutes. The average lesson length was 22 minutes; eight of the observed vocabulary lessons were reading a story aloud to a whole group and one observed vocabulary lesson was during small group reading activity. During the observation, the researcher focused on the teachers' actions rather that the students', since the aim of the investigation was to explore teachers' practices of

vocabulary instruction. The researcher sat in an area of the classroom that allowed her to observe the lesson and, at the same time, be as unobtrusive as possible. The researcher used a laptop to record everything occurring during the lesson in the observation protocol. Also, the researcher used a digital recorder during the real-time observation. This helped her to capture any missing information after the end of the observation.

Document Analysis

The document analysis is one approach to establishing triangulation to gain better understanding of the issue being studied (Teddlie & Tashakkori, 2009). In this study, the lesson plans for vocabulary were analyzed and reviewed by the researcher. Each participant teacher was asked to submit 20 vocabulary lesson plans, 180 in total, which had been taught in the preceding month. Analyzing the lesson plans for vocabulary helped to supplement the interview and observation data to provide a thorough picture of effective teachers' practices to teach vocabulary in kindergarten classrooms. The analysis of the provided lesson plans assisted the researcher to gain more understanding of the methods used to teach vocabulary, ways to select vocabulary, different assessments to assess students' vocabulary development and the technology that teachers use during the vocabulary lessons.

<div align="center">

Data Analysis

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Data analysis started as soon as data collection began and continued to the end of the study. The data were transcribed, stored electronically, and organized in order to qualitatively describe the practices of highly effective kindergarten teachers in vocabulary instruction. The following analytic strategies were used to address the main research question of the study: How do highly effective kindergarten teachers teach vocabulary?

First, the same data analysis methods were used to answer the first four research sub-questions:

1. What are the methods highly effective kindergarten teachers use to teach vocabulary?

2. How do they select vocabulary worth teaching?

3. How do they assess vocabulary development in their students?

4. How do they use technology to teach vocabulary?

These research sub-questions examine the methods, word selection, vocabulary assessments, and technology that highly effective kindergarten teachers use and believe is effective for kindergarteners. The data from the observation, interview, and lesson plan analysis helped to answer these questions. To analyze these qualitative questions, the researcher used the coding steps in grounded theory (Strauss & Corbin, 1994). Coding steps in grounded theory served as a guideline to analyze participants' responses to the open-ended questions used in the interview and to analyze data collected from observation and lesson plans analysis. The coding steps involve coding the data per response for its major categories of information, classifying the significant statements into categories, labeling similar statements with the same code called "theme," and calculating frequency and percentage per theme across respondents. Overall, the percentages for each item in the observation, interview and lesson plans analysis were calculated. These steps assisted the study to report the important findings that reflect highly effective teachers' practices in vocabulary instruction.

Second, the fifth sub-question was analyzed:

5. To what extent do highly effective kindergarten teachers' practices align with the recent research on vocabulary instruction?

This question examines whether the effective teachers' practices align with recent research recommendations regarding the best practices to teach vocabulary to kindergarten children. To answer this question, an evaluation checklist for vocabulary instruction in kindergarten classrooms has been developed by the researcher (see Appendix E). The checklist is composed of four parts that align with the research questions including: (a) methods to teach vocabulary, (b) word selection, (c) assessing students' vocabulary knowledge, and (d) using technology. Each part contains five recommendations for a total of 20 recommendations that are identified from recent research regarding vocabulary instruction. Each recommendation is based on at least three recent studies on literacy (see Appendix F). Besides the support from recent literature, the checklist has been reviewed by two literacy specialists and one statistical specialist and, based on their comments, several modifications have been made. The data from the observation, interview and lesson plans analysis were compared with the recommendations in the checklist. The evaluation checklist is only designed to record qualitative data on whether or not each recommendation is implemented by the participant teachers. To supplement the yes/no answers in the checklist, a comments section is provided for clarification on partial use or modified use of the recommendations.

Limitation

There are several limitations that need to be acknowledged and addressed regarding the present study. First, the participant teachers' selection involved asking their principals to identify highly effective kindergarten teachers based on criteria provided by the researcher. It was assumed that the principals had knowledge of the effective teachers in their school and that they followed the specific criteria provided to select the participant teachers. Second, the qualitative methods used in this study may inherently reflect the researcher's and the participants'

perceptions; thus, documenting the findings of the study might be sometimes challenging. However, the researcher recognized the significance of careful reporting of data. Third, for the purpose of this study, only one observation per teacher was implemented. The researcher recognized that conducting multiple observations helps to gain an in depth understanding of teachers' practices of vocabulary instruction in kindergarten classrooms. Nevertheless, the data from the study can be considered a resource base available for further observational studies in this area. Fourth, during data collection, participant teachers may act somewhat differently due to being audiotaped and observed. The researcher made sure to remind teachers that the aim of the study is to describe what they normally do to teach vocabulary to kindergartners and not to ask the participant teachers to perform differently on their vocabulary lesson.

Another limitation is that the study describes nine participant teachers from nine elementary schools within one school district. The participant teachers are representative of a small sample; thus, the study is limited in its generalization. Yet, within the study goals, the rich description of participant teachers' practices will add to the body of literature on vocabulary instruction in kindergarten. Finally, since the participant teachers are from one school district, the influence of the district's teaching practices might affect all teacher participants' practices to teach vocabulary; for example, all participant teachers use the same curriculum materials that were suggested by their school district. However, the purpose of this study is to describe vocabulary instruction in kindergarten classrooms and it was thought that the findings of the study would be of value for this purpose.

Trustworthiness

Obtaining trustworthiness is important and was considered prior to conducting this study. To ensure trustworthiness of this study, multiple data sources were used, such as interviews,

observations, and document analysis, to collect data. The use of multiple methods in this study is

an effort to provide triangulation and establish trustworthiness for the study. Greene (2007)

indicates that through triangulation, researchers use different methods to investigate the same

phenomenon to promote the validity of a study's conclusions and findings. The triangulation

strategy allows the researcher to look at the approaches to teaching vocabulary in kindergarten

from more than one standpoint, which assists the researcher to better understand the phenomena

(Teddlie & Tashakkori, 2009).

 In order to confirm the accuracy of data from observations and interviews, all

observations and interviews were audiotaped and were transcribed immediately and verbatim.

The participant teachers reviewed all transcripts to validate the accuracy and representation of

their words. Most participant teachers were satisfied and made no change to their responses, and

two of them wrote several comments which were taken into consideration. In addition, before

analyzing the data, the transcripts were reviewed many times against the audiotapes by the

researcher to ensure the accuracy of the transcripts.

<div align="center">**Summary**</div>

The scope of this study investigated how highly effective kindergarten teachers teach

vocabulary. This study was conducted with nine kindergarten teachers from nine elementary

schools within one school district located in Northwest Arkansas. The teachers were identified

based on recommendations from each school principal, which were based on specific criteria

provided by the researcher. Several methods to collect data were used in this study, including

classroom observation of participant teachers' practices in vocabulary instruction, semi-

structured interviews, and analysis of vocabulary lesson plans. The gathered data were analyzed

using coding steps in grounded theory and an evaluation checklist. The results from analyzing

the data provided an explanation of the following: (a) the most effective methods as perceived by participant teachers to teach vocabulary, (b) the strategies that they use to select target vocabularies, (c) the assessments that they use to check for students' understanding of word meanings, and (d) their integration of technology in vocabulary instruction.

CHAPTER IV

FINDINGS REPORTED BASED ON DATA COLLECTION METHODS

This chapter presents the results of qualitative data collected by the researcher throughout the course of the study. The aim of this present study was to describe highly effective kindergarten teachers' practices in vocabulary instruction. The findings of this study were reported based on data from teacher interviews, classroom observations and document analysis of lesson plans of nine highly effective kindergarten teachers in nine elementary schools within one school district located in northwest Arkansas. The researcher investigated the following main research question and the five sub-questions:

How do highly effective kindergarten teachers teach vocabulary?

1. What are the methods they use to teach vocabulary?

2. How do they select vocabulary worth teaching?

3. How do they assess vocabulary development in their students?

4. How do they use technology to teach vocabulary?

5. To what extent do their practices align with the recent research on vocabulary instruction?

In this chapter, the results are organized according to particular data collection methods used in the study, and in the next chapter the results are presented according to the research questions. The results of the study are presented in the following sections of the chapter. The first section provides a summary description of each participant teacher's vocabulary lesson. The second section describes the interview data from the participant teachers. The third section includes a summary of data from the lesson plans collected from the participant teachers. The final section provides findings across data collection methods.

Audiotaped Vocabulary Lesson Data

Each participant teacher's vocabulary lesson was observed and audiotaped within the fourth quarter of the school year. All participant teachers teach a vocabulary lesson every day. The lessons ranged in length from 15 to 27 minutes (see Table 2); the average length of lessons was 22 minutes. Eight of the nine observed lessons were read aloud for the whole class and one was based on small group reading instruction. The nine participant teachers in all observed lessons taught one vocabulary word directly. While reading aloud, all participant teachers held the book out to the side to enable children to see illustrations, except for one teacher, Ms. Elizabeth, who used an ELMO projector. All participant teachers used the same manner to read aloud. Before reading, they introduced the author, illustrator and title of the book and asked children for their predictions of what would happen in the story. During reading, participant teachers paused occasionally to ask open questions, make comments, listen to children's answers and define some vocabulary words. After reading, they asked more questions, determined if children's predictions were right and focused on the target vocabulary of the lesson. All participant teachers explained the vocabulary after reading aloud; three of them also introduced the vocabulary before and during reading aloud, and one teacher presented the vocabulary during the lesson, as well as afterward. The strategies to explain the vocabulary differ from teacher to teacher; however, they all use discussion, student-friendly definition and examples to introduce the vocabulary to children. The following section is a description of the vocabulary lessons for each participant teacher.

Ms. Sarah's Lesson

Ms. Sarah read the fiction book *A House for Hermit Crab* by Eric Carle. The new vocabulary word that the teacher focused on was the word "tidy." Before reading, the students

were directed to look at the cover of the book and look for clues revealing the story's characters and setting. The teacher asked children for their predictions by asking them "What do you think the hermit crab's house will look like?" While reading, the teacher focused on certain vocabulary words. For example, during the reading, the teacher asked students about the meaning of the word "pebbles." Then, she related the word to the unit being studied, which is "living and nonliving," by telling them that a pebble is not alive, and she gave them the student-friendly definition "a pebble is a small rounded stone." Then, she showed them the picture of pebbles in the book. After reading, the teacher discussed the meaning of the story with the children and asked some questions about the story to see if they understood it. Ms. Sarah then began to explain the target vocabulary word "tidy." She read the sentence that contained the word "tidy" in the story: "How tidy and hard working you are, would one of you be willing to come and help clean my house?" The teacher provided a student-friendly definition of the word "tidy" and asked the children to give examples of the word. She repeated the word and asked children to repeat the word many times. She also gave the students the opportunity to answer the question "What are some ways to keep our room tidy?" Then, the teacher used the thumbs up or thumbs down method. She offered students some scenarios using the word "tidy" and asked them to thumb up if the scenario represented the word "tidy" and thumb down if it did not. For example, the teacher said "I made my bed today," and the children thumbed up; then she said "I spilled the ice-cream on the floor and I did not clean it up," and the children thumbed down. At the end of the lesson, the teacher encouraged children to use the word in their conversations and writings.

Ms. Elizabeth's Lesson

In the lesson, Ms. Elizabeth focused on the vocabulary word "prey." The teacher began the lesson with a brief preview of the nonfiction book *Baby Animals of the Grasslands* by

Carmen Bredeson. Before reading, she asked the children for their predictions of some ways they thought the baby animals would be able to stay safe. While reading, the teacher asked some questions to the children and gave them the opportunity to answer. After reading, the teacher discussed the meaning of the story by asking them some questions, such as "What animal has the largest egg in the world?" What animal is the tallest?" Then, the teacher asked if their predictions before reading were right or wrong by asking them "Were we right about how the baby animals stayed safe?" After discussing the story, the teacher explained the vocabulary word "prey." The teacher reread the sentence that contained the word in the story: "Soon they will learn to hunt for prey like zebras and wild pigs." Then, she asked children to tell how "prey" was used in the story. The teacher provided a definition of the target vocabulary word and asked children to provide their own definitions of the word. After that exercise, she asked them to give some examples of the word "prey." Then, the teacher told the students to act like lions and sneak up on their prey. The children clearly enjoyed this activity. At the end of the lesson, the teacher asked children to use the target word in a complete sentence.

Ms. Rachel's Lesson

Ms. Rachel read the nonfiction book *From Tadpole to Frog* by Wendy Pfeffer. The vocabulary word taught was "hibernate." Before reading, the teacher introduced the story to the students. She asked them "Where do you think the frogs might be? Why?" Then, she asked them to listen to find out where the frogs are and how they live and grow during the year and the next year. While reading the story, the teacher asked students some questions about the story and explained some vocabulary words. For example, after she read the sentence "Tiny hind legs begin to sprout," she asked children about the meaning of the word "sprout," and she provided a definition of the word. At the end of reading aloud, the teacher discussed the meaning of the

story and presented the new vocabulary word "hibernate." Ms. Rachel reread the sentence "Frogs hibernate." After repeating the vocabulary word many times, she asked the children to think-pair-share to answer the question "What does the word hibernate mean?" Some children gave their own definitions. Then, the teacher provided them with a student-friendly definition of the word hibernate: "To be very quiet and still, not eating, for a very long time, like for the whole winter." The teacher asked students to give examples of animals that are hibernating. Then, she asked children to create sentences using the word "hibernate." The students provided several sentences, and the teacher wrote their sentences on the board and discussed them with the students.

