Vocabulary Growth in Preschool Children
Whose Teachers Use Instructional Conversation Strategies Based on Storybooks
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Table of Contents

Abstract 3
Introduction 4
Literature Review 10
Methods and Hypothesis 30
Findings and Analysis of Quantitative Data 41
Limitations of the Study 53
Mining the Qualitative Data 58
Applications and Implications 71
References 74
Appendix A: Letter of Support 84
Appendix B: Informed Consent Forms 86
Appendix C: Samples of Materials Given to Teachers 89
Appendix D: Sample of Picture Vocabulary Assessment Materials 102
Appendix E: Summaries of Data for Books 1, 2, and 3 105
Appendix F: Sample Post-Study Survey for Teachers 114
Abstract

Four preschool classrooms located in African American neighborhoods in Cincinnati, Ohio were the setting for a study of strategies to enhance vocabulary learning. Target vocabulary was chosen from theme-related storybooks. Strategies to promote instructional conversations included linking vocabulary to specific materials in various learning centers and using vocabulary during classroom routines like family-style meals. Both children and adults in the classrooms where the conversational strategies were implemented showed gains in target vocabulary knowledge and use up to 2 months after the instruction. The literature review and teacher responses to the in-classroom aspect of the study lead to the conclusion that work should continue to develop strategies to increase vocabulary learning that may be easily implemented in all early childhood settings.
In 2005 the State of Ohio launched the Early Learning Initiative (ELI), providing early education and care for children of families who were living in poverty. During the past two years, the Early Childhood Educators who teach in ELI programs have participated in professional development classes to facilitate literacy development, conducted by Early Language and Literacy Specialists, including this researcher. The participating teachers have indicated a desire to learn better ways to facilitate the oral language development of the children in their care. These concerned educators wanted practical strategies to encourage their children’s oral language growth. The questions and concerns of these professionals sparked a search of literature and classroom practice for information and strategies with the goal of developing and testing strategies that would help children learn book-related vocabulary during typical routines and playful activities.

One longitudinal study documented the major role oral language development plays in overall literacy development (Snow, Tabors & Dickinson, 2001). Further reading revealed that preschool environments and activities may positively influence oral language development and, thus, overall literacy acquisition (Gest, Holland-Coviello, Welsh, Eicher-Catt, & Gill, 2006; Joshi, 2005; Nekovei & Ermis, 2006; Roskos, Tabors, & Lenhart, 2004). Other authors focused on the role of conversation in language development, specifically vocabulary development (Bodrova & Leong,
2003; Cote, 2001; Hudson, Chryst, & Reamsnyder, 1994) or on talk related to storybooks (Conrad, Gong, & Sipp, 2004; Coyne, 2004; Elley, 1989).

Additionally, significant differences existed in home language exposure and support between families living in financial comfort and those living in poverty (Hart and Risley, 2003). McGee and Richgels (2003) state, “Children with delayed spoken language development are far more likely to experience reading difficulties than children with well-developed spoken language abilities” (p. 6). Since the children who are part of ELI are living in poverty, their oral language development and, therefore, their later reading skills may be at risk.

The research question

The study described in this thesis has attempted to discover the relationship between teacher conversations and preschool children’s oral language skills by answering the question: Will the use of specific instructional conversation strategies around storybooks, along with story-related activities, lead to increased vocabulary acquisition in preschool children? It was hypothesized that preschool children whose teachers use the planned intervention strategies will demonstrate increased vocabulary knowledge and use at a greater rate than children in control classrooms.

The research design included providing four teachers with story books and giving two of them research information, specific strategies and materials to use to increase the use of target vocabulary words during daily routines and story-related play activities. Activities were monitored and vocabulary use was assessed in all four classrooms. Due to the risk living in poverty poses to language and literacy
development, this study was conducted with the support and participation of an agency providing ELI services in inner city areas of Cincinnati, Ohio. Because children in such classrooms require much individual attention, the proposed strategies had to be easily implemented by very busy teachers.

**Terminology**

While reading about this study, it would be helpful to know several terms that are used in the literature and the course of the research.

1. **Decontextualized Language** – “…decontextualized language is used to talk about the past or future and to share information about abstract objects, events, and situations that are removed from the immediate context” (Currenton & Justice, 2004, p. 240-241).

2. **Early Learning Initiative** – “Designed to provide children with educational experiences that will help them enter kindergarten ready for success and meet the child-care needs of working, low-income families” (Ohio Department of Education, 2006). Known as ELI, the program requires agencies to contract directly with the state and detail their plans for meeting the state-set Early Learning Guidelines.

3. **Environment** – In the preschool classroom, the environment includes furniture and materials, the atmosphere created by the attitudes of the teacher and the interactions between adults and children. “Print-rich and engaging learning environments are essential in a preschool classroom. Books, posters, charts, displays and environmental print should be everywhere” (Trehearne, 2005, p. 193).

Specifically for this study, a language or literacy-rich environment would include
materials that promote the use and growth of language skills, both oral and written. Environmental print, wide use of books in all classroom areas, rich teacher-child conversations, facilitation of child-child conversation and writing will be encouraged and modeled throughout the day (Christie, 2004).

4. **Instructional Conversation** – “…discussion-based lessons geared toward creating richly textured opportunities for students’ conceptual and linguistic development” (Goldenberg, 1992, p. 317). In this study, instructional conversations are planned teacher-child conversations around a topic or book that build children’s knowledge of the topic and help them use it in daily activities.

5. **Interactive Reading** – “The most effective way to read aloud to children is to intersperse conversation with the reading….During interactive read-alouds, the teacher and children make comments, ask and answer questions, and make predictions” (McGee & Richgels, 2003, p.84).

6. **Phonemic Awareness** – “The ability to recognize spoken words as a sequence of sounds” (Neuman, Copple & Bredekamp, 2000, p. 124).

7. **Phonological Awareness** – “The whole spectrum from primitive awareness of speech sounds and rhythms to rhyme awareness and sound similarities and, at the highest level, awareness of syllables or phonemes” (Neuman, Copple & Bredekamp, 2000, p. 124).

8. **Oral Language Development** – “Oral language is the foundation of learning to read and write….Language is a verbal system. It consists of words and rules for organizing them and changing them” (Roskos, Tabors & Lenhart, 2004, p. 1, 6). The
development of oral language skills is demonstrated in children’s ability to attend to words and sounds in a variety of contexts, including conversation, storybook reading, storytelling, personal narratives, songs, poems and games. These skills develop along a continuum from responding to environmental sounds, to identifying individual words and their uses, to recognizing individual sounds within words, and to relating them to print.


10. **Story-related activities** – “Playing with ideas from books helps children contextualize them and see them in new way” (Owocki, 2001, p. 59). This play may include props or puppets to help re-enact story events, science explorations related to the topic of the story, math activities related to the number or pattern of characters or events, and similar extensions of story events, concepts and characters to various learning centers in a preschool classroom.

11. **Themes/topics** – The focus of a week or more of lesson plans may be a general topic to be explored through books and activities. An example could be farms or construction or a set of activities built around a theme, such as a holiday or family tradition. It is important to “select themes that deliberately build children’s world and word knowledge” (Roskos, Tabors, & Lenhart, 2004, p. 24). “The challenge is to select topics that interest young children and to integrate literacy activities into the study of every meaningful topic” (Vukelich & Christie, 2004, p. 61).
12. **Vocabulary** – “… the store of words children know. It is organized into two large types: (1) expressive vocabulary, words children can use to express themselves, and (2) receptive vocabulary, words they can understand when heard in context” (Roskos, Tabors, & Lenhart, 2004, p. 10). Children learn words by hearing and practicing them in various contexts. A relationship between children’s vocabulary and later reading comprehension has been identified (Roskos, Tabors, & Lenhart, 2004, p. 1).

13. **Zone of Proximal Development** – The area between a child’s independent performance on a given skill and the point at which she needs the help of a more knowledgeable person to complete a task. “This has been termed the *learning zone* because when teachers target instructions to a child’s ZPD on a specific task and assist him or her in completing the task, new learning takes place as the child is able to link known concepts to new ones” (Venn & Jahn, 2004, p. 12).
Literature Review

Some of the foundational research about early literacy recognized oral language skills as the first step toward emergent literacy. The International Reading Association [IRA] and National Association for the Education of Young Children [NAEYC], in their 1998 Joint Position Statement stated that “children learn to use symbols, combining their oral language, pictures, print and play into a coherent mixed medium for creating and communicating meanings in a variety of ways” (p. 3). One of the combined groups’ recommendations to support early literacy development during infancy and toddler-hood was to “engage in many one-on-one, face-to-face interactions with them to support their oral language development and lay the foundation for later literacy learning” (p. 9).

A popular framework for early childhood curriculum, *The Creative Curriculum for Preschool* (Dodge, Colker & Heroman, 2002), stated that “language and literacy skills go hand in hand” (p. 22). In another resource book, *Teaching and Learning in Preschool* (Venn & Jahn, 2004), the authors pointed out, “oral language development is the foundation for a preschooler’s literacy acquisition” (p. 62).

Snow, Tabors and Dickinson (2001) recognized a “consensus that the environments of young children should be language-rich, with lots of words used during interesting conversations, and should be enriched by stories and explanations” (p. 5). Pullen and Justice in 2003 concurred with the relationship between oral language skills and reading achievement. They noted “that pre-kindergarten and kindergarten children’s performance on vocabulary (semantic) and grammar (syntax)
tasks accounts for a significant amount of variance in later elementary-grade reading ability” (p. 90). These authors recognized the “intricate and robust association between oral language and other aspects of emergent literacy” (p. 94) including phonemic awareness.