Ms. Kathy's Lesson

In the reading aloud period, Ms. Kathy read the nonfiction book *Commotion in the Ocean* by Giles Andreae. She directly taught the vocabulary word "scamper." Before reading the story, the teacher introduced the book to children and asked for their predictions by asking "What kind of animals do you think might be in the book?" The teacher gave the children the opportunity to answer the question. Then, she told them to listen to find out if their predictions were correct. While reading, the teacher reviewed some vocabulary words and gave student-friendly definitions to the words. She explained the meaning of the word "jiggle," and then she asked them "can you jiggle jelly?" She also provided a definition to the word "skewer" as "to put something on a thin stick or rod," and a definition to the word "massive" as "very big or huge." After reading the story, the teacher discussed the meaning of the story and what the children learned. After that, the teacher discussed the word "scamper." She reread the sentence that contained the target word and provided a definition of the word as "a quick light run or movement." She provided some examples of the vocabulary word "scamper" such as "The

mouse scampered through our house. He was fast and had quiet feet." The teacher asked a child to show the class how to scamper. Then, the teacher used the thumbs up/down method; for example, she said "Do you think an elephant would scamper?" At the end of the lesson, she encouraged children to use the vocabulary word "scamper" with their family and model the word during recess.

Ms. Jasmine's Lesson

Ms. Jasmine began the vocabulary lesson by introducing the book *Can I Have a Stegosaurus, Mom?* By Lois Grambling. She provided children with a brief overview of the book and asked for their predictions. The teacher presented the new word "pounce." She said "When you hear me say the word pounce, you will clap your hands." While reading, the teacher stressed the new word "pounce." Some of the children clapped their hands, and the teacher reminded them that this was the new word that they would learn. After reading aloud, the teacher discussed the meaning of the story. Then, the teacher asked them to listen to the word "pounce" again. The teacher reread the sentence in the story and provided a student-friendly definition of the word "pounce," which is "to jump on." She repeated the new vocabulary word "pounce" many times, and she put the word in a new sentence: "The lion cub pounced on the baby zebra." The teacher asked children to pair-share to think of other animals that might pounce on their prey. The teacher took time to hear children's examples of the target word, and she provided more examples of the new word in other contexts. At the end of the lesson, the teacher encouraged children to use the new word in their writing and their speaking.

Ms. Morgan's Lesson

In the vocabulary lesson, Ms. Morgan read aloud the book *Mud* by Mary Lyn Ray. The teacher focused on the vocabulary "scattered." She began the lesson with a brief overview of the

observing the students and asked each set of partners to answer the question. After the pair-sharing, she asked students to listen to the story and to the word "swooped" to see if their guess of the meaning of the target vocabulary was correct. When the teacher read the word "swooped" during reading aloud, she asked the children to listen to the word again in a sentence and look at the picture to figure out the meaning of the word. The teacher gave the children the student-friendly definition: "Move rapidly downward through the air". She also defined the word "rapidly" as "quickly." After reading the story, the teacher asked the students "What is the word we learned today?" The teacher reread the sentence in the story, and then she provided another example: "The eagle swooped down and grabbed the little field mouse out of the yard." The children repeated the target vocabulary word many times and modeled the word using their hands. The teacher asked students "Which of these would swoop down from the sky, a bumblebee or a frog?" At the end of the lesson, Ms. Mary asked the children to provide a good definition of the word in their own words and use the word in sentences.

Ms. Kelly's Lesson

Ms. Kelly led a small group of five students in a guided reading or a small group reading instruction period. Ms. Kelly and the small group read a book titled *One More Frog* by PM Math Readers. In this lesson, the teacher focused on one vocabulary word, "hibernate." Each student had an individual copy of the same book. The teacher asked students to look through their books to look for clues about the characteristics and the plot of the story. The teacher then began to read aloud while the children followed her by pointing to the words in the story. During reading, the teacher reviewed some vocabulary words, such as the vocabulary "comparison." The teacher gave some examples that explained the meaning of the word "comparison." In this small group, the teacher focused on how to read fluently, and she listened to each student while reading. Then,

she asked each student to read with his or her partner. The teacher reviewed the vocabulary from the previous lesson, "hibernate." She asked children to provide their own definition of the word "hibernate." The teacher gave children a student-friendly definition of the word, and she asked them to provide examples of animals that hibernate. At the conclusion of the lesson, Ms. Kelly directed each student in the small group to take the book and read it several times with their family at home.

Ms. Erica's Lesson

Ms. Erica read aloud to the whole group a nonfiction book *How a Seed Grows* by Helene Jordan. The vocabulary word was "shoot." Before reading, the teacher introduced the new vocabulary "shoot" to children, and she asked them to signal by patting their shoulders when they heard the word in the story. Then, she asked children for their predictions by asking them, "When you look at the picture in the front cover of the book, what does this book make you think about?" After listening to many predictions from children, the teacher told them "Let's read to find out what happens when the seed gets planted in this story." While reading, the teacher asked some questions about the story; for example, the teacher asked children to share with a partner to think of which seed grows fast and which does not. While the teacher was reading, the children listened to the word "shoot," and some of them patted their shoulders as directed when they heard the target vocabulary. The teacher pointed to the word and to the picture to help children figure out the meaning of the word "shoot." The teacher continued reading while discussing the meanings of the text on each page of the book. After reading the story, the teacher read the sentence that contains the word "shoot" again: "Soon you will see the pale shoots push through the soil." The teacher provided a student-friendly definition of the vocabulary word. She asked them to say the word together and use it in another context. The teacher asked them to model the

word shoot. She asked them to pretend that they were seeds; she sprinkled a little water on them and they modeled how the seed grows. At the end of the lesson, the teacher gave students several meanings of the word shoot. Table 2 summarizes each participant teacher's vocabulary lesson.

Table 2

Length and Description of the Observed Vocabulary Lessons, Organized by Participant Teachers

Teacher	Date/Time	Lesson Description
Ms. Sarah	May 6th, 2013 11:10 to 11:31 (21 minutes)	• Reading aloud a fiction book *A House for Hermit Crab.* • Vocabulary: "tidy." Introduced after reading aloud. • Methods: discussion, thumbs up/down, repeating, examples, student-friendly definition.
Ms. Elizabeth	May 2nd, 2013 9:30 to 9: 54 (24 minutes)	• Reading aloud a nonfiction book *Baby Animals of the Grasslands.* • Vocabulary: "prey." Introduced after reading aloud. • Methods: discussion, repeating, student-friendly definition, children's definitions, examples, modeling.
Ms. Rachel	May 14th,2013 9:42- 10:09 (27 minutes)	• Reading aloud a nonfiction book *From Tadpole to Frog.* • Vocabulary: "hibernate." Introduced after reading aloud. • Methods: discussion, repeating, student-friendly definition, examples, writing the vocabulary, Think-Pair-Share.
Ms. Kathy	May 30th, 2013 8:30 to 8:50 (20 minutes)	• Reading aloud a nonfiction book *Commotion in the Ocean.* • Vocabulary: "scamper." Introduced after reading aloud. • Methods: discussion, student-friendly definition, examples, repeating, modeling, thumbs-up/down.
Ms. Jasmine	April 23rd,2013 8:7 to 8:26 (19 minutes)	• Reading aloud a fiction book *Can I Have a Stegosaurus, Mom?* • Vocabulary: "pounce." Introduced before, during and after reading aloud. • Methods: discussion, student-friendly definition, examples, repeating.

(Continued)

Table 2 (Continued)

Teacher	Date/Time	Lesson Description
Ms. Morgan	May 20th, 2013 12:45- 1:10 (25 minutes)	▪ Reading aloud a nonfiction book *Mud.* ▪ Vocabulary: "scattered." Introduced during and after reading. ▪ Methods: student-friendly definition, examples, repeating, modeling.
Ms. Mary	May 14th, 2013 2:00 to 2:15 (15 minutes)	▪ Reading aloud a fiction book *The Munching Crunching Caterpillar.* ▪ Vocabulary: "swooped." Introduced before, during and after reading. ▪ Methods: discussion, student-friendly definition, children's own definition, examples, modeling, sentence.
Ms. Kelly	May 1st , 2013 8:33 to 8: 55 (22 minutes)	▪ Reading aloud in a small group a nonfiction book *One More Frog.* ▪ Vocabulary: "hibernate." Introduced after reading. ▪ Methods: student-friendly definition, examples.
Ms. Erica	May 17th,2013 2:27 to 2:50 (23 minutes)	▪ Reading aloud a nonfiction book *How a Seed Grows.* ▪ Vocabulary: "shoot." Introduced before, during and after reading. ▪ Methods: student-friendly definition, multiple meanings, examples, model, repeating.

Interview Data

The researcher conducted semi- structured interviews with all participant teachers to learn more about the vocabulary instruction practices of highly effective kindergarten teachers than may have been expressed fully through the classroom observation. The interview questions were designed to align with the research questions to investigate participant teachers' methods to teach vocabulary, techniques to select vocabulary worth teaching, approaches to assess students' vocabulary development and integration of technology in teaching vocabulary. The following section provides a summary of the data collected from the interviews.

Ms. Sarah' Interview

The analysis of the interview data revealed that Ms. Sarah teaches vocabulary by using a strategy from a book titled *Bringing Word to Life* (Sarah, Interview, May 6th, 2013, p.1). She indicated that this book served as a guide to help her select reading materials that are on students' engagement level and choose certain words called "tier two words" which are words that students need to know for success in their academic learning. In her words, "I focus on words that children are going to come across again as they go in their literacy experiences… these words called tier two" (Sarah, Interview, May 6th, 2013, p.1). She selects a book and then makes a list of five to six tier two words and chooses the most beneficial words to teach directly during the reading aloud period, approximately five to ten words a week. Ms. Sarah believes that the best way to teach vocabulary is when the vocabulary is being taught in context. To support her idea, she went on to explain a vocabulary program that she worked on years ago. As she explained, this program teaches children vocabulary in isolation, and she found the program was not effective because it did not put vocabulary in context. Ms. Sarah indicated that she used several methods to teach vocabulary, such as thumbs up and thumbs down, word wall, and model. Usually, she reviews the meaning of the taught words with children at the end of the week. To assess children's understanding of the vocabulary, she uses an observation method, noting that "through observation I can see who really is understanding the words" (Sarah, Interview, May 6th, 2013, p.3). For technology used to teach vocabulary, Ms. Sarah stated that she uses the Smartboard, computers and iPads. For example, she uses an iPad during small group to show pictures representing the new vocabulary words.

Ms. Elizabeth's Interview

The analysis data of the interview with Ms. Elizabeth showed that her strategy to teach vocabulary is to select books that go along with the unit and her students' learning level, and sometimes she uses the books that are provided by the school district. From the selected books, she chooses one or two vocabulary words to be directly taught. She believes that the best way to learn vocabulary is through literature. She stated that "books are great introductions for new vocabulary" (Elizabeth, Interview, April 26th, 2013, p.1). Ms. Elizabeth indicated that she uses student-friendly definition, and sometimes she explains the multiple meanings of some words. She also focuses on academic vocabulary, especially in math and science. For example, she explained that at the beginning of every chapter of the math book she lists vocabulary words on the wall that children must know and talks about them with the children. She pointed out that she uses observation every day to assess children's understanding of the new vocabulary. She also reviews the meaning of the target vocabulary during the small group. In addition, Ms. Elizabeth believes in the importance of using technology to teach vocabulary, such as computers, iTouch and video. She noted that "children love using software programs such as Compass and Starfall; they can manipulate it well and choose the books and read along with the books and listen to songs which can improve their vocabulary" (Elizabeth, Interview, April 26th, 2013, p.5). One of her examples of using technology to teach vocabulary: "I showed the children a video about moms and babies, and I explained the word calf which is a baby cow, so they learned new vocabulary words through videos" (Elizabeth, Interview, April 26th, 2013, p.5).

Ms. Rachel's Interview

In Ms. Rachel's response about methods she uses to teach vocabulary, she indicated that she uses several methods to teach vocabulary during her direct vocabulary instruction including

modeling, think-pair-share, a complete sentence, discussion, children's own definition, and student-friendly definition. Ms. Rachel thinks that one of the most effective methods to teach vocabulary is when children use the vocabulary in their own words. The data showed that Ms. Rachel's approach to select vocabulary worth teaching is by selecting words that are "useful, richer and a little more difficult" to children (Rachel, Interview, April 29th, 2013, p.2). She believes that selecting these words benefits students in their future reading and writing. She also focuses on academic vocabulary; one of her examples was when they learned the landforms, for a science lesson, it was important for children to learn specific academic vocabulary words to learn the names of the different forms. To assess children, Ms. Rachel uses observation every day to check for children's understanding of the new word. She indicated that she usually asks children when they are in small group to write or illustrate the target vocabulary word. Regarding using technology to teach vocabulary, Ms. Rachel noted that she uses videos and PowerPoint to show the pictures of some vocabulary words. Moreover, she pointed out that in her classroom there are computers and iTouches loaded with many software programs to teach literacy in general, and they are available to children. She believes that technology helps children who are auditory or visual learners to internalize the new vocabulary.

Ms. Kathy's Interview

The interview data with Ms. Kathy revealed that she uses several strategies to teach vocabulary, which are student-friendly definition, examples, and complete sentences. She thinks that the most effective strategy to teach vocabulary is reading aloud to children. She further explained the importance of providing opportunities for children to hear the word in text, use it in other sentences and give examples of the word. Ms. Kathy indicated that she teaches directly one to two vocabulary words a day and many vocabulary words indirectly throughout the day.

When she was asked about her way to select vocabulary worth teaching, she indicated that she

selects words that children are most likely to hear in a show or other stories but do not use in

their language. In addition, she noted that she does not use formal assessments to check for

children's understanding of the new vocabulary. Ms. Kathy said, "We do have formal

assessments for phonics and oral language, but we do not specifically have formal assessments

for vocabulary" (Kathy, Interview, April 29th, 2013, p.3). She explained that she uses

observation methods almost every day during group reading to make sure that students

understand the new vocabulary words. For integrating technology, Ms. Kathy indicated that she

uses different types of technology, such as computers, Mimio, and iPads to teach literacy in

general. She thinks that "technology helps keep children's attention better, and it is interesting to

them" (Kathy, Interview, April 29th, 2013, p.4).

Ms. Jasmine's Interview

Ms. Jasmine indicated in the interview that she teaches one to two new vocabulary words

a day and her way to teach the vocabulary is by introducing a book to the students, and from that

book she selects a word which she feels benefits the student's vocabulary development. She

believes that introducing new vocabulary through literature is an effective strategy to teach new

vocabulary. She indicated that this strategy helps children to understand the word by relating it to

the context of the story, which is much more meaningful than presenting just a word from a list.

Regarding her way to select vocabulary worth teaching, Ms. Jasmine selects the vocabulary

words that are useful to children and related to the unit they study. She noted:

We try to make the lesson cohesive throughout the day and week; for example, if we are

talking in science about living and nonliving things, we try to pick useful words that are

related to the study that we are having at that time (Jasmine, Interview, April 22nd, 2013, p.3).

Ms. Jasmine's way to assess children's vocabulary development is through observation, and she noted that she does not use formal assessments to assess children's vocabulary growth. For using technology, Ms. Jasmine thinks that technology helps children to learn new vocabulary. She uses videos to present new vocabulary words visually which helps students to better understand the words. She also indicated that she uses many software programs that support literacy learning; however, they are not designed specifically to help students learn new vocabulary.

Ms. Morgan's Interview

The interview data with Ms. Morgan revealed that she incorporates different strategies to teach vocabulary. She noted:

I try to pick up tier two words which are more useful to children, give definition of the word, provide different examples and ask children to act out the word and give them time to talk to each other about the new vocabulary (Morgan, Interview, May 17th, 2013, p.1).

She also encourages children to use the new vocabulary after the lesson. For example, she indicated that she asks children to write about the vocabulary during center time, talk about it with friends, and come up with sentences about the new word. To assess children's understanding of the target vocabulary, Ms. Morgan uses observation every day. She stated, "I focus on children's oral skills to see if they are able to speak and use vocabulary comfortably in front of the class and if they understand the word and use it correctly" (Morgan, Interview, May 17th, 2013, p.3). After the vocabulary lesson, Ms. Morgan's class does some activities with the new vocabulary. One of her examples was "we do writing activities and I am looking for their

integration of the word in their writing" (Morgan, Interview, May 17th, 2013, p.2). In addition, she believes in the importance of integration of technology to teach vocabulary, saying that "It is good for this age to use technology to stimulate their attention, and technology can provide them with a better description of the word" (Morgan, Interview, May 17th, 2013, p.5).

Ms. Mary's Interview

In the interview, Ms. Mary indicated that she teaches vocabulary every day during the reading aloud lesson. She uses think-pair-share strategy to discuss the target words and provides student-friendly definition and examples to children. She encourages children to use the word in different sentences and provides them the opportunity to listen to the new word many times during the unit. Her strategy to select vocabulary is to choose useful vocabulary that children can use again; she stated, "When I choose a word from a book I try to make sure that the word is useful to children, and they will use it again in their conversation" (Mary, Interview, May 9th, 2013, p.2). Ms. Mary indicated that she teaches a lot of academic vocabulary during the content time when teaching science and math. She teaches directly one and sometimes two words a day during reading aloud; however, there are "many teachable moments to teach new words" when children do not know the meaning of the words (Mary, Interview, May 9th, 2013, p.2). To assess children's understanding of the new vocabulary, she uses observation every day and end-of-unit tests. At the end of the vocabulary lesson, Ms. Mary pays attention to children's use of the new vocabulary in their conversation and writing. In addition, Ms. Mary believes that children need to understand how to use technology from a young age. She indicated that she and her students have just finished creating an electronic storybook using an iPad, which was fun and interesting for the children. She also uses many software programs that are loaded with literacy activities appropriate for kindergarten students.

Ms. Kelly's Interview

In the interview, Ms. Kelly indicated that she uses both small and large group instruction time to teach vocabulary. She shows the vocabulary word, discusses its meaning, reads a story that includes the word, and then has the students use the word in their own sentence. She believes that the previously mentioned method is most effective, because, as she expressed, "students are able to hear the word, see it, and then use it, and these strategies enable the students to remember the word very well" (Kelly, Interview, May 1st, 2013, p.1). Ms. Kelly uses the vocabulary that is provided by the district; however, if the vocabulary words are not already provided for a particular lesson, she selects useful vocabulary from a story that coincides with the curriculum. To assess students' understanding of the target vocabulary word, Ms. Kelly uses observation every day and end-of-unit tests. She also uses software programs for literacy provided by the district, and she believes that these programs are excellent resources to teach reading and literacy skills.

Ms. Erica's Interview

The interview data with Ms. Erica indicated that she uses both direct and indirect instruction to teach vocabulary. The direct instruction is provided each day in the vocabulary lesson when the teacher reads aloud a story to the whole group. The indirect instruction is provided throughout the day when children ask questions and when they are encouraged to use vocabulary in their talking. In order to select vocabulary, Ms. Erica indicated that she chooses words that children need to know how to use in their writing and speaking. She also focuses on academic vocabulary in math and science content. She pointed out that she makes the new vocabulary words available to children through a word wall and a vocabulary binder, so they can refer back to them during the week when they do their writing and journals. To assess children's

vocabulary growth, she responded that she uses observation every day and gives a test at the end of each unit to make sure that they understand the vocabulary words they studied. Moreover, Ms. Erica uses technology to clarify the meanings of new words; for example, she sometimes uses iTouch to show children in small group a word and its picture, and she uses "videos and short clips that might introduce the new word" (Erica, Interview, May 17th, 2013, p.5).

Lesson Plan Data

The researcher asked each participant teacher to provide 20 copies of vocabulary lesson plans that they have taught in previous months. The researcher collected 180 lesson plans from all nine participant teachers. All lesson plans provided were read aloud lessons because the participant teachers indicated that they teach vocabulary directly to children in the reading aloud period. The read aloud lesson plan was designed to achieve two main goals. The first goal is to guide comprehension using open questions that ask children to consider the characters, ideas and plot in the story, and the second goal is to develop students' concept and vocabulary growth.

The data from analyzing the lesson plans showed that the lesson plans were sequenced in a manner that would allow for direct instruction of one to two vocabulary words. Of the 180 lesson plans, 123 were designed to expose children to one vocabulary word and 57 were designed to teach two vocabulary words. The use of technology to teach the target vocabulary words was not incorporated in any provided lesson plans. The design of the lesson plans offers opportunities for children to learn the new vocabulary words as presented in the context of the story. All lesson plans were designed in one specific format because the format was provided by the school district, and all teachers are required to follow the provided format when designing a read aloud lesson plan. In all lessons, the length of time was 15 minutes. The format of all lesson plans was divided into the following three sections:

Before Reading

In this section, teachers have to provide a brief overview of the book and take a moment to look at the front cover of the book. The teachers introduce the author, illustrator, title and the characters of the story. Then, the teachers ask for children's predictions by asking them questions like "when you look at this picture, what does this book make you think about? What will we see inside this book?" After that, the teachers set the purpose for listening.

During Reading

The lesson plans were created to help teachers provide opportunity for children to develop concepts and vocabulary, while the teachers read fluently with expression. The lesson plans direct teachers to talk about each concept and vocabulary that children might not know in each page of the story. The lesson plans provided teachers the needed information of what to say and how to discuss the concepts with children and how to make connections among concepts as the story moves along.

After Reading

The teachers have to discuss the meaning of the story, confirm or disconfirm children's predictions that they made before reading, and discuss vocabulary words. The discussion of vocabulary words was clearly described in a similar manner in all lesson plans. The lesson plan led the teachers to begin the discussion by rereading a specific sentence in the story to tell children how the vocabulary was used in the story. Teachers should then say the word with the children, followed by giving a student-friendly definition and using the vocabulary in another context. After defining and using the word, teachers have to engage students and encourage them to interact with the target vocabulary. This engagement helps teachers to assess children's understanding of the target vocabulary words. Teachers should then repeat the target word again

with children. At the end, the lesson plans directed teachers to use the vocabulary words in a

complete sentence. Figure 1 provides a description of the vocabulary instructional sequence after

the read aloud, using the example of the vocabulary word "breeze."

Title of book: *One Windy Wednesday* by Phyllis Root

Vocabulary: "breeze"

Contextualize the word (tell how it was used in the story/reread the sentence)	Say the word	Give students a friendly definition (define in own words/pair with an example)	Use in another context (give examples in other contexts)
"Just then a little breeze blew by."	"Breeze."	"Breeze means a soft wind."	"The breeze blew gently through her hair."

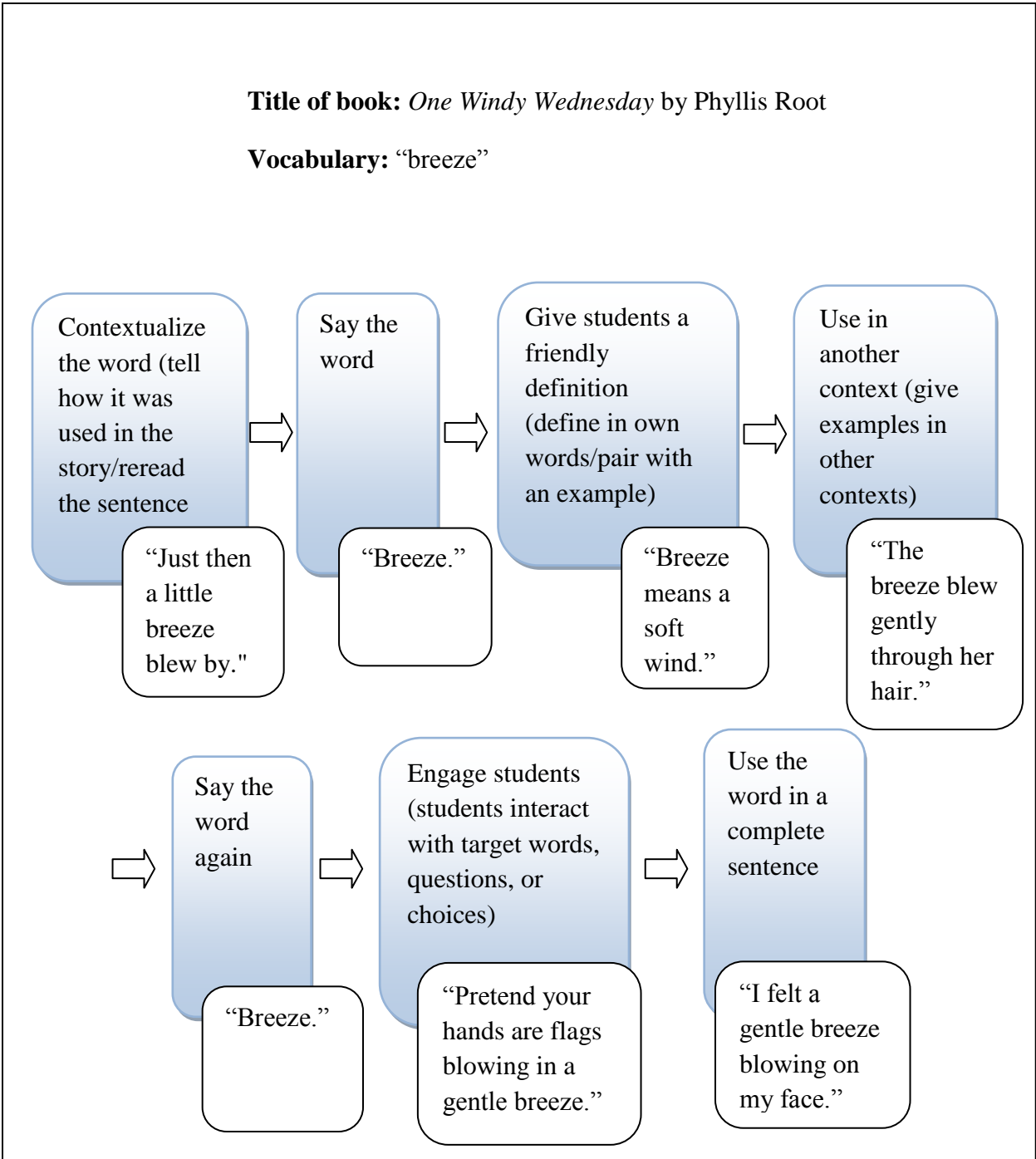|	Say the word again	Engage students (students interact with target words, questions, or choices)	Use the word in a complete sentence
	"Breeze."	"Pretend your hands are flags blowing in a gentle breeze."	"I felt a gentle breeze blowing on my face."

Figure 1. Vocabulary instructional sequence after the read aloud, using the example of the vocabulary word "breeze."

Findings Across Data Collection Methods

This chapter presents a summary description of collected data of each method used in the study. Certain important findings and themes emerged from analyzing the data collected from observed vocabulary lessons, interviews and document analysis of vocabulary lesson plans of nine highly effective kindergarten teachers (see appendices G and H). The findings are listed below and are considered in depth in chapter five based on the five research sub-questions of the study:

1. Vocabulary instruction is introduced every day using several methods, including: introducing vocabulary in context, providing definitions with examples, engaging students with target vocabulary, and expanding repeated exposure to vocabulary.

2. The selection of vocabulary worth teaching is based on school district's selection and teachers' own selection of productive vocabulary.

3. The assessment of students' vocabulary development is through teachers' observation and end-of-unit tests.

4. The use of technology in vocabulary instruction is based on presenting vocabulary visually and integrating software programs for vocabulary.

5. Participant teachers' use of methods to teach vocabulary and their selection of vocabulary worth teaching are aligned with most recommendations from recent research; on the other hand, participant teachers use few recommendations from recent research regarding assessing children's vocabulary growth and use of technology in vocabulary instruction.

CHAPTER V

FINDINGS REPORTED BY RESEARCH QUESTIONS

After providing the data from observations, interviews, and lesson plans that describe the vocabulary instruction of the individual teacher participants regarding their vocabulary instruction practices, the themes and patterns were highlighted by the researcher.