**Focus on phonemic awareness**

In fact, much of the work done in this area seemed to focus on encouraging phonemic awareness. Hawken, Johnston and McDonnell (2005) surveyed Head Start teachers and found that “the literacy domain that received the least attention” from them was phonological awareness. The authors recommended that Head Start teachers could benefit from more in-depth training in strategies to promote phonological awareness skills in their students. One of the articles referenced by Hawken, Johnston and McDonnell, Justice and Pullen (2003) recognized two domains of emergent literacy: written language awareness and phonological awareness. The authors explored three evidence-based practices for enhancing literacy skills: adult-child shared storybook reading; literacy-enriched play centers equipped with print in many forms as well as writing materials; and the use of a commercially prepared, structured phonological awareness curriculum. McGee and Richgels (2003) classified phonological awareness skills including syllable and rhyme identification, onset-rime blending and phonemic decoding, as part of the alphabetic principle (p. 31).

Lane, Pullen, Eisele, & Jordan (2002) cited research that showed phonological awareness to be “one of the few [reliable predictors of later reading performance] that
educators are able to influence significantly” (p. 102). They concluded that “teachers of young children must recognize the importance of incorporating phonological awareness into programs designed to promote emergent literacy, because these teachers now have a tool for preventing reading problems” (p. 109). In a book written to help teachers of young children implement the IRA/NAEYC Position Statement recommendations, Neuman, Copple and Bredekamp (2000) stated, “Learning to read requires that children have considerable awareness of the sound structure of spoken language. Thus, teachers of young children must give careful attention to children’s development of phonological awareness” (p. 80). In fact, a survey of preschool teacher-idea books yielded some specific strategies for increasing children’s phonological awareness skills and linking those with printed letters, but there were few suggestions to build oral language skills except in conjunction with ideas for increasing speaking, listening and conversational turn-taking skills (Adams, Foorman, Lundberg, & Beeler, 1998; Trehearne, Healy, & Catalini-Williams, 2005; U.S. Dept. of Education & U. S. Dept. of Health and Human Services, 2002; and Ward, 2003 and 2005).

Oral language skills

However, some researchers recognized a need for more emphasis on oral language skills other than phonemic awareness and letter associations. Dickinson and Tabors (2002), in the midst of lauding the early childhood field’s focus on literacy, expressed concern that “early literacy efforts will take a single-minded focus on print-related dimensions and fail to recognize that oral language [differentiated from
phonological awareness] is the foundation of early literacy” (p. 10). The authors
added, “In the rush to embrace literacy in early childhood settings, we fear that oral
language may be overlooked” (p.10). Venn and Jahn (2004) recognized oral language
development and phonological awareness as separate skills that required different
approaches with young children. Roskos, Tabor and Lenhart (2004) stated:

It is through everyday experiences filled with talking, reading, and writing
that children gain the oral language they need to be strong readers and learners
in the future….For children with too little language, learning to read and write
is very hard. It is essential in these early years that all children are not only
exposed to an abundance of language but also are guided to skillfully use
language…. (p. 1)

Two concepts dominated the literature about oral language development: the
importance of vocabulary building and its relationship to later reading
comprehension; and the fact that adult-child conversations also had measurable
effects on comprehension. Dodge, Colker and Heroman (2002) stated “the richer a
child’s vocabulary, the more likely that child will become a good reader” p. 22). Joshi
(2005) declared:

A well-developed meaning vocabulary is prerequisite for fluent reading, a
critical link between decoding and comprehension. However the role of
vocabulary in fluent reading has received much less attention in both research
and theory than have decoding and comprehension strategies. (p. 209)
In a study that examined how children acquired syntactic, or language construction skills, Vasilyeva, Huttenlocher and Waterfall (2006) pointed out that while biological inheritance definitely affected these skills, “input plays some role in the acquisition process, because each individual acquires the particular language to which he or she is exposed, including specific words as well as specific ways of building multiword utterances” (p. 164). The Committee on the Prevention of Reading Difficulties in Young Children, Commission on Behavioral and Social Sciences and Education, National Research Council (1999) stated, “Children who are exposed to sophisticated vocabulary in the course of interesting conversations learn the words they will later need to recognize and understand when reading….Talking to adults is children’s best source of exposure to new vocabulary and ideas” (p.19).

Other authors compared the effectiveness of instruction in phonological awareness skills in the form of decoding, or sounding out, words versus instruction focused on word meanings. As part of a longitudinal study, Juel, Biancarosa, Coker, and Deffes (2003) compared the differences in the oral vocabulary learning of low-income preschool, kindergarten and first grade children whose teachers used either phonological awareness or code-focused instruction versus those who focused instruction on word meanings. They concluded that simply reading a book and discussing it did not improve vocabulary knowledge. Additionally, phonological awareness instruction was associated with increased vocabulary knowledge through kindergarten, but not in first grade. They found that children who had the greatest growth in vocabulary knowledge were those exposed to “anchored word instruction”
in which the teacher used words from a storybook and intentionally connected the words’ letter-sounds as well as their spellings and meanings through print and discussion (p. 12).

Connor, Morrison and Slominski (2006) did a large study of preschool language and literacy exploring the relationship of instructional strategies to growth in knowledge of the alphabet, letter/word recognition and vocabulary. Code-focused activities included naming and writing letters, rhyming, and relating letters to their sounds while meaning-focused activities included explaining word meanings, reading aloud, and discussing stories. The authors stated that “for vocabulary, children who spent more time in…meaning-focused, classroom-level activities…exhibited greater vocabulary growth than did children who spent…more time in the code-focused activities” (p. 677). One particularly interesting aspect of this study was that the meaning-focused activities occurred mostly in large group settings and the growth in vocabulary occurred in all age and ability levels. The authors suggested a combination of both whole-class meaning-focused activities and individual or small-group code-focused activities to achieve the most overall growth in literacy skills (p. 683). This study illustrated the necessity of vocabulary or word-meaning skills, and validated the place for code-focused activities in overall literacy learning.

**Instructional conversations**

Tharp and Gallimore (1988), who viewed literacy as the “basic goal and value of education” (p. 93), linked the development of literacy skills to the development of language, stating these are “inseparable” (p. 104). They stated that “word
meaning…develops in the context of social use in joint activity” (p. 94), pointing out that the conversations occurring in natural settings, like the home, are the basis for language learning (p. 99). But these authors also lamented the lack of opportunity for meaningful conversations within the typical school setting. They pointed out that in the schools they studied, classroom talk “was mostly about the routine activities of the school or teacher-led recitation rather than “meaningful discourse” about academic content (p. 99). They described this discourse as weaving “together spoken and written language with previous understanding” (p. 111) and went on to point out that “it is through the instructional conversation that babies learn to speak, children learn to read…and all to become literate” (p.111).

Hudson, Chryst & Reamsnyder (1994) studied instructional conversations that help children learn, especially those living in poverty, calling it “a form of social interaction that promotes literacy by encouraging teachers and students to use language in purposeful activities involving reading writing, speaking and thinking” (p. 266). These authors created a study that used instructional conversations as part of an after-school reading intervention program for low-income children who were mostly African-American. They used conversations about children’s experiences, preferences and ideas to “make visible the children’s prior knowledge and enable the teacher to expand their [the children’s] knowledge base within a meaningful context” (p. 276).

Justice (2004) also identified meaningful conversations as having a great effect on children’s overall oral language skills. She described a language-rich
classroom environment as “one in which children are exposed deliberately and recurrently to high-quality verbal input among peers and adults and which adult-child verbal interactions are characterized by high levels of adult responsiveness” (p. 37). She cited the importance of teacher knowledge, clear goals and daily plans in making such conversations possible. Justice concluded that a preschool classroom may have a clearly defined philosophy, a carefully planned room arrangement and a “deliberate” daily language plan, but “without adult-child conversations of sufficiently high quality and sensitivity, these efforts are not likely to result in the desired child outcomes” (pp. 42-43).

In-depth studies

The Bristol Study of Language Development (Well & Wells, 1984), studied the language development of 128 randomly selected children aged 15 months to 39 months for two and a half years in their homes, then followed 32 of them through their early school careers to correlate their findings about literacy learning within the children’s homes to their later literacy achievement in school. The authors identified the importance of children’s meaningful conversations with adults in the home, stating that children “not only learn to talk but talk to learn” (p. 196). They called talk between adults and young children in the home a “collaboration” as the “adult’s role is essentially one of sustaining and extending the child’s initiatives” and providing “a resource of knowledge and skill on which the child can draw to resolve questions and problems that arise from the activities” (p. 192). Parents would listen to children’s
narratives about their activities and contribute additional information to help children comprehend their experiences.

In contrast, Wells and Wells (1984) found that children’s conversational experiences in the primary school environment lacked child-initiated topics and questions. Teachers were the initiators and dominant forces in classroom conversations rather than collaborators. The result was “the schools were not providing a linguistically rich environment able to provide compensation for those believed to be deprived at home” (p. 194). The authors concluded that “the major responsibility of teachers is to facilitate the development of children’s understanding of the world in which they live…(p. 196)” and that this “requires opportunities for conversation in which there is an effort to achieve a meeting of the minds through shared construction and negotiation of meaning” (pp. 197).

The Home School Study of Language and Literacy Development (Dickinson & Tabors, 2001) began in 1987 and focused on 83 preschool children who met Head Start or subsidized child care guidelines. They observed children in literacy-related activities both at home and in various preschools settings. The study also looked at 74 of these children three years later during kindergarten to determine the effect of various exposures to literacy-related skills learned in preschool on the beginning of their school careers (Snow, Tabors & Dickinson, 2001). They expected to find that an important aspect of emergent literacy is skill using extended discourse. Children are most likely to acquire such skill by being part of conversations in classrooms that include varied words and that involve talk about topics apart
from the ongoing activities of the classroom. (Dickinson & Smith, 2001, p. 142-143)

They also expected that such conversations would be of the most benefit when held with adults because “it is adults who are most likely to be able to extend a child’s thinking about topics and supply appropriate vocabulary” (p. 143).

During the home phases of the study, the researchers documented that “more extended discourse – in the form of narrative or explanatory talk – was related to higher scores on the vocabulary, definitions, and listening comprehension measures” in kindergarten (Beals, 2001, p. 90). Additionally, the study found that conversations during mealtimes in the preschool setting

…provide an opportunity for children to enhance their vocabulary and narrative skills through discussions with teachers….This seems to occur when teachers are not engaged in a lesson and are therefore free to engage children in extended discussions about decontextualized (that is, non-present) events or activities….it is not the activity or the presence of an adult in itself that results in children’s discussions of non-present events. Rather, what is necessary is the presence of an adult who values and encourages children’s discussions. (Cote, 2001, p. 221)

The researchers concluded that “as with explanatory talk, vocabulary development appears to be aided by narrative talk” (Dickinson & Beals, 1994, p. 38). Assessment evidence also indicated that “children who are exposed to a high proportion of narrative talk at mealtimes also seem to be developing stronger story
comprehension skills. Interestingly, narrative talk at mealtimes also is linked to print
skills at age five…” (Dickinson & Beals, 1994, p. 38).

The authors found similar results when focusing on conversations during large
and small group activities and free play activities. They concluded that extended
discourse in various preschool activities with both peers and adults does have
measurable effects on children’s performance on literacy assessments in kindergarten
(Dickinson, 2001b).

Recently, Dickinson and Sprague (2001) reviewed the data from the Home
School Study of Language and Literacy Development (HSLLD) and “again found
this association between analytical conversation and subsequent vocabulary growth”
(p. 269). Additionally, in a study completed in the mid-1990s, the authors found that
“intentional vocabulary teaching was very rare, appearing in less than one percent of
the mealtime intervals and less than one percent of the free play intervals” (p. 271).
The authors discovered that some classrooms had much higher rates of intentional
vocabulary teaching, as much as nine percent at mealtimes and 13 percent during free
play, and “wonder[ed] what might occur with long-term exposure to such level of
intentional attention to vocabulary use” (p. 271).

*Storybooks*

Another aspect of adult interactions identified as a factor helping to increase
vocabulary learning was the reading of storybooks. Four studies (Coyne, 2004; Elley,
1989; Justice, 2002; and Sénéchal & Cornell, 1993) examined the effect of teachers’
explanations of the meanings of new words encountered during storybook reading
with children. Whether the techniques for explaining the words were labeling, identifying synonyms, demonstration or showing illustrations, the children showed some gains in vocabulary. One of these studies, Sénéchal and Cornell (1993) used single, interactive readings of storybooks. The authors noted some gains in children’s receptive vocabulary but negligible gains in their expressive vocabulary. They concluded that “a possible explanation for the lack of new expressive vocabulary is that children did not have the opportunity to verbalize the to-be-learned words” (p. 371).

The other three studies made use of multiple readings of story books. In all three, children learned target vocabulary words regardless of their previous vocabulary knowledge. Coyne (2004) acknowledged the need for more research to help increase children’s vocabulary knowledge (p. 146). This study used two readings of a story book, intentional instruction of target words through definitions and discussions in which the words were explained and used in context. There was significant gain in the vocabulary learning through the use of storybooks, though the authors acknowledged that the process was limited by the time required, the small number of words that can be explicitly taught and the lack of consensus on what words were critical for young children to learn (p. 160).

Elley’s study (1989) included the use of a story set in a context familiar to the children and one that was exotic to them. There was a greater degree of vocabulary learning from the book set in the more familiar context. The vocabulary learning was also increased when the characters and plot line of the story engaged children’s
interest and attention (p. 185). When teachers’ explanations of new words were added to the reading of the story, the vocabulary learning doubled (p. 184).

Justice (2002) focused on vocabulary depicted in illustrations rather than in text. The study included two readings of a storybook and compared the vocabulary learning that occurred when readers labeled the new words and when readers asked either perceptual questions or conceptual questions about the words. Two exposures to the book in any of the test conditions led to small gains in receptive vocabulary, but no real gains in expressive vocabulary (p. 99).

*Storybook-related activities*

Though these studies did include multiple exposures to a storybook and some discussion at the time of reading, they did not provide opportunities for children to use the new words in other activities that were tied to the storybook. Indeed Dickinson (2001a) cited the importance of storybook- and theme-related activities as critical to the growth of vocabulary and development of other literacy skills:

To fully understand the place of book reading in classrooms, one needs to look beyond the time when books are read aloud. Children may reenact the story in the dramatic play area, reread the book alone or with a friend, and discuss it at lunch with friends for their teacher. Because children learn language best when they actively take part in conversations, such opportunities to…use the language of a story support children’s developing capacities to understand books (Rowe, 1998). (p. 177)
Neuman (2006) recognized that “language and vocabulary represent the very
foundation of learning to read and write” (p. 12). She went on to point out that while
children should hear rich language, they must actively participate in conversations,
both informal and structured, in order to increase vocabulary and language skills. She
suggested pulling words from storybooks, reading the books multiple times and
helping children relate the new words from the story to similar words they already
knew (p. 13).

Nekovei and Ermis (2006) acknowledged the research about the importance of
reading aloud to future reading success. But they pointed out that the “amount of
reading in and of itself does not boost vocabulary and comprehension abilities.
Vocabulary increases when children actively engage in discussions and activities
before, during and after the read-aloud (Smallwood, 2000)” (p. 94).

Bodrova and Leong (2003) documented the importance of extended pretend
play with open-ended props in vocabulary learning. “The play that has the most
profound effect on language and literacy development is dramatic play” (p. 36). Such
play, supported where necessary by an observant teacher, provided children the
opportunities for practicing new words associated with the theme or book. Trying out
new roles and new play themes encouraged children to use new words and
expressions. “This is very important since the mastery of new words cannot be
accomplished without children using these words in a meaningful context. Producing
the words during play assures us that the children actually understand what the word
means” (p. 40).
Struggles for teachers

Some preschool teachers have attempted to create and use conversational opportunities during meal times and free play, however they apparently lack knowledge of the importance of such activity, as well as strategies for getting started. Dickinson, McCabe and Essex (2006) found that books may include about 11 unusual words, while teachers’ conversations about the books tended to include fewer than 5 of those words indicating “that teachers rarely intentionally use or discuss the interesting words found in books” (p. 20). They went on to say that “such patterns of interaction highlight shortcomings in support for language and literacy and the paucity of content knowledge instruction” (p. 21).

Gest, Holland-Coviello, Welsh, Eicher-Catt & Gill (2006), studied the talk of Head Start teachers during mealtimes, storybook reading and free play. They found that teachers “should recognize that their everyday conversations with children in multiple classroom settings represent a potentially critical contribution to children’s oral language skills” (p. 313). They recommended that teachers be taught to recognize these opportunities for conversation, “including the less ‘instructional’ and more ‘social’ discourse of mealtime” as ways to encourage children to develop skills that will help them in the future (p. 313). Hudson, Chryst and Reamsnyder (1994) found that teachers didn’t feel like conversations were equivalent to teaching, did not “know how to do it” and felt they didn’t “have time to do instructional conversation” (p. 279). Wells and Wells (1984) believed teachers need to recognize the value of
conversations and “organize the classroom to make such constructive collaboration possible” (p. 196).

Research indicated that instructional conversations are important to the language and vocabulary development of all young children. Additionally, these conversations have been recognized as especially important to children whose home environments, due to poverty and related conditions such as parents’ lack of schooling, may not provide many opportunities for rich language experiences. Several authors (Coyne, 2004; Elley, 1989; and Justice, 2002) recognized the importance of helping children in poverty gain language and vocabulary skills through the use of storybooks. It was interesting to note that while the majority of the studies reviewed focused on children in low socio-economic circumstances and interventions were frequently used with impoverished African-American children, no studies were undertaken with children in middle or higher socio-economic circumstances.

Both the Bristol Study of Language Development (Wells & Wells, 1984) and the Home School Study of Language and Literacy Development (Dickinson & Tabors, 2001) studied children in poverty because they were seen as being at the greatest risk for literacy development (Hart & Risley, 1995). Perhaps Tharp and Gallimore (1988) stated the concerns most clearly:

At the earliest levels of instruction – for children whose emergent literacy experiences in the home have been limited – it is necessary to build those cognitive competencies that are foundational to eventual text comprehension. For the very young child, or for the child without early interactions with
schooled parents, it is necessary first to build word meanings on the everyday, verbal level and to gradually introduce the linguistic stream of writing itself. (pp. 109-110)

Despite the well-documented results and recommendations of these studies, Biemiller (2006) pointed out that

Children enter school (or child care) differing widely in vocabulary, just as they differ in knowledge of numbers or awareness of phonemes. Educators have become increasingly aware of the significance of number knowledge or phonemic awareness. This provides an opportunity to compensate for areas of knowledge that may not have been addressed at home. However, at present no similar effort is made to compensate for differences in language experience. (p. 44)

The author examined one strategy for preschool classrooms called dialogic reading, in which the teacher and the children converse about the book, explore words and retell the story. He stated that the results were minimal: 2.5 new words in a six-week study and 4.3 new words in a 10-week study (p. 47).

Other approaches to vocabulary

Biemiller (2006) went on to suggest some strategies for intentional instruction of word meanings in the primary classroom. These strategies included assigning words to a level of difficulty (1, 2, or 3) and spending about half an hour per day in direct instruction.
Woodard, Haskins, Schaefer, and Smolen (2004) described an approach called “Let’s Talk.” It involved the creation of a separate learning center with a “talk table” with materials provided in “Let’s Talk” boxes “containing dramatic play toys in 5 categories” (p. 92-93). Children were paired by teachers, who matched a more proficient speaker with a child who scored poorly on a language screening. The pairs of children played with and talked about the toys for 15 minutes each day. The study found an increase in the language screening scores as well as the self-confidence and social relationships of the less fluent children. The authors suggested ways in which this approach could be adapted for various classroom settings.