To answer the first four sub-questions, coding steps in grounded theory served as a guideline to analyze participants' responses to the open-ended questions used in the interview and to analyze data collected from observation and lesson plans (Strauss & Corbin, 1994).The researcher read the transcripts line by line to obtain a sense of the general response. From reading the responses, keywords related to research questions were color coded and underlined. This process led to the determination of categories and themes (see appendices G and H). After identifying the categories, the coded responses and keywords were assigned into the developed themes. These steps helped the current study to calculate percentage per theme across respondents to report the important findings that reflect highly effective kindergarten teachers' practices in vocabulary instruction. These practices include methods used to teach vocabulary, approaches to select vocabulary worth teaching, techniques to assess vocabulary development in their students, and integration of technology to teach vocabulary. To answer the fifth sub-question, the evaluation checklist for vocabulary instruction was used to determine whether the participant teachers' practices aligned with recent research recommendations regarding the best practices to teach vocabulary in kindergarten classrooms.

The developed themes that addressed the first four research sub-questions are listed below and are presented in greater depth in the following section:

1. Introducing vocabulary in context

2. Providing definitions with examples

3. Engaging students with target vocabulary

4. Expanding repeated exposure to vocabulary

5. Using the school district's vocabulary selection

6. Selecting productive vocabulary

7. Using teacher observation

8. Using end-of-unit tests

9. Presenting vocabulary visually by using technology

10. Using software programs for vocabulary

These themes are organized based on each research sub-question to answer the main research question: How do highly effective kindergarten teachers teach vocabulary? Each theme discussed was supported with quotations from the interviewees and examples from the observed lesson and the copies of lesson plans.

Research Sub-question 1: What are the methods highly effective kindergarten teachers use to teach vocabulary?

The data from classroom observations, interviews and lesson plans indicated that participant teachers teach target vocabulary words directly every day for at least 15 minutes. It was found that participant teachers employed various methods to teach vocabulary. Seventeen methods were identified in the data; seven of these methods were shared by all participant teachers. These different methods were categorized into four salient themes: a) introducing vocabulary in context, b) providing definitions with examples, c) engaging students with target vocabulary, and d) expanding repeated exposure to vocabulary. Table 3 outlines examples of significant phrases from collected data, formulated meaning, and the four themes.

Table 3

Selected Significant Statements and Corresponding Formulated Meanings and Themes Emerging From Participant Teachers' Methods to Teach Vocabulary (Research Sub-question 1)

Example of Significant Statement	Formulated Meaning	Theme
▪ "The teacher reread the sentence that included the target word and asked children to figure out the meaning" *(Erica, Teacher Observation, May 17th, 2013).* ▪ "We talk about how the word is used in the story" *(Rachel, Interview, April 29th, 2013, p.1).*	Teachers use context clues to determine the meanings of unfamiliar words during read aloud, shared reading or guided reading.	Introducing vocabulary in context
▪ "The teacher asked children to provide a good definition of the word from their own words" *(Mary, Teacher Observation, May 14th, 2013).* ▪ "I encourage children to create sentences of the word to make sure that they understand it" *(Elizabeth, Interview, April 26th, 2013, p.1).*	Teachers give student-friendly definitions, multiple meanings, examples and complete sentences of the word and encourage children's own definitions.	Providing definitions with examples
▪ "I could be 'compassionate' by… think, pair, share and then share as class" *(Kathy's lesson plan, document #3).* ▪ "We discussed the word 'uniform' and I asked them to think of people in the community that wear uniforms to relate the word to children's lives" *(Jasmine, Interview, April 22nd, 2013, p.2).*	Teachers encourage children to interact with target words through discussion, drawing, pair/share, thumbs up/down, children's own experience and model.	Engaging students with target vocabulary
▪ "The word they learned is posted on the wall, I call it 'powerchart vocabulary,' and we refer back to it to discuss that word" *(Morgan, Interview, May 17th, 2013, p.1).* ▪ "I take these words and put them in a vocabulary binder and put them in the writing center, so children can look back through and use them" *(Erica, Interview, May 17th, 2013, p.2).*	Teachers provide opportunities for children to hear, see and use the target word in different contexts.	Expanding repeated exposure to vocabulary

Introducing Vocabulary in Context

All participant teachers believe that one of the most effective methods to teach vocabulary words is to introduce the target vocabulary in context. To teach vocabulary in context, the participant teachers read the sentence that contains the target vocabulary; then they either explained or asked children to guess the meaning of the word by referring to the clues about the target word in context and by asking children how the vocabulary was used in the context or story. Introducing new vocabulary in context, as participants maintained, can enhance children's deeper understanding of the target vocabulary in comparison to teaching it in isolation. For example, Ms. Jasmine expressed that "the most effective strategy to teach new vocabulary is introducing the words through literature" (Jasmine, Interview, April 22nd, 2013, p.1). Another teacher, Ms. Mary, said "we explain the words in stories to help children focus on the words and understand them" (Mary, Interview, May 9th, 2013, p.1). Similar to this statement, Ms. Kelly responded, "I think that reading a story that includes the new word enables the students to remember the word very well" (Kelly, Interview, May 1st, 2013, p.1). From analyzing the data, it was found that the participant teachers use three different methods to present new vocabulary words in context: read aloud, shared reading and small group reading instruction (or guided reading). All participant teachers reported that they use read aloud every day to present new vocabulary words using fiction or nonfiction books. Of the nine participant teachers, three indicated that they use guided reading and two use shared reading as techniques to provide new vocabulary words in context to children. The results of the frequency and percentage of each method used to introduce vocabulary in context are provided in Table 4.

Table 4

Frequency of Participant Teachers' Responses Regarding Introducing Vocabulary in Context

Theme and subcategory	Frequency (*N*= 9)	Percentage
Introducing vocabulary in context		
Read aloud	9	100%
Guided reading	3	33.3%
Shared reading	2	22.2%

Providing Definitions with Examples

Defining the target words and providing different examples is another category of effective methods that the participant teachers use to help children understand the meaning of vocabulary words. This theme includes: student-friendly definitions, children's own definitions, multiple meanings of vocabulary, examples, and complete sentence. All participant teachers provide student-friendly definitions and examples that align with children's understandings as well as having them use the vocabulary in a complete sentence. According to Ms. Mary, "We always give them kid-friendly definitions and use the words in other sentences" (Mary, Interview, May 9th, 2013, p.1). Of the nine participant teachers, four teachers reported that they ask children to define the vocabulary in their own words. Ms. Rachel believes that one of the most effective strategies to teach new vocabulary is when we let children define the vocabulary in their own words; she stated:

When I ask children to just tell me the meaning of the word that measures the basic knowledge; however, when children reflect back and tell me what the word means in their own words or give examples of the word, we can ensure their understanding and children can internalize the word more (Rachel, Interview, April 29th, 2013, p.1).

Further, two participant teachers indicated that they introduce multiple meanings of the target words. For example, as mentioned previously, in Ms. Morgan's lesson she defined the target word that aligns with the story and then she gave them another meaning of the same word (Morgan, Teacher Observation, May 20th, 2013). Also, Ms. Elizabeth pointed out:

> I taught the word "dawn." A child said, "Dawn is a name of my friend," and I told him that it might be somebody's name, and it also means the first appearance of light in the sky. Another vocabulary I taught was "patient," which can mean sick people and it can also mean able to remain calm (Elizabeth, Interview, April 26th, 2013, p.2).

The following table presents frequency and percentage of each method used to provide definitions with examples.

Table 5

Frequency of Participant Teachers' Responses Regarding Providing Definitions with Examples

Theme and subcategory	Frequency (*N*= 9)	Percentage
Providing definition with examples		
Student-friendly definitions	9	100%
Examples	9	100%
Complete sentences	9	100%
Children's own definitions	4	44.4%
Multiple meanings of the word	2	22.2%

Engaging Students with Target Vocabulary

The data showed that participant teachers provide children with opportunities to engage and interact with target vocabulary words as a strategy to enhance students' understanding of the new vocabulary. It was found that the participant teachers employed several methods to engage

students with target vocabulary. These methods involve the use of discussion, model, think-pair-share, children's own experiences, thumbs up/thumbs down, and draw a picture. All participant teachers indicated that they use discussion by asking several open questions and providing answers to children's questions about the target vocabulary. Ms. Rachel said that "we teach a vocabulary lesson every day and we discuss the meaning of the word…I ask questions about the word and sometimes I wait and see if the children have questions about the new word" (Rachel, Interview, April 29th, 2013, p.1). Seven of the participant teachers reported that they use models to introduce new vocabulary. For example, in her lesson, Ms. Elizabeth used the model technique when she asked her students to model the word "prey" by acting like a lion and sneaking up on prey (Elizabeth, Teacher Observation, May 2nd, 2013, p.2). Also, the data showed that four participant teachers reported using think-pair-share as a technique to teach the target vocabulary. Ms. Rachel explained:

> The think-pair-share is one of the effective strategies. I tell children what the word means and they have to talk to their partner about the word and then share what they think about the word with the whole class. Sometimes I use this strategy before teaching the word to figure out what the word means (Rachel, Interview, April 29th, 2013, p.2).

Of the nine participant teachers, four declared that they use thumbs up or down as a method to engage children in learning a new vocabulary word. In this method, the teacher makes a scenario using the target word correctly or incorrectly. For example, in Ms. Sarah's lesson, she offered some scenarios about the word "tidy" and asked children if the scenario represented the target word or not (Sarah, Teacher Observation, May 6th, 2013, p.2). Also, the data indicated that four of the participant teachers reported using students' own experiences as a method to make vocabulary more meaningful to children. Ms. Erica expressed that one of her methods to teach

vocabulary is to "relate the word to children personally more and relate it to their lives so they can retain that better" (Erica, Interview, May 17th, 2013, p.1). Finally, three participant teachers pointed out that they ask students to draw pictures representing the target word. In Ms. Rachel's words, "in small group, I let children write about the word or illustrate and draw a picture of the word" (Rachel, Interview, April 29th, 2013, p.4). Table 6 contains frequency and percentage of each method used by participant teachers to engage students with target vocabulary.

Table 6

Frequency of Participant Teachers' Responses Regarding Engaging Students with Target Vocabulary

Theme and subcategory	Frequency (*N*= 9)	Percentage
Engaging students with target vocabulary		
Discussion	9	100%
Model	7	77.7%
Think-pair-share	4	44.4%
Children's own experiences	4	44.4%
Thumbs up/down	4	44.4%
Draw picture	3	33.3%

Expanding Repeated Exposure to Vocabulary

Another theme of strategies that participant teachers use to teach new vocabulary is providing children with multiple exposures to the vocabulary. This strategy includes say the target word, use a word wall, and repeat the vocabulary through the unit. The data demonstrates that all the lesson plans direct teachers to say the target word with students at least two times. The observation data supported this finding and found that all nine participant teachers repeated

the target word by saying it with children during the lesson many times. Another method that all

participant teachers shared is a word wall. Word wall is a technique that helps to provide

repetition and multiple exposures to the target vocabulary. The data from classroom observation

showed that all participant teachers have posted the target words on classroom walls; the posted

vocabulary words were visible and accessible to students. As Ms. Sarah pointed out:

> In content areas, we usually make a word wall on chart paper and put words that we
>
> would use. For example, I hanged on the wall chart paper "what is science?" We put
>
> words such as observation and prediction. I believe that word wall is friendly to
>
> kindergarten children (Sarah, Interview, May 6th, 2013, p.3).

Of the nine participant teachers five teachers reported that they provide opportunities for children

to use the target words in a variety of contexts through speaking and writing. One participant

teacher, Ms. Mary, explained "I tried to use the word throughout the week to help children

understand it and hear it in common language" (Mary, Interview, May 9th, 2013, p.1). Another

participant teacher, Ms. Sarah, said "usually at the end of the week we go back and review the

meanings of the words that we had" (Sarah, Interview, May 6th, 2013, p.2). Ms. Morgan further

explained, "I give the children the opportunity to use the new words in their speaking; for

example, in the circle time, I use show and tell, and I might give children vocabulary words to

use in their sentences while speaking" (Morgan, Interview, May 17th, 2013, p.1). The results of

frequency and percentage of each method used to expand repeated exposures to vocabulary are

presented in Table 7.

Table 7

Frequency of Participant Teachers' Responses Regarding Repeated Exposure to Vocabulary

Theme and subcategory	Frequency ($N=9$)	Percentage
Expanding repeated exposure to vocabulary		
Say the word	9	100%
Word wall	9	100%
Repeat the word during unit	5	55.5%

Research Sub-question 2: How do highly effective kindergarten teachers select vocabulary worth teaching?

The analysis of collected data showed that all participant teachers teach one to two vocabulary words explicitly every day. It was found that the participant teachers' approaches to select vocabulary worth teaching can be categorized into two themes, including use of the school district's selection and selecting productive vocabulary. These two themes are shared by all participant teachers. Table 8 presents examples of significant phrases from collected data, formulated meaning, and the two themes.

Table 8

Selected Examples of Significant Statements and Corresponding Formulated Meanings and Themes Emerging From Participant Teachers' Response of How to Select Vocabulary Worth Teaching (Research Sub-question 2)

Example of Significant Statement	Formulated Meaning	Theme
▪ "Usually the school district provides us with books and specific vocabulary words for reading aloud" *(Mary, Interview, May 9ᵗʰ, 2013, p.2).* ▪ "I typically use the vocabulary that is provided by the district" *(Kelly, Interview, May 1ˢᵗ, 2013, p.2).*	In each unit, the school district provides several reading materials that contain vocabulary words worth teaching.	Use of the school district's selection
▪ "We try to select vocabulary words that are useful to children and meet the concepts of a specific unit." *(Morgan, Interview, May 17ᵗʰ, 2013, p.2).* ▪ "I tried to look at words that they will use" *(Elizabeth, Interview, April 26ᵗʰ, 2013, p.2).*	Selecting vocabulary words that are useful, appropriate, academic, important for comprehension, and meet the curriculum.	Selecting productive vocabulary

Use of School District's Selection

From analyzing the collected data, it was found that the school district of the participant teachers provides kindergarten teachers with vocabulary words to be introduced to children during read aloud lessons. All participant teachers reported that they teach the vocabulary suggested by the school district alongside their selections of words, as will be discussed in the following theme. Ms. Rachel explained how the school district provides vocabulary words to teachers; she clearly stated:

The district tells me specific words to use but I do not know where they pick these words other than the stories that they gave us. For example, the district gave me this book titled *Inch by Inch* and here are the two words that I have to use with this book "twigs" and

"measure." Sometimes they provide suggestions in a reading list, but they do not provide

me a book for every day; they might provide one or two a week, so it sort of driven by

the district but not for every single day (Rachel, Interview, April 29th, 2013, p.2).