McKeown and Beck (2006) described an approach to story-reading called “Text Talk” that was created because simply “encouraging children to talk about a story’s ideas, acknowledging their responses, and moving on does not fulfill the prescription for engaging children in talk and in thinking about ideas” (p. 284). They went on to explain that “Text Talk was developed to scaffold children’s comprehension of a story as the events and ideas unfold” (p. 285). As teachers encouraged children to use rich language from books and state their ideas in detail, they were fulfilling “a major purpose of read-aloud discussion…to develop children’s abilities to make sense of and respond to decontextualized language” (p. 287). This study was carried out in primary classrooms rather than in preschool classrooms.

These three approaches to increasing children’s vocabulary seemed impractical to this researcher. Two of the approaches (Biemiller, 2006 and McKeown & Beck, 2006) were used in kindergarten and primary grade classrooms. The direct
instruction and extended discussion, if carried out as described, would require children to sit for half an hour or more, longer than most Early Childhood Educators would expect their children to focus. The third approach (Woodard, Haskins, Schaefer, & Smolen, 2004) was largely disconnected from the daily activities of the classroom and would require teachers, who may already be overloaded, to add another element to their planning and instruction.

**Review of major points**

In summary, the research showed that oral language skills including vocabulary and phonemic awareness were important elements of overall literacy development and reading success. Most research and methods articles focused on helping children develop phonemic awareness. However, it was increasingly recognized that children needed to use new words in meaningful contexts in order to learn them well enough to positively affect the sophistication of their expressive language and their future reading comprehension skills. Conversations and play related to storybooks were particularly effective in enhancing vocabulary development and text comprehension.

Some researches opined that Early Childhood Educators need specific professional development to help them recognize the benefits of instructional conversations and plan ways to use them effectively to build comprehension and vocabulary. These skills were particularly important for children living in poverty, who might have limited literacy experiences in their homes. Instructional
conversations appeared to be the most effective way various authors found to help children use language in meaningful contexts.

The majority of the studies reviewed recognized the need for vocabulary learning and the positive effect of instructional conversations around storybooks and during daily activities. However, few of these studies offered specific strategies that were proven effective as well as being easy to implement and practical for use in preschool classrooms. I decided to attempt to develop effective, easily implemented strategies to build the vocabulary of preschool children through instructional conversations around storybooks and during classroom routines and play.

After completion of the classroom research, I discovered a study by Wasik and Bond (2001) in which similar strategies were included: the selection of storybooks and target vocabulary and the provision of story-related materials and activities. This study focused on low-income four-year-old children and used a picture vocabulary test and classroom observations to compile data. “Children whose teachers provided multiple opportunities to interact with vocabulary words learned more book-related vocabulary compared with children who were exposed to just the books” (p. 247). This study measured children’s use of words during specific 20-minute activities. The study I designed attempted to evaluate children’s use of book-related vocabulary throughout the preschool day.
Methods and Hypothesis

This researcher chose to create strategies for Early Childhood Educators to use to promote story-related vocabulary acquisition during classroom routines and learning center activities. In order to assess the effectiveness of the strategies to be used in the quasi-experimental design, both control and experimental classrooms were needed. The review of related literature guided the selection of both strategies and classrooms.

Preparing for the study

One variable described in the literature was the effect of teacher knowledge of child development and literacy (Bodrova, Leong, & Paynter, 1999, IRA & NAEYC, 1998, and Kinnucan-Welsch, Grogan, & Rosemary, 2006). In an attempt to control this variable, all teachers considered for the study had recently completed the 15-session training on the Core Curriculum for Preschool. This body of knowledge and some sample strategies informed teachers of the “strong relationship [that] has also been found between experience with books during the early years and language development...Stories introduce children to language that is more formal than the language used in conversation” (Schickedanz, 1999, p. 44).

The researcher attempted to eliminate another possible variable by inviting only teachers from the same agency to participate in the study. Various agencies that provide early care and education have differing standards and policies concerning lesson planning and schedules of themes or topics to be covered, so working with teachers within the same agency seemed prudent.
A third consideration influenced the invitation of teachers to participate. All of the teachers who participated in the Core Curriculum training series worked with children living in poverty, through the Early Learning Initiative (ELI). Additionally, since two studies reviewed (Hudson, Chryst, & Reamsnyder, 1994, and Strickland, 2001) found that African American children living in poverty were at very high risk for vocabulary development, this study focused on four classrooms in three inner city neighborhoods in Cincinnati, Ohio with a majority of African American residents.

Participants

The four classrooms were part of a non-profit, community agency and the study was undertaken with the knowledge and support of the teachers’ supervisors, and the agency’s ELI and Education Coordinators (see Appendix A for a letter of support from the agency). The researcher’s previous interactions and observations of the agency’s administrators and classrooms revealed characteristics of what Strickland (2001) called a “successful prevention and integration program” including: a considerable amount of “time on task;” materials children can use with success; care in choosing topics for study; monitoring of individual children’s progress; and provision of professional development for teachers, assistants and volunteers (p. 328-329).

The population of the four classrooms was mostly African-American and all the children in the classes were part of Ohio’s Early Learning Initiative (ELI). All classrooms had between 14 and 20 children with two adults, a lead teacher and an assistant, during the majority of the preschool day. These were full-day programs and
the children ate breakfast, lunch and afternoon snack in the classroom. They took afternoon naps on cots spread throughout the classroom. Some of the children had behavior problems that required their teachers to focus a significant amount of time on teaching self-control and social skills.

Prior to conducting the study, this researcher submitted the methodology to the Institutional Review Board and received approval to carry out the study (see Appendix B for Informed Consent Forms for both Teachers and Children).

Two of the lead teachers had Bachelors degrees in Early Childhood Education/Family Studies (BA), and two had Associates degrees in Early Childhood Education (AA). The researcher provided some mentoring for each of these teachers from the time they began attending the Core Curriculum classes in September 2005. Based on observations over time, the researcher noted that one of the teachers with a bachelor’s degree and one with an associate’s degree were already making some use of instructional conversations to help children learn new words and concepts. Their classrooms were labeled “Controls” and received the three storybooks used for the study, but none of the strategies or materials created to increase instructional conversations. The other two teachers did not make strong use of conversations, but wanted to learn more about how to do so. Their classrooms were labeled “Experimental” and received the intervention strategies and materials for use in their classrooms in addition to the three storybooks. The researcher attempted to control the technical aspects of the study, providing the same audiotape schedule and equipment to all four classrooms.
The four ELI classrooms were located in three early care and education centers in the city. The control teacher with the Bachelor’s degree (referred to in future figures and tables as C-B) taught in one center. The experimental teacher with the Associate’s degree (referred to in figures and tables as E-A) taught in a second center. The other two teachers (C-A and E-B) taught in neighboring classrooms in the third center. These two classes shared playground time, large muscle room time and other activities on occasion. The two teachers agreed to be vigilant about not sharing classroom activities or other curriculum information for the duration of the in-class research. At the conclusion of the classroom part of the research, the two control teachers received the professional development information and planning principles. Additionally, they received props and materials for an upcoming theme.

The researcher was unable to control one important variable in this study. The assignment of children to the classrooms was done by the agency at the beginning of the school year, so there was no control regarding abilities, needs or personalities of the students.

Research questions

As previously stated, this study is predicated on the theory that there is a relationship between teacher conversations and preschool children’s oral language skills and seeks to answer the question: Would the use of specific instructional conversation strategies around storybooks, along with story-related activities, lead to increased vocabulary acquisition in preschool children? I hypothesized preschool children whose teachers use the strategies provided would use target vocabulary
words more frequently than children in control classrooms during the ongoing activities as well for a period of a month after the activities concluded.

An additional question explored in this study was whether a teacher’s level of education had an apparent effect on the vocabulary learning of the students. The pairing of the control and experimental teachers by college degree attained also facilitated this approach to the data.

**Strategies**

Several studies influenced the development of strategies for this study. Dickinson (2001b), Dickinson and Smith (2001), Justice (2004) and Tharp and Gallimore (1998) all cited the importance of conversations occurring in natural settings, like mealtimes and play, in children’s learning of word meanings in context. Therefore, strategies to help teachers intentionally build vocabulary during snacks, lunchtimes, play in learning center and even large muscle play were created.

Coyne (2004), McKeown and Beck (2006), and Neuman (2006) connected the reading and discussion of storybooks, calling attention to specific new words and using them in context to vocabulary learning. McKeown and Beck state, “researchers who observed teacher-student read-aloud interactions identified talk surrounding reading as the most valuable aspect of the activity for enhancing children’s language development” (2006, p. 282). Biemiller stated that “word meaning acquisition is unlikely to occur in the absence of a fairly specific concrete referent clearly associated with a word. The word must be learned in the context of a physical task or in the verbal context of a task described in a verbal narrative” (2006, p. 44). This
rationale suggested the use of specific target words chosen from storybooks and made the focus of suggested conversations and activities in conjunction with multiple readings of the storybooks used in the study.

*Handling data*

The methods of data collection were inspired by the techniques used in the Home School Study of Language and Literacy Development (Dickinson & Tabors, 2001) and included observations of the classroom environment, audio-taping conversations during scheduled activities in all four classrooms and making transcripts of the tapes for analysis. Adults’ and children’s use of the target words were tallied and analyzed. Follow-up interviews with two to four children from each class were conducted by the researcher. The interviews included questions about the storybooks worded to prompt the use of the target words.

In one attempt to collect more data, the researcher conducted a picture card vocabulary evaluation with two pairs of children from each of the four classes two months after the first experimental book was used and one month after the second experimental book was used. The pictures in the tool were illustrative of the target words for the two books. (See Appendix D for samples of the Picture Vocabulary Assessment.)

The numerical data was analyzed using descriptive statistics to determine the three measures of central tendency: mean, range and standard deviation within the two groups. Inferential statistics, specifically, *t* tests, were used to compare the differences between the classes which received the intervention and those which did
not, as well as the classes led by teachers with Bachelor’s degrees and those led by teachers with Associate’s degrees.