Also, Ms. Erica added:

I am in the writing committee team for kindergarten. When we, as a team, write these

lessons to other kindergarten teachers we think about words in the book that children

might not know and we choose words that they can use in other contexts in their writing

or speaking, so we do not try to choose super words that will never come up in another

time (Erica, Interview, May 17th, 2013, p.2).

Selecting Productive Vocabulary

In all participant teachers' views, productive vocabulary means words that are

appropriate for kindergarten children, useful to them and to their future reading, important for

comprehension, and related to curriculum. As Ms. Kelly clearly explained:

If words are not already provided by the district for a particular lesson, I choose a word

from a story in which I feel students need to be exposed and are useful to them.

Sometimes I choose words that coincide with our social studies and science curriculum as

well. These decisions vary from lesson to lesson based on student need (Kelly,

Interview, May 1st, 2013, p.2).

Ms. Rachel further said:

I try to look at words that are useful, richer and a little more difficult. We call them tier

two words. These words are not like "red," "house" or other basic vocabulary words. We

try to look at words that children need to know, and they do not usually use in their

everyday vocabulary (Rachel, Interview, April 29th, 2013, p.2).

Ms. Sarah further pointed out:

> I read a text, make a list of five to six tier two words and then I go back and think about
> what word do I think would be most beneficial to them and they can use in their everyday
> life (Sarah, Interview, May 6th, 2013, p.2).

Also, Ms. Mary stated "When I choose a word from a book I try to make sure that the word is useful to children, and they will use it again in their conversation" (Mary, Interview, May 9th, 2013, p.2). In addition, Ms. Jasmine provided an example by saying:

> We taught last week the word "porcupine" because most of the students do not know the
> meaning of the word and have never seen the word before but may have heard about it, so
> this would give us the opportunity to share with them everything they know about that
> particular animal and give other kids who have never seen one a basis of understanding
> (Jasmine, Interview, April 22nd, 2013, p.2).

In addition, all participant teachers were aware of the significance of including academic words in their vocabulary instruction. As Ms. Rachel expressed, "it is absolutely important for children to learn the academic words" (Rachel, Interview, April 29th, 2013, p.3). The data showed that all nine participant teachers mentioned that they introduce academic vocabulary words during content areas, including science, math and social studies. According to Ms. Mary, "During our content time, in math, science and social studies, we use a lot of academic vocabulary" (Mary, Interview, May 9th, 2013, p.2).

The results of frequency and percentage of each theme used to select vocabulary worth teaching are presented in Table 9.

Table 9

Frequency of Participant Teachers' Responses Regarding Selecting Vocabulary Worth Teaching

Theme	Frequency (*N*= 9)	Percentage
Use of school district's selection	9	100%
Selecting productive vocabulary	9	100%

Research Sub-question 3: How do highly effective kindergarten teachers assess vocabulary development in their students?

From analyzing the data collected from classroom observations, interviews and lesson plans, two salient themes emerged regarding participant teachers' approaches to assess kindergarten children's vocabulary development. The first one is the use of teacher observation and the second is the use of end-of-unit tests. The following table shows examples of significant phrases from collected data, formulated meaning, and the two themes.

Table 10

Selected Examples of Significant Statements and Corresponding Formulated Meanings and Themes Emerging From Participant Teachers' Response of How to Assess Children's Vocabulary Development (Research Sub-question 3)

Example of Significant Statement	Formulated Meaning	Theme
• "I use observation in reading group to see if they understand the words" *(Rachel, Interview, April 29th, 2013, p.4).* • "Through observation I can see who really is understanding the words" *(Sarah, Interview, May 6th, 2013, p.3).*	Monitoring children's use of target vocabulary during their conversation, reading and writing.	Use of teacher observation
• "At the end of each unit I give the children a vocabulary test" *(Mary, Interview, May 9th, 2013, p.3).* • "I give them a test after each unit and their scores give me an idea of their level of understanding" *(Erica, Interview, May 17th, 2013, p.4).*	Giving children paper and pencil tests at the end of each unit to determine their vocabulary knowledge.	Using end-of-unit tests

Use of Teacher Observation

The analysis of data revealed that the participant teachers use observation as one type of informal assessment to check for their students' understanding of the target vocabulary words. As Ms. Mary indicated:

Every day I use observation…I usually listen to their pair-sharing with their partners to see how they are using the words, and I see if they use the word in their conversations or in their writing and if they are able to use the word in a sentence (Mary, Interview, May 9th, 2013, p.3).

Another participant teacher, Ms. Rachel, pointed out, "I always check to see if the children understand the meaning of the words and if they use it correctly in their writing" (Rachel,

Interview, April 29th, 2013, p.4). Ms. Morgan further said, "I use observation every day. For example, during pair/share time I walk around and sit with children to listen to everyone" (Morgan, Interview, May 17th, 2013, p.3). In addition, the data from observed lessons showed that all participant teachers use observation at the end of the lesson through discussion of the target vocabulary words. This discussion helps teachers to determine their students' understanding of the vocabulary words' meanings and usages. As Ms. Erica described, "I observe my students at the very end of the vocabulary lesson… [it] is written here in the lesson plan 'engaging students;' this means assessing for students' understanding of the word meaning" (Erica, Interview, May 17th, 2013, p.4).

Using End-of-Unit Tests

The participant teachers who use end-of-unit tests indicated that they give their students paper and pencil tests at the end of each unit to determine their students' understanding of the vocabulary words. The end-of-unit tests include multiple-choice, matching, and short answers, which are designed to be appropriate for kindergarten children. Figure 2 presents examples of vocabulary tests that children have at the end of the unit provided by participant teachers, Ms. Mary and Ms. Erica.
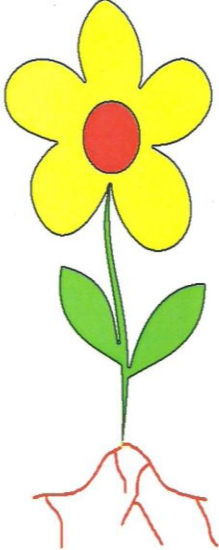
Figure 2. Example of vocabulary tests that children have at the end of the unit provided by Ms. Mary and Ms. Erica.

Of the nine participant teachers, three indicated that they use the end-of-unit test to check for their students' vocabulary growth. During an interview with Ms. Erica, she showed the researcher examples of students' answers on the test, and she expressed that the students' scores on these tests give her an idea about her students' vocabulary progress. The end-of-unit test is considered a type of informal assessment because the three participant teachers who reported using the test indicated that they do not document the scores of the test in their students' report or file; instead they just "grade them and they go to children's home so they are not really formal assessments" (Erica, Interview, May 17th, 2013, p.4). Table 11 presents the results of frequency and percentage of each theme used to assess students' vocabulary growth.

Table 11

Frequency of Participant Teachers' Responses Regarding Assessing Children's Vocabulary Development

Theme	Frequency (*N*= 9)	Percentage
Use of teacher observation	9	100%
Use of end-of-unit tests	3	33.3%

Research Sub-question 4: How do highly effective kindergarten teachers use technology to teach vocabulary?

The responses of all participant teachers indicated strong agreement regarding the importance of integrated technology in learning to enhance instruction. As Ms. Rachel expressed, "Technology involves some modalities that help children to learn" (Rachel, Interview, April 29th, 2013, p.5). Further, Ms. Sarah said, "technology gains children's attention, and they are very engaged when they use technology" (Sarah, Interview, May 6th, 2013, p.4). The data showed that technology tools in all participant teachers' classrooms are accessible and available to children. According to Ms. Erica, "We have six computers in the classroom, and I usually let my students use the computers at least 25 minutes every day" (Erica, Interview, May 17th, 2013, p.5). In addition, it was found that the technology tools used in all participant teachers' classrooms are "at children's learning level and they are kid-friendly" (Sarah, Interview, May 6th, 2013, p.4).

All participant teachers talked about the different types of technology they integrate in their classrooms; however, for the purpose of this study, the report of data was limited to the technology that participant teachers integrate to support children's vocabulary growth. The

analysis of the collected data led to identification of two themes: presenting vocabulary visually

by using technology and using software programs for vocabulary. Table 12 presents examples of

significant phrases from collected data, formulated meaning, and the two themes.

Table 12

Selected Examples of Significant Statements and Corresponding Formulated Meanings and Themes Emerging From Participant Teachers' Response of Using Technology to Teach Vocabulary (research sub-question 4)

Example of Significant Statement	Formulated Meaning	Theme
▪ "I use iTouches to show them a word and its picture." *(Erica, Interview, May 17th, 2013, p.5).* ▪ "I use PowerPoint; I put a picture of the new word and talk about the word" *(Rachel, Interview, April 29th, 2013, p.5).*	Show children pictures of the target vocabulary words using PowerPoint, video, iTouch and iPad.	Presenting vocabulary visually by using technology
▪ "On the iTouch there are a bunch of vocabulary games that children can play" *(Elizabeth, Interview, April 26th, 2013, p.5).* ▪ "I have some programs in the Smartboard that are specifically for vocabulary" *(Sarah, Interview, May 6th, 2013, p.4).*	Technology tools such as computers, iPads, and iTouches are loaded with vocabulary activities	Using software programs for vocabulary

Presenting Vocabulary Visually by Using Technology

Many participant teachers indicated that technology facilitates their vocabulary

instruction. As Ms. Morgan expressed, "technology can provide children with a better

description of the word" (Morgan, Interview, May 17th, 2013, p.5). Also, Ms. Kelly believes that

using technology "can help student understanding to see the vocabulary used in different ways"

(Kelly, Interview, May 1st, 2013, p.4). Of the nine participant teachers, seven mentioned using

technology to show pictures of target vocabulary words. PowerPoint, video, iTouch and iPad were all mentioned as tools to present new vocabulary visually to children. For example, Ms. Jasmine talked about using video to teach new vocabulary:

> I can show them a short video clip about the characters and the story that I am reading to them, and by showing them a video clip of it, it gives them some information and ideas about the new vocabulary, whether it is a person or place or something else (Jasmine, Interview, April 22nd, 2013, p.4).

Ms. Rachel further pointed out, "I use PowerPoint; I put a picture of the new word and talk about the word" (Rachel, Interview, April 29th, 2013, p.5). Another participant teacher, Ms. Sarah, said, "I use an iPad during small group to show children pictures of new words" (Sarah, Interview, May 6th, 2013, p.4).

Using Software Programs for Vocabulary

Although all of the participants reported that they use several software programs that benefit students' literacy development, they reported mixed responses when directly questioned about if the software programs are designed specifically for vocabulary. Of the nine participant teachers, two indicated that they use software programs designed to help children learn vocabulary. During Ms. Sarah's interview, she showed the researcher the software program that she uses with children. The software program contains interactive vocabulary games which allow children to sort, match, write, and see the pictures of vocabulary words. Ms. Elizabeth further indicated that in her classroom there are five iTouches available for children to use during center time. These iTouches are loaded with "a bunch of vocabulary games that children can play, such as match words, build words and write words" (Elizabeth, Interview, April 26th, 2013, p.5). The

results of frequency and percentage of each theme regarding using technology to teach

vocabulary are reported in Table 13.

Table 13

Frequency of Participant Teachers' Responses Regarding Using Technology to Teach Vocabulary

Theme	Frequency (N= 9)	Percentage
Presenting vocabulary visually by using technology	7	77.7%
Using software programs for vocabulary	2	22.2%

Research Sub-question 5: To what extent do highly effective kindergarten teachers' practices align with the recent research on vocabulary instruction?

To investigate whether the participant teachers' practices align with recent research

recommendations regarding the best practices to teach vocabulary, an evaluation checklist for

vocabulary instruction in kindergarten classrooms has been developed by the researcher (see

Appendix E). As mentioned in Chapter Three, the checklist is composed of four parts that align

with the four research sub-questions including: (a) methods to teach vocabulary, (b) word

selection, (c) assessing students' vocabulary knowledge, and (d) using technology. Each part

includes five recommendations, 20 in total, from recent research on vocabulary instruction. Each

of the 20 recommendations was supported by at least three recent research studies of the best

practices to teach vocabulary to children (see appendix F). The data from the observed lessons,

semi-structured interviews and lesson plan analysis were compared with the recommendations in

the checklist. The findings of each part in the checklist are presented in the following section.

Methods to Teach Vocabulary

The methods to teach vocabulary section includes five recommendations from recent research regarding the best methods to deliver vocabulary to kindergarten children. The analysis of data indicated that all participant teachers follow four of the five recommendations. They all teach the word meanings directly by introducing the vocabulary in context at least 15 minutes every day during reading aloud lessons, and they provide clear explanation of the target vocabulary using different methods such as student-friendly definitions, examples, modeling and sentences. They all also provide multiple exposures to the words using word wall and saying the words multiple times. Regarding the fifth recommendation to provide follow-up activities to enhance vocabulary development, five participant teachers reported that they offer activities for vocabulary during the unit using writing journals, show/tell activities and drawing pictures representing the target words.