Qualitative data was an important factor in this study. Observations and conversations, both those recorded on audiotapes as well as personal conversations, yielded relevant information for consideration. There was also an attempt to collect formal qualitative information using a teacher survey (see Appendix F).

**Procedures**

Beginning in February of 2007 one storybook, *Bunnies on the Go: Getting from Place to Place* by Rick Walton, was provided to each of the four teachers to use in their classrooms, but no list of target vocabulary words was shared. The theme during this two-week period was Transportation. All teachers also received a small tape recorder, tapes, a custom-made stand and a taping schedule. The researcher observed briefly in each of the classrooms and teachers audio-taped various class activities, such as circle time, lunch time and play in one or more learning centers, according to the schedule (Figure 1). Transcripts were made from the two most intelligible tapes from each class.
**Book 1 Taping Schedule**

<table>
<thead>
<tr>
<th>Tape 1 A:</th>
<th>Day 1 – after reading story at circle.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape 1 B:</td>
<td>Day 1 – Dramatic Play</td>
</tr>
<tr>
<td>Tape 2 A:</td>
<td>Day 2 – Block Area</td>
</tr>
<tr>
<td>Tape 2 B:</td>
<td>Day 2 – Lunch</td>
</tr>
<tr>
<td>Tape 3 A:</td>
<td>Day 4 – Story circle</td>
</tr>
<tr>
<td>Tape 3 B:</td>
<td>Day 4 – Dramatic Play</td>
</tr>
</tbody>
</table>

Figure 1. Taping schedule for *Bunnies on the Go: Getting from Place to Place* by Rick Walton.
The number of times the target words were used by teachers and children in conversations during these activities was tallied from the tape transcripts. Information about instructional strategies was also noted from both transcripts and observations. This data functioned as a “pre-test” to provide a comparison point and documentation of some differences between the control and experimental classrooms.

Following the schedule of themes set by the agency, two other storybooks were provided to all four teachers during March and April. For the theme of Farm Animals, they were to use *Going to Sleep on the Farm* by Wendy Lewison and for the theme of Pets, they were to read *Move Over, Rover!* by Karen Beaumont. No other material was provided to the “control” classes, but a variety of information, strategies and technical assistance were provided for the use of the two “experimental” classes.

These included: research about the importance of oral language development and using instructional conversations to build vocabulary; a guideline for choosing five to 10 target words from a storybook; types of learning center activities that should promote the use of target vocabulary during story-related conversation; and a template for planning for instructional conversations for the various learning centers and routine activities. Specific strategies were designed for each of the two storybooks; conversation starter cards for each learning center were created; and story-related props and materials were assembled. The researcher and teachers collaborated on the lesson plans and discussed how to use the materials and strategies. In order to maximize children’s opportunities to truly learn words from the books, each book was used as the focus of activities for the two weeks allotted for a theme.
The teachers using these experimental strategies were also given a tool to tally children’s use of target vocabulary and indicate the learning centers in which the words were used. Schedules for taping (Figures 2 and 3) were provided for each of these time periods and samples of the materials are in Appendix C.
**Book 2 Taping Schedule**

- **Tape 1 A:** Day 1 – Block Center.
- **Tape 1 B:** Day 1 – Dramatic Play
- **Tape 2 A:** Day 2 – Math Center
- **Tape 2 B:** Day 2 - Lunch
- **Tape 3 A:** Day 4 – Circle Activity
- **Tape 3 B:** Day 4 – Naptime

Figure 2. Taping schedule for *Going to Sleep on the Farm* by Wendy Lewison.

**Book 3 Taping Schedule**

- **Tape 1 A:** Day 3 – Math Center.
- **Tape 1 B:** Day 3 – Science Center
- **Tape 2 A:** Day 4 – Art Center
- **Tape 2 B:** Day 4 - Lunch
- **Tape 3 A:** Day 7 – Block Center
- **Tape 3 B:** Day 7 – Dramatic Play

Figure 3. Taping schedule for *Move Over, Rover!* by Karen Beaumont.
Findings and Analysis of Quantitative Data

The first book was used to understand all four teachers’ approaches to targeting and teaching new vocabulary. The second and third books were used to compare the frequency of target word usage between both adults and children in the Control and Experimental groups.

In the Control groups, the teachers and the children used the target words for the first storybook more frequently than those in the Experimental groups, even though no list of target words was made available. This was expected because the Control teachers had previously been observed directly teaching new vocabulary and relating it to children’s background knowledge.

The intervention strategies created by the researcher were used with the second storybook. The frequency of target word use by both Experimental classes was high as was expected. The teachers used the materials and conversation starter ideas with a high degree of fidelity to the suggested script. However, the frequency of word use for the third storybook was very low, due to a variety of problems that rendered the data almost meaningless. The problems have been addressed later in this manuscript and the numerical data for the third book has been included in the interests of full disclosure of the research.

Data from transcripts

The t test data comparing the use of the target words for each of the three storybooks is reported in Table 1. The data is compared between both the adults and the children in the Control and Experimental classes, indicated by “t.” The amount of
statistical difference between the two groups is reported as “p.” For the difference to be considered meaningful, or significant, the p value would have to be .05 or less. The difference in the adults’ usage of target words for storybook two begins to approach statistical significance at .064, however the rest of the quantitative data clearly shows the null hypothesis was not rejected. There was no statistically significant difference between the target word usage by preschool children whose teachers used the experimental strategies provided and those whose teachers did not use the strategies.

The total frequency of target vocabulary usage by adults and children in a variety of activities, including circle time, learning center activities, and small group interviews about the books are reported for the two Control classes and the two Experimental classes in Table 2, along with the descriptive statistics for each. It is important to note that transcripts of two tapes for each class for each book were analyzed and the target words were not counted during the reading of the actual storybook, if it was caught on tape. Only words used during routines and play activities were tallied.

The Raw Total of words used by adults and children for the first storybook demonstrates the strength of the teachers in the Control classes in explaining new vocabulary words. The difference in teachers’ usage of the target words for the second storybook reflects the implementation of the experimental strategies as teachers intentionally used the new words during various activities. However, for the
third storybook, the usage appears very similar. However, this may be misleading.

This explored later in this manuscript.

Table 1

$t$ Test Comparing the Use of Target Vocabulary

<table>
<thead>
<tr>
<th></th>
<th>Book 1</th>
<th>Book 2</th>
<th>Book 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults</td>
<td>$t(2) = -1.480, p = .277$</td>
<td>$t(2) = 3.750, p = .064$</td>
<td>$t(2) = .707, p = .553$</td>
</tr>
<tr>
<td>Children</td>
<td>$t(2) = -2.000, p = .184$</td>
<td>$t(2) = .971, p = .434$</td>
<td>$t(2) = .000, p = 1.000$</td>
</tr>
</tbody>
</table>
Table 2

Frequency of Target Word Usage for Three Storybooks

<table>
<thead>
<tr>
<th>Freq. of Use</th>
<th>Book 1</th>
<th></th>
<th>Book 2</th>
<th></th>
<th>Book 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult</td>
<td>Children</td>
<td>Adult</td>
<td>Children</td>
<td>Adult</td>
<td>Children</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw Total</td>
<td>24</td>
<td>10</td>
<td>4</td>
<td>9</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>N</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mean</td>
<td>12.00</td>
<td>5.00</td>
<td>2.00</td>
<td>4.50</td>
<td>8.00</td>
<td>2.50</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>8.49</td>
<td>.00</td>
<td>2.83</td>
<td>6.36</td>
<td>5.66</td>
<td>3.54</td>
</tr>
<tr>
<td>Median</td>
<td>12.00</td>
<td>5.00</td>
<td>2.00</td>
<td>4.50</td>
<td>8.00</td>
<td>2.50</td>
</tr>
<tr>
<td>Range</td>
<td>12.00</td>
<td>.00</td>
<td>4.00</td>
<td>9.00</td>
<td>8.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw Total</td>
<td>6</td>
<td>6</td>
<td>55</td>
<td>19</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>N</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mean</td>
<td>3.00</td>
<td>3.00</td>
<td>27.50</td>
<td>9.50</td>
<td>12.00</td>
<td>2.50</td>
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<tr>
<td>Std. Dev.</td>
<td>1.41</td>
<td>1.41</td>
<td>9.19</td>
<td>3.54</td>
<td>5.66</td>
<td>3.54</td>
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<tr>
<td>Median</td>
<td>3.00</td>
<td>3.00</td>
<td>27.50</td>
<td>9.50</td>
<td>12.00</td>
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<tr>
<td>Range</td>
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<td>13.00</td>
<td>5.00</td>
<td>8.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>
Data from picture identification

Additionally, a picture vocabulary assessment was completed for the second and third books. The researcher worked with four children from each class to see if they could identify pictures representing target vocabulary from the two books. Cues from the stories and the related activities were used to activate their knowledge and encourage their recall. Sample items from this assessment, along with the related cues are in Appendix D.

Table 3 describes the results of this assessment, comparing the Control and Experimental classes. The Raw Totals, or number of pictures identified, was more than five times greater for children in the Experimental classes than the number identified by children in the Control classes. However, for the third book, there was little difference.