Word Selection

Five recommendations were identified from recent research to enhance kindergarten teachers' approaches to select words worth teaching. The first recommendation regarding selecting two to three vocabulary words was partially used by participant teachers; the data showed that all participant teachers teach one to two vocabulary words daily. However, they all reported that there are teachable moments to introduce the meanings of some vocabulary words when they feel that students need to understand particular words while speaking, reading or writing. The other four recommendations were all mentioned by the nine participant teachers. The participant teachers were aware of the importance of selecting vocabulary words that are essential to reading comprehension, useful, academic and appropriate to children's age and learning level.

Assessing Students' Vocabulary Knowledge

Five recommendations were listed in the checklist regarding the best practices to assess children's vocabulary growth. Three of the five recommendations were not reported by any of the participant teachers. The data showed that participant teachers do not use screening assessments at the beginning of the school year to identify their students' vocabulary knowledge. Also, all participant teachers reported that they do not use diagnostic assessment to get in-depth information about specific students' vocabulary growth. They also stated that they do not use any formal assessments for vocabulary. In Ms. Jasmine's words, "we use assessments that assess children's phonetic abilities and how to put words together, but we do not use formal assessments to assess vocabulary growth in kindergarten" (Jasmine, Interview, April 22nd, 2013, p.3). Similarly, Ms. Morgan stated, "we give assessments on letter recognition, sound recognition, segmenting and blending, but not for vocabulary" (Morgan, Interview, May 17th, 2013, p.4). The fourth and fifth recommendations, regarding using informal assessments and assessing students at the end of the vocabulary lessons, were shared by all participant teachers. All participant teachers indicated that they use observation to assess their students' vocabulary growth. Further, all participant teachers assess children's understanding of the target vocabulary at the end of the vocabulary lesson using several methods, such as discussion, modeling, and thumbs up/down. Besides assessing students at the end of vocabulary lessons, three of the participant teachers indicated that they assess their students at the end of each unit using pencil and paper tests to check for their students' understanding of vocabulary words.

Using Technology

The section regarding use of technology to teach vocabulary includes five recommendations. For the first and second recommendations, regarding the accessibility and

suitability of the technology tools in the classroom, the data showed that all participant teachers indicated that the technology tools in their classroom are available to all students and appropriate to their students' learning level. For the third recommendation, two of the nine participant teachers stated that the computers, iPads and iTouches in their classrooms are loaded with software programs that include vocabulary activities. For the fourth recommendation, seven participant teachers said that they integrate technology in their lesson to provide better descriptions of the target words. Seven of the participants also follow the fifth recommendation by indicating that technology can provide them with some ideas and information to plan vocabulary lessons.

In sum, of the 20 recommendations on the checklist, 12 recommendations were shared by all participant teachers. Three of the recommendations, all within the section on assessing children's vocabulary knowledge, were not reported by any participant teachers. One recommendation regarding number of vocabulary to be taught was partially used by participant teachers. Three recommendations were used by at least five participant teachers, and one was used by only two participant teachers. Figure 3 presents the frequency and percentage of participant teachers' application of the recommendations.

Areas	Teacher's practices	N	%	Comments
Methods to teach vocabulary	Vocabulary instruction is an everyday part of literacy instruction. The teacher teaches the word meanings directly for about 10 to 20 minutes	9	100%	Teach vocabulary explicitly every day at least 15 minutes
	The teacher introduces vocabulary in context by providing a daily read aloud with clear explanations of the meanings of new words	9	100%	During read aloud, guided reading and shared reading
	The teacher uses modeling, examples and sentences to teach word meanings	9	100%	All use examples and sentences; 7 use modeling
	The teacher offers multiple exposures to see, hear and talk about learned words at least once every day for a week	9	100%	Using word wall; repeating words
	Follow-up activities are provided. The teacher offers opportunities that support vocabulary development in a variety of ways such as using vocabulary in writing and drawing pictures.	5	55.5%	Using writing journal, show/tell activities and drawing pictures of target words
Selecting vocabulary worth teaching	The teacher selects 2 to 3 words each vocabulary lesson	*		All participants select 1-2 words
	The teacher selects words that are essential to understanding and reading comprehension	9	100%	
	The teacher chooses useful words that students use in their lives	9	100%	
	The teacher chooses academic vocabulary	9	100%	
	The teacher selects words that are appropriate to the age and ability of students	9	100%	
Assessing children's vocabulary knowledge	The teacher uses screening assessments at the beginning of the school year to identify students' vocabulary knowledge	0	0%	Use screening assessments for other literacy skills but not vocabulary
	The teacher utilizes diagnostic assessments to get in-depth information about specific students' vocabulary development	0	0%	
	The teacher assesses students' ongoing progress using formal assessment tools(e.g., Peabody Picture Vocabulary Test and the Expressive Vocabulary Test)	0	0%	
	The teacher assesses students' ongoing progress using informal assessment tools (e.g., observation, discussion and checklists)	9	100%	Using observation and discussion
	The teacher assesses students' understanding of the vocabulary at the end of the vocabulary instruction lessons	9	100%	Engage students in discussion; using end-of-unit tests

(Continued)

Areas	Teacher's practices	*N*	%	Comments
Using technology to teach vocabulary	Technology tools, such as computers, tape-recorders and iPods, are available and accessible to students	9	100%	
	Technology tools used are appropriate to students' age and ability	9	100%	
	Computers and other technologies, such as iTouches and iPods, are loaded with vocabulary activities	2	22.2%	The other participants mentioned using software programs but not specifically for vocabulary
	The teacher uses technologies during the lesson, such as the Internet , videos and Smartboards, to teach vocabulary	7	77.7%	Seven reported using technology to show videos and pictures of the target words
	The teacher utilizes technologies, such as the Internet and software programs, to plan vocabulary lessons	7	77.7%	Seven reported that technology gives them some ideas to support their lessons

Figure 3. Frequency of participant teachers' practices compared with recent research recommendations regarding best practices to teach vocabulary in kindergarten.
 ***Note.* The recommendation was partially used by all participant teachers

Summary

This study aimed to describe highly effective kindergarten teachers' practices in

vocabulary instruction. Qualitative approaches were utilized to provide rich descriptions of the

findings of the study. The analysis of data from classroom observations, interviews, and lesson

plans was provided in this chapter. The findings were presented according to the research sub-

questions that guided the study. Regarding the first research sub-question, four themes and 17

subcategories were identified to describe methods participant teachers use to teach vocabulary:

(a) Introducing vocabulary in context through reading aloud, guided reading and shared reading;

(b) providing definitions with examples, using student-friendly definitions, examples, complete

sentences, children's own definitions, and multiple meanings of the word; (c) Engaging students

with target vocabulary through discussion, modeling, think-pair-share, children's own

experience, thumbs up/down and drawing pictures; and (d) expanding repeated exposure to vocabulary using word wall, saying the word and repeating the word during the unit. For the second sub-question regarding selecting words worth teaching, two themes were identified: (a) using the school district's selection and (b) selecting productive vocabulary. The themes of the third sub-question regarding assessing students' vocabulary development are (a) use of teacher observation and (b) use of end-of-unit tests. For the fourth sub-question regarding using technology in vocabulary instruction two themes emerged: (a) presenting vocabulary visually by using technology and (b) using software programs for vocabulary. In order to answer the fifth research sub-question, an evaluation checklist for vocabulary instruction in kindergarten classrooms has been developed by the researcher. The data showed that three recommendations were not used by any teachers, five were partially used or used by some teachers, and twelve were used by all participant teachers.

CHAPTER VI

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

The methodology incorporated into this study was designed to build a clear picture of how highly effective kindergarten teachers teach vocabulary. Specifically, the study sought to investigate highly effective kindergarten teachers' methods, vocabulary selection techniques, assessments, and technology used to teach vocabulary. The study also investigated whether the practices of highly effective kindergarten teachers are consistent with recommendations of recent research in vocabulary instruction. Nine highly effective kindergarten teachers from nine elementary schools were observed and interviewed, and their vocabulary lesson plans were analyzed. The research was directed by the following main research question and the five sub-questions:

How do highly effective kindergarten teachers teach vocabulary?

1. What are the methods they use to teach vocabulary?

2. How do they select vocabulary worth teaching?

3. How do they assess vocabulary development in their students?

4. How do they use technology to teach vocabulary?

5. To what extent do their practices align with the recent research on vocabulary instruction?

This chapter includes discussion of the major findings of the study, conclusions, implications for practice, and recommendations for future research.

Discussion of Findings

The discussion of the findings are organized around the following topics: methods to teach vocabulary, selecting vocabulary worth teaching, assessing children's vocabulary development, and using technology to teach vocabulary.

Methods to Teach Vocabulary

Several observational studies (Juel et al., 2003; Kent et al., 2012; Wright, 2011) found that vocabulary instruction in kindergarten classrooms is overlooked, unplanned or limited. However, all teachers in this study provide planned vocabulary instruction every day for at least 15 minutes. This finding is consistent with a growing body of literacy research documenting the efficacy for teaching vocabulary words directly to increase children's word awareness and knowledge (Beck & McKeown, 2007; Biemiller & Boote, 2006; Block & Israel, 2005; Coyne et al., 2010). This finding demonstrates that highly effective kindergarten teachers in this study are aware of the importance of providing direct vocabulary instruction to kindergarten students.

The analysis of data also revealed that all participant teachers incorporated several techniques to discuss the target vocabulary to engage children in learning. As Marzano (2009) expressed, incorporating several methods to introduce target vocabulary words to children ensures delivery of effective teaching of vocabulary words. In this study, seventeen methods to teach vocabulary were identified. Several methods are shared by all teachers in this study, including introducing vocabulary in context during read aloud; providing student-friendly definitions, examples, complete sentences and discussion of target words; saying the word multiple times; and posting the target words on a word wall. The other methods shared by some teachers include introducing vocabulary through guided reading and shared reading, using children's own definitions, providing multiple meanings of the word, repeating the word during

the unit, and engaging children by using models, think-pair-share, children's own experiences, thumbs up/down and drawing pictures.

Although teachers in this study report using several techniques to engage children in learning new vocabulary, wordplay, which is considered the most effective technique to motivate and engage children in learning vocabulary (Blachowicz & Fisher, 2012), is not reported by any of the participant teachers. Teachers should be aware of including wordplay when teaching vocabulary. They can plan various activities to play with the whole group to interest kindergarten children in learning the meanings of the word. Despite not using word play, all highly effective teachers in this study introduced vocabulary in context through read aloud, an effective method to teach vocabulary (Blachowicz & Fisher, 2010; Kindle, 2010). All participant teachers introduced the target vocabulary while reading aloud using fiction or nonfiction books. They all reread the sentence that contained the target word, asked children to figure out how the word was used in the story, and discussed the meaning of the word. This practice is aligned with recent research that emphasizes the importance of introducing target words through literature to ensure teaching the vocabulary in meaningful ways (Scanlon et al., 2010).

Additionally, recent research encourages teachers to use word walls to enrich their classrooms' environments and foster students' vocabulary development (Blachowicz & Fisher, 2012). It was observed that all teachers in this study use word walls to display the target words. As the teachers indicated in the interviews, after they taught the target vocabulary they post words to the word wall to review the word and provide reference support for children. Moreover, the data showed that all participant teachers repeat the vocabulary words many times with children during the vocabulary lesson. Engaging "all students in saying the word together two or

three times" is one strategy that teachers should use to ensure children practice pronunciation to say the word correctly (Feldman & Kinsella, 2005, p. 5).

The data also showed that most of the teachers in this study introduced the target vocabulary after reading aloud; however, three teachers in this study introduced the vocabulary before, during and after reading aloud. These three teachers allocated more instructional time to explain the target vocabulary, which ensures an increase of children's vocabulary knowledge and understanding (Coyne et al., 2009). Further, the data from observations showed that two of the teachers in this study followed an approach called "the magic words" suggested by Coyne et al. (2012). The idea of this approach is to introduce the target word before reading, encourage the children to raise their hands if they hear the word during reading and provide explanation with the definition of the word. The two teachers introduced the target vocabulary by saying the word with children many times, by asking children to signal when they heard the target vocabulary, such as clapping their hands and patting their shoulders, and by discussing the word with children. According to Coyne et al. (2012), using this approach helps to increase children's understanding of the word meanings. Therefore, it will be assumed that if these two teachers use this approach on all vocabulary lessons, the vocabulary knowledge of their children will increase. Overall, the highly effective kindergarten teachers in this study use various methods to teach vocabulary and these methods are consistent with recent literacy research of the best practices in vocabulary instruction.

Selecting Vocabulary Worth Teaching

The data revealed that teachers' approaches to select vocabulary words included use of the school district selections and their own selections. As Ms. Rachel expressed, both the school district and teachers select books that contain appropriate vocabulary words to be introduced in

vocabulary lessons. The teachers' approach to select vocabulary worth teaching, as described in this study, showed that they follow the best practices to select productive vocabulary words that support their students' learning. Their responses regarding how to select vocabulary worth teaching seem to be an answer to questions developed by Blachowicz et al. (2005). The questions are: How important is the word to the reading or theme of study? How useful is the word outside of the selection or theme? Is this a word that students might learn independently? Is this a word that will heighten students' enthusiasm for word learning? (p. 6). Answering these questions prior to the vocabulary instruction assists teachers in selecting vocabulary worth teaching. All teachers' responses indicated that they select vocabulary words that are useful to children, related to children's lives, aligned with the curriculum, and less likely to be learned by the children outside of the classroom.

In addition, several teachers in this study referred to the vocabulary words they select as "tier two words," characterized by Beck et al. (2002). According to Beck et al. (2002), words can be categorized into three tiers: tier one includes basic words that do not require instruction, such as "red," "baby" and "table;" tier two contains words that are important when using mature and academic language, such as "coincidence" and "absurd;" and tier three integrates words that are less frequently used and are part of specific fields of study, such as "metaphor" and "isotope." Beck et al. (2002) recommended teachers select tier two words because they are useful to children and less likely to be learned independently.