The t test comparing the identification of target vocabulary by the two groups of children almost reached statistical significance with a p value of .054. However for the third book, the results were nowhere near significant. In other words, children in the Experimental classes identified pictures of the target vocabulary words for the second storybook, used two months earlier, at a greater rate than children in the Control classes. However, for the third storybook, used only a month prior to the assessment, both groups identified only a couple of words.
Table 3

Picture Vocabulary Assessment for Two Classes (N)

<table>
<thead>
<tr>
<th>Group</th>
<th>Book 2</th>
<th>Book 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw Total</td>
<td>2</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.50</td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw Total</td>
<td>10.50</td>
<td>5.25</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t test</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

```
Further comparisons

Three graphs (Figures 4, 5, and 6) offer a good way of exploring the differences between both the Control and Experimental groups as well as the Bachelor’s and Associate’s degreed teachers. On all three graphs, the Control classes are indicated by triangle markers and the Experimental classes are indicated by circular markers. The teachers with Bachelor’s degrees are indicated by hollow markers and the teachers with Associate’s degrees are indicated by solid markers.

There is no pattern for the performance of the teachers with Bachelor’s degrees when compared to that of the teachers with Associate’s degrees. Indeed, t-tests showed no statistical difference in frequency of word use between the two levels of college degrees.
Figure 4. Comparison of the frequency of word use by adults in both Control and Experimental classes, broken down by storybook and teachers’ college degrees.
Figure 5. Comparison of the frequency of word use by children in both Control and Experimental classes, broken down by storybook and teachers’ college degrees.
Figure 6. Comparison of the target vocabulary words correctly identified from pictures by children in both Control and Experimental classes, broken down by storybook and teachers’ college degrees.
Discussion of the graphs

The pattern of word usage for both adults and children for the first and second storybooks is expected. The Control teachers use the target words many times in the course of teaching vocabulary from the storybook because they always do so. The Experimental teachers did not use very many target words because they were not in the habit of emphasizing vocabulary.

During the second storybook, the teachers in the Experimental classes concentrated on the target vocabulary and using the prescribed strategies and materials to a great degree. Both their frequency of use and their students’ frequency were much higher than it had been with the first book. That contrasts with the lower frequency of use by both adults and children in the Control classes. Without informing the researcher, the teachers had changed their weekly theme and though they read the scheduled book, they were not doing any related activities. However it is interesting to note that the Control A teacher, despite not using the farm theme, led her class in extended discussion of the storybook and encouraged the children’s use of some of the target words to such an extent that they used them more frequently than children in one of the Experimental classes (see Figure 5).

As the study moved on to the third book, the Control teachers continued to follow an altered schedule, reading the scheduled books but not doing any related activities at all. The teachers of the Experimental classes were distracted by the various limitations they faced, they had difficulties with the audio taping and apparently did not fully implement the strategies. It was impossible to verify if the
adults or children in the Control A class and the Experimental A classes used the target words with any frequency. However, important points were gleaned from the graphic representation of the data.

Figures 4 and 5 illustrate the adults’ and children’s use of target words. When looking at the numbers for the first and second storybooks, it is evident that when teachers intentionally use selected vocabulary during classroom activities, children will also use the target vocabulary terms with greater frequency.

Despite the lack of reliable data for the third storybook, one interesting point may be inferred from the graph in Figure 6. Though the Experimental A teacher did not successfully record any activities from which word use could be tallied, she apparently did use two of the words enough that the children them. The two words were: “mighty” (as in mighty frightened) and “pouring” (as in pouring rain). These words were not typically used by the children in informal conversation prior to the study.
Limitations of the Study

This action research encountered a variety of difficulties. Technical difficulties with the use of the small audio tape recorders were the most prevalent problem. There were several tapes from two classrooms that had been used, but nothing was actually recorded. Several other tapes did pick up a lot of classroom conversation, but the actual words were indistinguishable. Since the researcher was unable to be in the classrooms very often, most of the quantitative data collection relied on this technology. It is significant to note that the majority of the tape problems occurred during work with the third storybook. For example, the lack of word usage for the Experimental – A group was due to a complete lack of audible or distinguishable tapes. Future studies would need to find a more reliable method of data collection and make sure the teachers were proficient and comfortable using the technology needed.

Scheduling misunderstandings also affected the outcome since both the Control teachers changed their class’s theme schedule for the Farm and Pet themes. They read the farm- and pet-related books provided during the weeks originally scheduled, but did not do actual theme-related activities during those weeks. The researcher was not aware that the agency allowed teachers to adjust the theme schedule until after the theme weeks had been completed. Future studies that rely on a schedule of themes would need to ensure that classes involved follow the published schedule during the study to avoid this problem.
The themes extended for two weeks. One reason for the large decrease in the use of target words by both adults and children in the Experimental classes while using the third storybook may have been due to children’s waning interest in those themes during the second week, when two of the tape sessions were scheduled (see Figure 3).

Another consideration that may explain the decrease in target word usage during the third storybook was poor word selection by the researcher. The selected words were romp, mighty (adj.), frightening, pouring (as rain), whiff, scatter, scamper, scurry, and sopping. Some of these may have been beyond the children’s Zone of Proximal Development (ZPD), in that they had no exposure to similar words on which to build new conceptual knowledge. Other words may not have had a clear connection to concrete objects or actions, which was one goal of the similar study by Wasik and Bond (2001) who said “by having the children see and interact with the objects, we hoped to increase the probability that they would learn and remember the words” (p. 244). When children took the picture vocabulary assessment, they often substituted more common synonyms “smell” and “scary” for the target words whiff and frightening. They also tended to interchange the target words scurry, scamper and romp or use the word “run” as a substitute.

The target words for the second book were hay, cozy, bill (of a bird), nest, snuggle, shut tight, worry, stable, barn, and curl up. These were connected to concrete objects, actions, or known concepts and were internalized to a greater degree, as evidenced by the higher level of recall of those terms on the picture vocabulary
assessment two month after the theme was completed. The children assessed had more difficulty identifying two of the terms: shut tight and curl up. These concepts were difficult to illustrate with simple photographs and when children attempted to identify those pictures on the assessment, they used the word “shut” or referred to the fact that the curled up animals were “on the ground.”

Another limitation faced in this study was the small size of the sample, with only four classrooms involved. Rather than gathering data on 80 individual students, the data was gathered from each class as a group, yielding only four streams of data. If the study is undertaken in the future, other approaches may increase the results in different ways. Increasing the sample size, either by adding classrooms or following individual children, could yield more opportunities to track and analyze target word usage. Conducting the study over a longer period of time might reveal the length of time children retain knowledge and use of the new vocabulary.

The largest limitation for this study was the fact that none of the in-class research could be conducted in my own classroom since I no longer teach preschool. Additionally, the research had to be conducted within the scope of the regular duties of my work as an Early Language and Literacy Specialist and I could not concentrate large amounts of time in just these four classrooms. Future research would benefit from more intense work in the classrooms involved.

Teacher concerns

In conversation with the Experimental teachers during the study, both found that trying to call attention to and use 10 target words was too difficult. They had the
option to shorten the list and concentrate on as few as five words and they did choose to exclude some words. This did not affect the numerical data, which tallied any use of any of the target words and did not focus on how often each word was used in conversation. The words they chose to focus on are recorded in Appendix E as part of the Data Summaries for the second and third storybooks.

The Experimental teachers also faced difficulties within their classrooms. One teacher was distracted from a consistent use of the strategies due to some of her students’ excessively violent behavior problems. All teachers deal with children’s unacceptable behaviors, however several of the children in the class were so violent, much of her time was spent protecting her other students from them. She also faced a lack of support from her administrators to avoid putting a large proportion of such children in her class.

Both teachers faced a lack of knowledgeable support from assistant teachers, who did not receive the study information directly from the researcher as the lead teachers did. For the strategies to work well, all adults in the classroom need to be using the target words during activities with individuals and small groups of children. For this reason one of the strategies is to place conversation starter cards in each of the learning centers in the classroom. In one of the classes, the cards were posted and the assistant teacher and weekly volunteers tried to use the target words while interacting with the children. In the other class, the assistant teacher was uninterested in trying the strategies and the teacher gave up on posting the cards since they were not used.
While there is little that could be changed about the need to keep children safe from the violent actions of their peers, gaining the participation of all adults in the classroom should be a focus of future studies. It would be helpful if some release time for in depth training were available for sharing information that would motivate all the adults in the classroom to participate fully in the study.
Mining the Qualitative Data

The literature reviewed connected the preschool classroom environment with literacy growth. There was much to be learned from observations of the environments in both the Control and Experimental classrooms. Just as the audio-taped data showed the expected differences in the Control and Experimental teachers’ approach to vocabulary, a study of their environments yielded similar results.

The theme at the time the initial, or “pre-test,” book was read was Transportation of various forms. In both Control classrooms theme-related materials were added to various learning centers: books about transportation were in most centers; cars, trucks and planes were in block areas; an interactive chart about cars was in one library area; and one teacher even adapted a large motor game (Duck, Duck, Goose) to use vehicle names (Truck, Truck, Car). Additionally, another teacher turned her dramatic play area into a Cincinnati Metro bus and she pretended to be a passenger or the driver, as the play scenarios unfolded:

ADULT: Thank you all for riding bus 51. Bus 51 will take you over to the [INAUDIBLE] racetrack so we all can race some cars. Are you all ready?

CHILDREN: Yes.

ADULT: Please hold on and enjoy the ride.

CHILDREN: I'm putting my seat belt on.

ADULT: [Singing] oh, the wheels on the bus go round and round. Round and round. Round and round. The wheels on the bus go
round and round, all through the town. How you doing ma'am?

Thank you for riding my bus today. (Transcript, Control-Bachelors, Bk. 1, Tape 1-Side B)

The teacher allowed the role play to be guided by the children:

CHILDREN: I want to go to the movies.

ADULT: I got to take you to the movies?

CHILDREN: Yes.

ADULT: That means I'll be going out of my way. Okay. Well, hold on, I have to start the bus up.

CHILDREN: I want to go to the Krogers.

ADULT: You want to go to the Krogers.

CHILDREN: Who wants to go to the Krogers?

ADULT: I have a passenger on the bus that would like to go to the Krogers. (Transcript, Control-Bachelors, Bk. 1, Tape 1-Side B)

Additionally, the Control teachers read the storybooks multiple times, called attention to rhyming words, and encouraged the children to talk about their travels and vacations, connecting them with the events of the storybook.

ADULT: Oh, thanks for sharing that with us. What other kind of transportation have you all been on? Now D. is going to Disney World in April. So how do you think his family will get to Disney World?

CHILDREN: Drive.
ADULT: You guys are going to drive. Are you going to take a car or a van? Do you know? D. is going to take some pictures of it so I'm sure we'll have lots of exciting things to look at when he comes back. He can tell us all about it. He's going on vacation with his family just like the bunnies went on vacation, getting from place to place. (Transcript, C-A, Bk. 1, 1-B)

Personal experiences help make stories and vocabulary meaningful. One teacher shared her experiences of flying in an airplane and the tape showed her children were attentive and involved in her story.

In contrast, the environments in the Experimental classrooms contained a few books about vehicles, some car-shaped blank books and some transportation toys. Little related conversation or related play was observed. A review of the transcripts showed the teachers calling attention to rhyme and sequence during circle activities on two days. Transcripts showed the teachers responding to children’s disagreements and misbehaviors rather than taking part in theme-related play in learning centers. Table 4 summarizes the four teachers’ approaches to the first storybook.
Table 4

General Story-Reading and Comprehension Strategies

<table>
<thead>
<tr>
<th>Group/Degree</th>
<th>Book 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>C – B</td>
<td>Review events</td>
</tr>
<tr>
<td></td>
<td>Define new terms and relate to children’s experience</td>
</tr>
<tr>
<td></td>
<td>Call attention to rhyming words</td>
</tr>
<tr>
<td></td>
<td>Connected children’s experiences to their feelings</td>
</tr>
<tr>
<td></td>
<td>Tell a story about a personal experience</td>
</tr>
<tr>
<td>E – B</td>
<td>Highlight rhyming words</td>
</tr>
<tr>
<td></td>
<td>Review events</td>
</tr>
<tr>
<td></td>
<td>Attempt to relate overall concept to children’s experiences</td>
</tr>
<tr>
<td>C – A</td>
<td>Review events</td>
</tr>
<tr>
<td></td>
<td>Specifically relate events to children’s experiences</td>
</tr>
<tr>
<td></td>
<td>Engage in extended conversations about experiences</td>
</tr>
<tr>
<td>E – A</td>
<td>Review events</td>
</tr>
<tr>
<td></td>
<td>Relate to a class field trip experience</td>
</tr>
<tr>
<td></td>
<td>Engage in extended conversation about experiences</td>
</tr>
</tbody>
</table>
Experiences with the second storybook

This changed dramatically for the second storybook, *Going to Sleep on the Farm*. Using materials provided by this researcher, the Experimental teachers had created a print-rich, vocabulary-stimulating, farm-centered environment. The environmental enhancements included: straw in the sensory table and art projects; farm animals and barns in block areas; farm supply catalogs for writing; farm clothes and farm animal masks for dramatic play; triangles, egg shakers and song charts in music areas; and beans and seeds in math areas.

Transcripts revealed purposeful conversations in learning centers that both helped expose children to appropriate academic content, but used the target vocabulary in contexts that were meaningful to the children. Both teachers used the target word “worry” while looking at the farm supply catalog with the children. One teacher helped define the term very well:

ADULT: Do we need to worry about having enough money to buy all these things?

CHILDREN: Yes.

ADULT: We do. Where do you think we'll get our money?

CHILDREN: At the store.

ADULT: We'll get our money at the store? Are you sure?

CHILDREN: [INAUDIBLE].
ADULT: Do you think we can pay for all the things we wanted to buy? We can? Where we going to get all the money? Where are we going to get all the money to buy all these things?

CHILDREN: My momma.

ADULT: Oh, your momma's going to give it to you? Is it scary to spend a lot of money? Yea, you think so? (Transcript E-B, Bk. 2, 1-B)

Target words were also consciously used in routines like clean-up time:

ADULT: You're done? You have nine more minutes, if you want to wait. Clean up all your area. L, did you finish ordering all your stuff? Okay.

CHILDREN: [INAUDIBLE].

ADULT: Clean it all up please. So that --

CHILDREN: I'm done too.

ADULT: You're finished? Okay.

CHILDREN: Me too.

ADULT: All right. Put the animals cozy in the barn. Make sure the duck is nice and snug in his nest. (Transcript, E-A, Bk. 2, 1B)

Teaching strategies were also improved. Before reading the storybook, this same teacher had her children recall their field trip to a farm and connected their responses to target vocabulary and the storybook:
ADULT: And when we went to the farm, when we went to the pumpkin patch we was on a farm, and we rode on a tractor and we sat on hay. Remember, it was raining all on us, and we sat on hay.

CHILDREN: My pants got soaking wet.

ADULT: My pants got soaking wet too.

CHILDREN: Me too. [INAUDIBLE] me too. (Transcript, E-A, Bk. 2, 3-A)

Table 5 summarizes the approaches the four teachers used with the second storybook. It was interesting to read the transcripts of the Control classrooms. Though the teachers were not following the published schedule, the transcripts showed intentional efforts to help children understand the meaning of words that they would encounter in every day life:

ADULT: You're a mailman. What do mailmen do?

CHILDREN: Bring you mail. Put it in your mailbox.

ADULT: Okay.

CHILDREN: I am going to check the mailbox. You got some mail.

ADULT: What kind of mail do I have?

CHILDREN: You got [INAUDIBLE] get the mail. [INAUDIBLE] that's mail. [INAUDIBLE] you got mail. We got your mail Miss S.

ADULT: Thank you. (Transcript, C-B, Bk. 2, 2-A)
Table 5
General Story-Reading and Comprehension Strategies

<table>
<thead>
<tr>
<th>Group/Degree</th>
<th>Book 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>C – B</td>
<td>N/A (Teacher only read book in circle time without conversation)</td>
</tr>
<tr>
<td>E – B</td>
<td>Engage in dramatic play scenarios related to story, using target words in conversations&lt;br&gt;Define new terms in situations/contexts using words familiar to children&lt;br&gt;Ask open-ended questions during play&lt;br&gt;Relate story and play to children’s experiences through play&lt;br&gt;Relate target words to concrete objects (by appearance or function)</td>
</tr>
<tr>
<td>C – A</td>
<td>Review events&lt;br&gt;Specifically relate ways of sleeping to children’s experiences in conversation</td>
</tr>
<tr>
<td>E – A</td>
<td>Show pictures related to terms&lt;br&gt;Relate new words to known words&lt;br&gt;Invite children to share experiences&lt;br&gt;Relate story to shared experience&lt;br&gt;Predict book events&lt;br&gt;Encourage extended conversation&lt;br&gt;Relate illustrations to words&lt;br&gt;Relate story and words to classroom materials&lt;br&gt;Build on background knowledge (animal sounds)&lt;br&gt;Check predictions&lt;br&gt;Apply story and words to future activity&lt;br&gt;Play with story-related props&lt;br&gt;Relate target words to concrete objects in play&lt;br&gt;Put emotion label into context with props&lt;br&gt;Use target words to facilitate clean-up</td>
</tr>
</tbody>
</table>

A more complete listing of how the four teachers addressed each storybook in their environments and teaching strategies is located in Appendix E.
**Benefits experienced by teachers**

During visits to the classrooms to pick up tapes and touch base with teachers, this researcher asked the Experimental teachers how they felt about using the prescribed strategies. Both teachers stated they felt their lesson plans were more purposeful and enjoyed having a direction for all their activities. They also said the children were more engaged with the new materials.

The Experimental-A teacher successfully encouraged her assistant teacher as well as two classroom volunteers to use the conversation starter cards that she posted in each learning center. This did not work out in the other classroom, but the Experimental-B teacher referred to the cards and used the suggested conversation scripts in her own interactions with her students.

Additional review of the transcripts reveals another benefit of the increased engagement of the children noted by their teachers. Arguments between children and teachers’ interventions were caught on tape during both the first and second storybooks. One of the teachers continually dealt with rule breaking, name calling and hitting. She both felt and sounded like a referee:

ADULT: Can you guys come out and you’ll be next? I'll get a waiting list and I'll put your name on it so you can be the next three children in here.

CHILDREN: [INAUDIBLE]. You guys have to get out.

[INAUDIBLE].
CHILDREN: My name is A. [INAUDIBLE] I'm [INAUDIBLE].
I'm [INAUDIBLE] the police. [INAUDIBLE].
CHILDREN: Get out. [INAUDIBLE].
ADULT: Not that I don't want [INAUDIBLE] go get it.
[INAUDIBLE]. You working over here? Okay. I see you in the
block area, but I don't see you building. What are you going to
build, or are you leaving this area? Are you leaving the block area?
CHILDREN: Yes.
ADULT: I need you to clean up your work.
CHILDREN: [INAUDIBLE].
ADULT: I saw you have some of the toys also. S., please don't
[INAUDIBLE]. (Transcript E-A, Bk. 1, 2-A)

She was unable to settle down to play with the children in any depth. Using the
conversational strategies for the second storybook helped keep both her and the
children’s attention focused on the theme and materials. Rather than refereeing and
reprimanding, the teacher could easily redirect children into meaningful activity:

ADULT: M, are you going to be a farmer or are you going to be an
animal?
CHILDREN: [INAUDIBLE].
ADULT: You can be a horse. A horse eats vegetables. You can
[INAUDIBLE].

(move ahead in transcript)
ADULT: I saved your spot for you. [INAUDIBLE] if you touch that, I will have to put the tape recorder somewhere else.

CHILDREN: [INAUDIBLE].

ADULT: I need you to be gentle when you're playing.

CHILDREN: [INAUDIBLE].

ADULT: [INAUDIBLE] needs you to be gentle when you're playing, she doesn't want you to be rough. [INAUDIBLE], what do you want to order out of the catalog for the farm? What are you going to order out of the catalog? (Transcript, E-A, Bk. 2, 1-B)

This and other disputes that were taped and transcribed did not appear to escalate and children seemed willing to be refocused on the theme-related materials.

Benefits for children

During the visits to the classrooms both to observe the environment and later to interview the children about the books, this researcher noted the children’s excitement as they used and showed off the materials, recited the book and answered questions by paraphrasing sentences from the book. Sometimes they got the meanings of the words, even when they didn’t actually use the target term. This exchange leading up to the term “shut tight” is a good example:

RESEARCHER: Oh, okay. Cool. All right, let's see who else is asleep. Who's this?

CHILDREN: The horsey is sleeping in the back he closes his eyes tight and then he goes [INAUDIBLE].
RESEARCHER: Oh, okay so he sleeps standing up?

CHILDREN: Yea. (Transcript, Interview, E-B, Bk. 1)

At the end of every interview, the children wanted to listen to themselves. All four teachers reported this to be true every time they taped an activity in their classrooms.