Another finding regarding the number of words to be taught showed that all teachers in this study teach one to two vocabulary words each lesson, yet literacy experts recommend kindergarten teachers teach two to three words each vocabulary lesson (Biemeller, 2012; Block & Israel, 2005). Nevertheless, other literacy experts argue that teaching many words during a

single lesson may hinder students' ability to internalize vocabulary words (Coyne et al., 2009). Participant teachers' practices in this study align with these recommendations that encourage teachers not to overwhelm students with excessive vocabulary words. In addition, the study found that participant teachers focus on academic vocabulary relevant to subject areas, such as math, science and social studies. The reason for this focus, as some teachers expressed, is the district's adoption of the Common Core State Standards, which require teachers to focus more on academic words (Grossman et al., 2011). This focus is designed to help kindergarten children obtain necessary skills to be successful in their academic learning in upper grades (Neuman & Roskos, 2012). Considered comprehensively, the data demonstrated that teachers are aware of the importance of choosing productive vocabulary to increase children's vocabulary growth.

Assessing Children's Vocabulary Development

The data showed that the teachers assess children's understanding of target vocabulary words through the use of two types of informal assessments: teachers' observation and end-of-unit tests. Observation is the only assessment shared by all teachers in this study. Through observation, teachers can determine their children's strengths and development areas in vocabulary knowledge (Rog, 2011; Schumm, 2006). Besides using teacher observation, three teachers indicated using end-of-unit tests. These tests are considered informal assessments because students' scores on these tests, as expressed by the teachers, are not documented on children's reports; however, using the tests after the end of each unit helps teachers to check for their students' understanding of the target words. Both observation and the end-of-unit tests are considered ongoing assessments that help teachers to gain more knowledge of students' progress in vocabulary development and to plan more effective methods for vocabulary instruction (Reutzel & Cooter, 2011).

Although researchers have emphasized the importance of including formal assessment to guide teachers to plan appropriate vocabulary instruction that meets students' learning levels (Blachowicz & Fisher, 2010; NICHD, 2000), the findings in this study indicated that formal assessment for vocabulary is overlooked in kindergarten classrooms. Using formal assessment to assess students' vocabulary development is not reported by any of the teachers in this study. Indeed, the teachers reported using several formal assessments that measure other literacy skills, such as phonics and oral language, but no formal assessment is used to measure students' vocabulary knowledge. This neglect of formal assessment to measure students' vocabulary growth can negatively affect the vocabulary teaching practices and consequently students' learning and performance.

Using Technology to Teach Vocabulary

Using technology in the classroom provides opportunities for teachers to support students' vocabulary development (Blachowicz et al., 2006). The data demonstrated that all teachers in this study are aware of the importance of using technology in classrooms as positive tools for teaching and learning. The technology tools used in the teachers' classrooms are appropriate to kindergarten children and meet the learning goals. The data also showed that teachers use several technology tools through their instruction. Most teachers reported that they use technology to present vocabulary visually. For example, they use video as a powerful tool to illustrate the meaning of target vocabulary words. Using video during vocabulary instruction assists teachers to increase their students' awareness of new vocabulary words. According to the findings from a study conducted by Xin and Rieth (2001), the vocabulary knowledge of students who are provided vocabulary instruction with video increases compared to those who are taught vocabulary without using video.

Further, using software programs in the classroom is an active and engaging tool that increases children's achievement (NAEYC, 2012). Considerable research shows that using software programs in classrooms increases students' literacy skills, including vocabulary knowledge (Cohen & Cowen, 2011; Ringstaff & Kelley, 2002; Vacca et al., 2012). In the current study, all teachers indicated using several software programs designed to enhance children's literacy skills; however, only two teachers reported that they use software programs that are designed to help children increase their vocabulary development. Teachers in this study were aware of the potential uses of technology but could improve in this area by using more specific vocabulary applications.

Conclusions

Early vocabulary development is crucial for students' success in their schools and in their lives. Therefore, students need to be introduced to essential and strong vocabulary skills beginning in primary grades (Beck et al., 2002; Biemiller, 2012; Coyne et al., 2012). This study represents a description of vocabulary instruction practices of highly effective teachers in the kindergarten classroom. The findings from this study can enhance other teachers' understanding of the various strategies available to teach vocabulary in kindergarten classrooms, thus increasing children's vocabulary development.

Taking into consideration the above discussion, it can be concluded that the teachers in this study provide direct and explicit vocabulary instruction with adequate instructional time as recommended by recent literacy research. The teachers in this study use different teaching methods to teach vocabulary to kindergarteners. Their approaches to select vocabulary worth teaching indicated their understanding of general guidelines suggested in recent literature to choose vocabulary appropriate for kindergarten children. Regarding their approach to assess their

students, the teachers' practices demonstrate a lack of formal assessments. This lack might be attributed to the district approach to assessment of the literacy skills of kindergarten children. However, teachers are aware of using the observation assessment tool to check for their students' understanding, and three of the participant teachers provide tests at the end of the unit to determine students' vocabulary knowledge outcomes. Regarding using technology in classrooms, the data showed that teachers in this study appreciate the need to integrate technology tools to support learning and to facilitate their explanations of the target words. They also use several software programs that are proved to enhance children's literacy skills. However, most teachers indicated that the provided software programs are not designed to increase children's awareness of word meanings.

In light of the discussion of the findings from the current study, the following instructional steps could be used in kindergarten classrooms for vocabulary instruction:

- Provide direct vocabulary instruction every day. During read aloud, present the target vocabulary in context, say the word aloud, discuss the meanings of the word, provide a student-friendly definition, and use the word in different examples.

- At the end of the lesson, engage children with several activities to use the target word in different contexts. These activities can be done with the whole group or small groups. Examples of these activities are modeling the word, relating the word to children's lives, writing journals about the word, drawing pictures to represent the word, and using it in conversations.

- Select a book that addresses the unit and choose productive vocabulary words that are useful, academic, appropriate and essential to comprehend the selected reading.

- Enhance the vocabulary instruction by using some technology tools to show pictures or a video that illustrates the meanings of the target words. Load computers, iPads or iTouches with vocabulary games and software programs to increase children's awareness of the target vocabulary words.

- Assess children frequently using formal and informal assessments to check for their understanding of the new target vocabulary.

Implications for Practice

The findings of the present study suggest the following implications for practice. First, kindergarten teachers need to incorporate the research-proven methods into their teaching practices. Teachers should be aware of the best practices to teach vocabulary in kindergarten to ensure effective vocabulary instruction for all students. Second, kindergarten teachers should engage children in learning new vocabulary by planning interesting activities, such as word play, show and tell and interact with each other. Teachers can also enrich the writing center with word cards or a binder containing target vocabulary words. Third, time needs to be allocated to review and repeat the target vocabulary words. Teachers might be willing to provide activities that enhance children's understanding of the target words; however, the limited time during the school day may hinder this opportunity. As Ms. Rachel pointed out, "The repetition of the word depends on how much time I have" (Rachel, Interview, April 29th, 2013, p.3). Teachers can modify class time to provide more activities for children to review the target vocabulary.

A fourth implication for practice is that assessment should be an ongoing part of vocabulary instruction. Based on the lack of formal assessment available to assess children's vocabulary development, it is recommended that the school district discuss the integration of vocabulary assessment into the literacy assessments. The literature provides many vocabulary

assessments appropriate for the kindergarten level that the school district can use, such as the

Peabody Picture Vocabulary Test (PPVT) (Dunn & Dunn, 1997) and the Expressive vocabulary

tests (Williams, 1997). Also, teachers should enhance their use of informal assessments. Besides

their use of observation in this study, other types of informal assessment should take place in

daily teaching and learning. For example, teachers can use vocabulary checklists to record their

students' correct use of the target vocabulary words in different contexts (Rog, 2011). A fifth

implication is the need to focus on vocabulary instruction in primary grades. Murnane et al.

(2012) indicates that one of the effective approaches to prevent reading difficulties is increasing

vocabulary development in primary grades. Therefore, rich vocabulary instruction has to be

introduced formally and directly in early primary grades. Further, the finding of this study

regarding using technology to teach vocabulary suggested, as a sixth implication, that the school

district needs to provide teachers with software programs that are designed particularly to

enhance children's vocabulary growth and provide a list that contains suggestions of learning

websites appropriate to kindergarten children to increase their vocabulary knowledge. Finally,

proper professional development opportunities should be provided. The professional

development should include a variety of learning experiences that facilitate implementation of

the best practices to teach vocabulary.

Recommendations for Future Research

The findings of this study recommend the following as areas for future research. First, the

participants in this study included nine kindergarten teachers who teach in the same school

district. It is recommended that future research include a larger population of highly effective

kindergarten teachers working within different school districts to minimize common

characteristics relating to the practices and theoretical orientations of teaching vocabulary. Future

research can compare the teachers' practices across school districts. Second, this study described vocabulary instruction from different elements, including: methods, selection of vocabulary, assessments, and technology. Future studies could expand on each element to investigate each in-depth. Third, future research is needed to measure students' knowledge of vocabulary words to determine the effectiveness of the strategies used for word knowledge. Future research can follow children longitudinally to determine if the effects of the strategies are retained. Fourth, the study could be replicated with highly effective teachers in upper elementary grades, to determine the methods they use in vocabulary instruction and if their practices are consistent with recent research on the best practices to teach vocabulary.

Fifth, future research is needed to investigate the best practices for vocabulary instruction to teach vocabulary to students who are learning English as a second language. Sixth, future research is needed to provide teachers with teaching approaches that can be used to narrow the vocabulary gaps existing between children from disparate socioeconomic backgrounds. Finally, future research efforts should attempt to explore the implications of this study so that teachers can work to develop a balanced approach for teaching vocabulary, using appropriate instructional methods, materials, assessments, and technology to provide effective vocabulary instruction to enhance children's reading achievement and success.

Summary

This study described highly effective kindergarten teachers' practices in vocabulary instruction. Several findings emerged from analyzing the three types of collected data. The findings are supported by what the nine highly effective kindergarten teachers said, did, or produced during the observed vocabulary lessons, interviews and vocabulary lesson plans. The findings of the study offered a rich picture focusing on five dimensions: teachers' methods to

teach vocabulary, their techniques to select vocabulary worth teaching, approaches they use to assess children's vocabulary knowledge, their use of technology to enhance children's word knowledge and whether their practices are consistent with recent research of vocabulary instruction. All teachers in this study allotted time for vocabulary instruction in their classrooms. They select productive vocabulary words to teach directly, using several teaching methods consistent with recent research. They assess their children using observation and end-of-unit tests; however, they do not use formal assessments to measure children's progress in vocabulary knowledge. Technology tools are used to provide supplemental explanations of target vocabulary words. Several software programs are accessible to children to enhance their literacy skills; however, few are designed to improve children's vocabulary awareness. Based on the findings of the study, several implications for practice should be implemented to enrich the vocabulary instruction provided to kindergarten children, and future research is needed to provide more in-depth investigations about teachers' practices in vocabulary instruction.

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Appendix A

Informed Consent

Title of the study: Vocabulary Instruction Practices of Highly Effective Kindergarten Teachers

Consent to Participate in a Research Study

Principal Researcher: Huda Alenezi

Faculty Advisor: Dr. Jennifer Beasley

Dear kindergarten teachers,

My name is Huda Alenezi and I am a graduate student pursuing my PhD in Curriculum and Instruction at the University of Arkansas.

You are invited to participate in a research study about vocabulary instruction in kindergarten classrooms. You are being asked to participate in this study because you have been identified as a highly effective kindergarten teacher.

Description: The present study is a dissertation designed to investigate highly effective kindergarten teachers' practices in vocabulary instruction. Three methods (classroom observation, interview and document analysis of vocabulary lesson plans) will be employed to explore and describe your practices in vocabulary instruction. You will be visited and observed during one of your vocabulary lessons. During the observation, I will sit in an area of the classroom that allows me to observe the lesson and, at the same time, be as unobtrusive as possible. Then you will be interviewed for about 30 to 40 minutes and you will be asked to provide the researcher with the vocabulary lesson plans that you have been taught in the preceding month. The classroom visit and interview will be scheduled with you in advance and I will provide you with the questions that I will ask prior to the interview. The analysis of the collected data will help the researcher to gain more understanding of the methods used to teach vocabulary, ways to select vocabulary, different assessments to assess students' vocabulary development and the technology that highly effective kindergarten teachers use during the vocabulary lessons.

Risks and Benefits: There are no risks to participate in this study. The potential benefits include providing other kindergarten teachers sufficient information and in-depth understanding of effective vocabulary instruction.

Voluntary Participation: Your participation is completely voluntary, but extremely appreciated and valued.

Confidentiality: Your responses will remain confidential throughout the study, to the extent allowed by law and University policy. To ensure confidentiality, a code will be established by randomly assigning a number to each participant teacher. Each participant will be assigned a number at random to establish the code. All data will be recorded anonymously using the code. The code, as well as all data collected during the study, will be stored in a secure place and will only be accessible to the researcher. Neither you nor your responses or data will be personally identified. Once the proposed study is completed, the code will be destroyed.

Right to Withdraw: If you choose to allow your responses and data to be used now, but at any time and for any reason change your mind, you may withdraw your consent. In that case, your data and responses would not be recorded in the study data. There would be no negative consequences for this decision.

Results of the study: At the conclusion of the study you will have the right to request feedback about the results. You may contact the faculty advisor, Dr, Jennifer Beasley at jgbeasle@uark.edu or principal researcher, Huda Alenezi at halenezi@uark.edu.You will receive a copy of this form for your files.

You have the right to contact the principal researcher or faculty advisor as listed below for any concerns that you may have.

I have read the above statement and have been able to ask questions and express concerns, which have been satisfactorily responded to by the investigator. I understand the purpose of the study as well as the potential benefits and risks that are involved. I understand that participation is voluntary. I understand that significant new findings developed during this research will be shared with the participant. I understand that no rights have been waived by signing the consent form. I have been given a copy of the consent form.

_____   _____   _____

Participant   School   Date

Appendix B

Research Questions and Interview Questions Alignment

Research Questions	Interview questions
What do they perceive as the most effective methods they use?	- What strategies do you use in your classroom to teach vocabulary? - Which strategy do you believe is most effective? Why? - Can you give an example of an effective strategy that you used to teach vocabulary? - How many times do you repeat the new word to children?
How do they select vocabulary worth teaching?	- How do you select vocabulary worth teaching? - Is there any vocabulary list you use to teach vocabulary? - How many word meanings do you teach every day / week? - Do you focus on academic vocabulary?
How do they assess vocabulary development in their students?	- How do you assess children's vocabulary growth? - What types of assessment do you use to assess children's vocabulary development? - How many times do you assess vocabulary instruction during the school year? - Do you assess students' understanding of word meanings after the vocabulary lesson? How?
How do they use technology to teach vocabulary?	- Do you think using technology is important to teach vocabulary? - Do you use technology to teach vocabulary? If so, what types of technology do you use? - Does technology help you to plan vocabulary lessons? If so, how? - What kinds of software programs do you use in your classrooms? Why?

Appendix C

Teacher Interview Protocol

Teacher _____ Date _____School _____

Time start _____ end _____

Introduction:

 Thank you for your agreement to participate in this study about the practices of highly effective

kindergarten teachers in vocabulary instruction. Your participation is extremely valuable and

appreciated. As we discussed in the first meeting, the interview will be confidential and the

transcripts and the tape will be secured. Your name and the school's name will not be identified

in the research paper. After I transcribe this interview, a copy of the transcript will be available

to you for review. It is very important to make sure that the interview transcript represents your

words. This interview should take about 30 to 40 minutes. I really appreciate your time.

Questions:

Introductory question for teacher demographic:

Would you please describe your teaching experience, years teaching in kindergarten and other
grades, degrees you hold, number of students in your classroom, and certification and honors you
have obtained?

1. What strategies do you use in your classroom to teach vocabulary?

2. Which strategy do you believe is most effective? Why?

3. Can you give an example of an effective strategy that you used to teach vocabulary?

4. How do you select vocabulary worth teaching?

5. How many word meanings do you teach every day / week?

6. How many times do you repeat the new word to children?

7. Do you focus on academic vocabulary?

8. Is there any vocabulary list you use to teach vocabulary?

9. How do you assess children's vocabulary growth?

10. What types of assessment do you use to assess children's vocabulary development?

11. How many times do you assess vocabulary instruction during the school year?

12. Do you assess students' understanding of word meanings after the vocabulary lesson? How?

13. Do you think using technology is important to teach vocabulary?

14. Do you use technology to teach vocabulary? If so, what types of technology do you use?

15. Does technology help you to plan vocabulary lessons? If so, how?

16. What kinds of software programs do you use in your classrooms? Why?

Final question: Do you have anything you want to add about vocabulary instruction that we have not talked about?

Appendix D

Classroom Observation Protocol

Teacher _____ Date _____School _____

Class period:

Topic of the lesson:

Objectives:

Materials used:

Methods used:

Number of words taught:

How children will be assessed (for this lesson):

Descriptions of the lesson:

Appendix E

An Evaluation Checklist for Vocabulary Instruction in Kindergarten Classrooms

Areas	Teacher's practices	Yes	No	Comments
Methods to teach vocabulary	Vocabulary instruction is an everyday part of literacy instruction. The teacher teaches the word meanings directly for about 10 to 20 minutes			
	The teacher introduces vocabulary in context by providing a daily read aloud with clear explanations of the meanings of new words			
	The teacher uses modeling, examples and sentences to teach word meanings			
	The teacher offers multiple exposures to see, hear and talk about the learned words at least once every day for a week			
	Follow-up activities are provided. The teacher offers opportunities that support vocabulary development in a variety of ways such as using vocabulary in writing and drawing pictures.			
Selecting vocabulary worth teaching	The teacher selects 2 to 3 words each vocabulary lesson			
	The teacher selects words that are essential to understanding and reading comprehension			
	The teacher chooses useful words that students use in their lives			
	The teacher chooses academic vocabulary			
	The teacher selects words that are appropriate to the age and ability of students			

Areas	Teacher's practices	Yes	No	Comments
Assessing children's vocabulary knowledge	The teacher uses screening assessments at the beginning of the school year to identify students' vocabulary knowledge			
	The teacher utilizes diagnostic assessments to get in-depth information about specific students' vocabulary development			
	The teacher assesses students' ongoing progress using formal assessment tools(e.g., Peabody Picture Vocabulary Test and the Expressive Vocabulary Test)			
	The teacher assesses students' ongoing progress using informal assessment tools (e.g., observation, discussion and checklists)			
	The teacher assesses students' understanding of the vocabulary at the end of the vocabulary instruction lessons			
Using technology to teach vocabulary	Technology tools, such as computers, tape-recorders and iPods, are available and accessible to students			
	Technology tools used are appropriate to students' age and ability			
	Computers and other technologies, such as iTouches and iPods, are loaded with vocabulary activities			
	The teacher uses technologies during the lesson, such as the Internet , videos and Smartboards, to teach vocabulary			
	The teacher utilizes technologies, such as the Internet and software programs, to plan vocabulary lessons			

Appendix F

The Recommendations and their Support from Recent Research

Focus of research questions	Recommendations	Support from recent research
Methods to teach vocabulary	Explicit teaching (vocabulary instruction should be delivered for 10 to 20 minutes daily)	(Beck & McKeown, 2007; Butler et al., 2010; Coyne et al., 2009; Kamil et al., 2008; Marulis & Neuman, 2010)
	Reading aloud	(Coyne et al., 2012; McGee & Schickedanz, 2007; Scanlon et al., 2010)
	Modeling, examples and sentences	(Blachowicz & Fisher, 2012; Carnine et al., 2010; Graves, 2008; Rog, 2011)
	Multiple exposures	(Biemiller & Boote, 2006; Coyne et al., 2009; Neuman & Roskos, 2012)
	Follow-up activities to review new vocabulary	(Biemiller & Boote, 2006; Blachowicz & Fisher, 2012; Christ & Wang, 2010; Graves, 2008)
Selecting vocabulary worth teaching	Select 2 to 3 words each day	(Biemeller, 2012; Block & Israel, 2005; Neuman, 2011)
	Select words that are essential to reading comprehension	(Armbruster et al., 2006; Beck et al., 2002; Scanlon et al., 2010)
	Choose useful words that children use in their lives	(Beck et al., 2002; Biemeller, 2010; McKeown, Beck, & Sandora, 2012)
	Choose academic vocabulary	(Blachowicz et al., 2005; Grossman et al., 2011; Stahl & Kapinus, 2001)
	Select vocabulary appropriate to students' age and ability	(Biemeller, 2012; Scanlon et al., 2010; Stahl & Stahl, 2012)

(Continued)

Focus of research questions	Recommendations	Support from recent research
Assessing children's vocabulary development	Screening assessments (at the beginning of the school year)	(Carnine et al., 2010; Reutzel & Cooter, 2011; Rief & Heimburge, 2007)
	Diagnostic assessments (to get in-depth information)	(Carnine et al., 2010; Reutzel & Cooter, 2011; Rief & Heimburge, 2007)
	Formal assessments (to assess children's ongoing progress)	(Reutzel & Cooter, 2011; Rog, 2011; Scanlon et al., 2010)
	Informal assessments (to assess students' ongoing progress)	(Blachowicz & Fisher, 2010; Rief & Heimburge, 2007; Schumm, 2006)
	Outcome assessments(at the end of instruction)	(Biemiller, 2010; Carnine et al., 2010; Rog, 2011)
Using technology to teach vocabulary	Technologies are available and accessible to students	(Kennedy& Deshler, 2010; NAEYC, 2012; Rief & Heimburge, 2007)
	Technology tools are appropriate to students' age and ability	(Dalton & Grisham, 2011; NAEYC, 2012; Schumm, 2006)
	Technologies are loaded with vocabulary activities	(Blachowicz et al., 2006; Cohen & Cowen, 2011; Dalton & Grisham, 2011)
	Technologies are used during the lesson	(Cohen & Cowen, 2011; McManis & Gunnewig, 2012; Rief & Heimburge, 2007)
	Technologies are used to plan vocabulary lessons	(Cohen & Cowen, 2011; Kennedy& Deshler, 2010; Rief & Heimburge, 2007)

Appendix G

Sample Coding of Transcript

From Ms. Jasmine's interview transcript
Date: April 22nd, 2013
Time 2: 40 pm to 3: 10 pm
Location: Ms. Jasmine's classroom.

Researcher: What strategies do you use in your classroom to teach vocabulary?

Ms. Jasmine: Every day we have a vocabulary lesson, and what we do is introduce a *[annotation: Provide Vocabulary lesson every day]* book to the students and from that book we select a word which we feel that has *[annotation: select useful words]* something that might benefit the student's vocabulary, some of the students may know the word but maybe it is new to a lot of them. What we try to do is read the story and *[annotation: read aloud]* we discuss the word after the story; the students point to me when they heard the word *[annotation: use magic word approach]* in the story. Following the vocabulary lesson we discuss the word with students, we *[annotation: discussion]* *[annotation: definition]* talk about the meaning of it, we use it in the context of the sentences in the story and *[annotation: Provide various examples of characters]* we use it in a new context or a different context. And then we have an activity for *[annotation: Pair/Share]* students to use that word either with the whole group or partner, using the word in a context that they understand. We try not just giving them the meaning of the word in the story but also have them use it in their own experiences. *[annotation: Connect the words to children's lives.]*

Researcher: Which strategy do you believe is most effective?

Ms. Jasmine: I believe the most effective strategy to teach new vocabulary is introducing *[annotation: introduce the word in Context]* the words through literature, rather than just giving them the words in isolation. If we use it in story format then we always have better luck with it for them to remember it. The *[annotation: word wall]* word they learned is posted in the wall back there and what we do is to have a picture each day ...and the word is listed under the picture and then we discuss that word.

Researcher: Why is this strategy effective?

Ms. Jasmine: I think it gives them a reference, if you give them a word in isolation it is not *[annotation: introducing the word in context is meaningful to children.]* meaningful as if you give them the word in context... if children can think of that word and the context of the story it is much more meaningful than presenting them just a word.

Appendix H

Sample Analytic Memo

Ms. Jasmine's Vocabulary Instruction Practices

April 26th, 2013

Ms. Jasmine provides vocabulary instruction during read aloud every day for about 15 minutes. She teaches one to two vocabulary words directly. Her practices in vocabulary instruction include:

- Present vocabulary through literature by reading aloud a fiction or nonfiction story. Ms. Jasmine introduces the target vocabulary before, during and after reading the story. In her observed vocabulary lesson, she introduced the target vocabulary before reading the story and asked children to clap their hands when they heard the vocabulary word while reading.
- Discuss the target vocabulary with children during the lesson by asking some questions about the word and listen to the children's answers.
- Use the vocabulary in a complete sentence and ask children to provide their own sentences.
- Offer student-friendly definitions of the target vocabulary. She uses familiar words so children can figure out the meaning of the new vocabulary.
- Ask children to provide their own definition and direct them to provide several examples of the target vocabulary.
- Provide a word wall that contains target vocabulary words that they have had during the unit.
- Repeat the target vocabulary word many times. During her lesson, Ms. Jasmine repeated the target vocabulary word more than ten times.
- Encourage children to pair/share to talk about the target vocabulary
- Relate the target words to children's lives.
- Teach vocabulary provided by the district.
- Select vocabulary words that children need to know and are appropriate for them.
- Choose vocabulary important to comprehending the selected story that meets the curriculum.
- Focus on academic vocabulary during content areas.
- Use observation to assess children's understanding of the new vocabulary.
- Use short video clips to illustrate the meanings of new vocabulary words.

Table H1

Key Findings from Ms. Jasmine's Observed Lesson, Interview, and Lesson Plans

Areas of teacher practices	Observed vocabulary lesson	Interview	Lesson plans
Methods to teach vocabulary	Read aloud ▪ Present vocabulary through literature ▪ Present vocabulary before, during and after reading aloud. ▪ Repeat the word ▪ Discuss the word with children ▪ Provide definitions and examples	▪ Present vocabulary in story ▪ Discuss the vocabulary ▪ Use complete sentences ▪ Provide student-friendly definitions ▪ Encourage children's own definitions and examples ▪ Use word wall ▪ Repeat the word ▪ Use pair/share ▪ Relate the word to children's lives	▪ Provide examples of the vocabulary ▪ Say the vocabulary with children ▪ Provide student-friendly definition ▪ Engage students with target vocabulary ▪ Use the vocabulary in complete sentences
Approaches to select vocabulary	▪ Teach one vocabulary word ▪ The selected story meets the unit's content.	▪ Select one to two vocabulary words to teach every day ▪ Some vocabulary words are provided by the district ▪ Select useful and appropriate words important for comprehension cohesive with the unit and academic.	▪ Out of 20 lesson plans, 12 lesson plans contain one target vocabulary word and eight lesson plans contain two vocabulary words.
Techniques to assess children's vocabulary knowledge	▪ At the end of the lesson, the teacher used discussion of the target vocabulary to determine their understanding	▪ Observation during whole group or small group to see if children use the vocabulary correctly	▪ The lesson plans direct teachers to ask questions and engage their students with target vocabulary to check for their understanding
Integration of technology to teach vocabulary	▪ Technology was not used during the lesson	▪ Short video clips to show pictures representing the target vocabulary	▪ No technology tools were included

Appendix I

Institutional Review Board Documentation

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review Board

April 1, 2013

MEMORANDUM

TO:	Huda Alenezi Jennifer Beasley
FROM:	Ro Windwalker IRB Coordinator
RE:	New Protocol Approval
IRB Protocol #:	13-04-631
Protocol Title:	*Vocabulary Instruction Practices of Highly Effective Kindergarten Teachers*
Review Type:	☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB
Approved Project Period:	Start Date: 04/15/2013 Expiration Date: 04/14/2014

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (http://vpred.uark.edu/210.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval.   Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 10 participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes.   All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.

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