Follow-up

The formal, post-study survey was offered to all four teachers, however only one of the Experimental teachers submitted it. On this survey, she noted that bringing vocabulary activities throughout the room was helpful and stated that children used better oral language skills as they re-enacted the storybook with block props as well as more traditional puppets.

However, this researcher learned more from post-study conversations than from the survey. The Experimental-A teacher reported that her children enjoyed hearing themselves talk so much, that at the request of her class, she has continued to use the tape equipment in the same way she did during the in-class research.

This same teacher typically spent seven hours of her own time on lesson plans for a two-week theme. She said she found that using these strategies cut her planning time to about three or four hours the first time she tried them without the collaboration of this researcher.

The Control teachers, upon reading the research material and strategies after the study, were happy to see that much of what they already do as standard practice is recognized by researchers as part of effective vocabulary teaching. I have also
presented these basic strategies to teachers as part of professional development classes. The teachers in those classes said that the strategies seemed practical and expressed a desire to try them. To date, there has been no follow-up contact from those educators to see if the strategies were of use in their classrooms.
Applications and Implications

While the study hypothesis was not proven statistically, there was an increase in the use of target vocabulary words for the second storybook by both children and adults when teachers used the specific strategies that were part of this study. The adults’ use of target words increased from under five incidences for the first book to between 20 and 35 for the second book. The children’s use of the target words was tallied at less than five times for the first storybook and between six and 12 time for the second book. The children also recalled and used between five and six of the words a month after the farm theme ended.

Throughout the research on early literacy there was a demonstrated need for some way to enhance the vocabulary learning of young children. Other studies called attention to the great degree of need for young children living in poverty to have specific instruction to increase their vocabulary of formal, book-related words. The various strategies examined in the literature had the potential to positively impact the vocabulary learning of young children, which would aid their later reading comprehension. Unfortunately, the majority of specific strategies examined were aimed at children in primary or older grades.

The research involving preschool children’s vocabulary learning left many questions and studies with unsatisfactory results, however they concluded that it was important for teachers to intentionally target and teach new vocabulary, as pointed out in studies by Bodrova (2003), Coyne (2004), and Nekovei and Ermis (2006). One particularly interesting conclusion was drawn by Wasik and Bond (2006): “children
whose teachers provided multiple opportunities to interact with vocabulary words learned more book-related vocabulary compared with children who were exposed to just books” (p. 247). This was confirmed by the findings of the action research described in this manuscript, which attempted to address the concerns expressed by the other researchers and succeeded in showing the potential for vocabulary growth with instructional conversations.

I believe that continued work should be done to help increase preschool teachers’ effectiveness in helping children learn new vocabulary. It has been my experience that teachers are willing to go to great lengths to help their children learn, despite the problems and frustrations they encounter. Finding ways to help Early Childhood Educators target vocabulary to be taught, integrate the vocabulary learning into their already full schedules and help them assess children’s acquisition of the new terms should be the focus of further study.

Such a study might include the strategies attempted in this study with the procedural modifications suggested: working with a larger sample; devoting more time to the Experimental teachers; choosing fewer target words; selecting words that relate to concrete objects and actions; and making sure the technology needed for data gathering is used more easily and confidently by the classroom teachers.

Perhaps the simplest and most effective modification could be carried out in one classroom, with a pre-assessment of individual children’s use of vocabulary from an upcoming theme, using the instructional conversation strategies described herein and then conducting a post-assessment of the children’s use of those same words.
This assessment could be repeated at two or three intervals to further assess the children’s retention of the target vocabulary.

The main point to be learned from this study is that children can learn new vocabulary if it is taught as part of playful, purposeful activities and conversations during daily routines. It is my goal to continue to study and refine methods to enhance vocabulary learning. These strategies must be easily used by all Early Childhood Educators, especially those in settings serving children living in poverty, who have long been considered to be at the highest risk of reading failure due to a limited vocabulary.
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Appendix A: Letter of Support
July 2, 2007

To whom it may concern:

I am writing this letter to express my support for our Early Language and Literacy Specialist Debbie Mickey. First I must give you some background on our agency. Cincinnati Union Bethel is one of the oldest social service agencies west of the Allegheny River. We operate six Early Childhood Education sites that currently serve children in the most at risk neighborhoods and we continue to seek support from individuals whose goal is of one that prepares children for kindergarten and beyond to be successful. Ms Mickey is that individual.

Through professional development, Ms Mickey helped to support our teachers by providing practical strategies to increase Oral Language Facilitation in our preschool classrooms.

After the completion of her work in the classroom, Cincinnati Union Bethel saw improved oral language skills in some of the classrooms where teachers applied the professional development, and the intentionally of conversations between teachers toward their students.

As the Director of the Early Childhood Education Department I was pleased to have Ms. Mickey’s support throughout the program year.

Fell free to contact me with any additional information

Sincerely,

[Signature]

DecAnn Camp M.Ed.
Director of Early Childhood Education
(513) 768-6937
Appendix B: Informed Consent Forms
Informed Consent Form - Teacher

You are asked to participate in a study of various teaching strategies conducted by Deborah Mickey, an Early Language and Literacy Specialist with the Literacy Specialist Project and the Early Learning Initiative (ELI), in partial fulfillment of the requirements for a Master of Arts in Education degree from Wittenberg University. This study will focus on the use of storybooks and activities during your regular preschool class time. You will be given three to four storybooks and may be trained to use certain strategies and materials to test if my ideas have an affect on student learning. I will observe your classes in person and will ask you to audio-tape some activities for later analysis. I will also look at the fall and spring scores of the “Get It! Got It! Go!” assessment to analyze the overall learning of the children in your classes.

There is no harm that will come to you through these activities. The information will not become part of any job review by your agency or the Early Learning Initiative All observations will be coded in such a way that no one outside your agency will be aware of the names of the teachers participating in the study. I will be available to coach you on ELI-related questions in addition to providing you with high quality children’s literature. One goal is that the study data and strategies tested will be published at a future date. Again, no identifying information regarding individual teachers or children will be included.

If you agree to participate in this study, please sign this consent form. If you would like to be excluded from the study, please indicate that on this form and other arrangements will be made. If you choose not to participate, there will be no consequences from me, your agency or the Early Learning Initiative. If no form is received by Tuesday, December 19, 2006, it will be assumed that you have given your consent to participate.

If you would like a copy of the finished paper, please add your address beneath your name below.

I, ____________________________ (please print your name),

agree [ ]               do not agree [ ]

to participate in this study.

__________________________________                 _______________
(your signature)                                                       (date)

[ ] I want a copy of the published report:

Address:
Informed Consent Form - Student

Your child is asked to participate in a study of various strategies conducted by Deborah Mickey, an Early Language and Literacy Specialist with the Literacy Specialist Project and the Early Learning Initiative (ELI), in partial fulfillment of the requirements for a Master of Arts in Education degree from Wittenberg University. This study will focus on the use of storybooks and activities during your child’s regular preschool class time. Your child’s teacher will be given three to four storybooks and may be asked to use certain strategies to test if these ideas affect student learning. The classes will be observed in person and some activities will be audio-taped for later analysis. The fall and spring scores of the “Get It! Got It! Go!” assessment will also be analyzed for the overall literacy learning of the children in the study classes.

There is no harm that will come to your child through these activities. The storybooks are fun and enriching to read, the activity ideas are developmentally appropriate and the observations and recordings will not identify children by name. The analysis of the assessment scores will not include any individually identifying information. One goal is that the study data and strategies tested will be published at a future date. Again, no identifying information regarding individual teachers or children will be included.

If you agree to allow your child to participate in this study, please sign this consent form. If you would like your child to be excluded from the study, please indicate that on this form and no recordings will be made of any activity your child participates in and no consequences will be experienced by you or your child, from this researcher, the teacher or the agency. If no form is received by your child’s teacher by Thursday, December 28, 2007, it will be assumed that you have given your consent for your child to participate.

If you would like a copy of the finished paper, please add your address beneath your name below.

I, ____________________________ (please print parent or guardian’s name),

agree [ ]     do not agree [ ]

to allow my child to participate in this study.

______________________________  ______________________
(parent or guardian’s signature)  (date)

[ ] I want a copy of the published report:

Address:
Appendix C: Samples of Materials Given to Teachers
Conversation Starters: Going to Sleep on the Farm

Target words: hay, cozy, bill (of a bird), nest, snuggle, shut tight, worry, stable, barn, curl up.

Block Center (props include farm animals, hay bale, farm toys as available)

“Let’s build a barn / stable. What animals live there?”
“Do you think the hay would make the barn / stable cozy? Why?”
“It’s really cold outside and there is no heater in the barn / stable. How do you think the animals stay warm?” (snuggle up in the hay, stand close together and get cozy)
“Make sure the barn / stable door is shut tight so the cold wind doesn’t get in / animals don’t get out.”

Dramatic Play Center (props include farm animal masks, work gloves and hats, farm catalog, maybe some blankets)

“Look at the catalog. What shall we order for our farm? Do we need to worry about having enough money? Do you think we can pay for it all? Is it frightening to spend a lot of money?”
“Look at the cow and the duck. How can we make our barn a cozy place for the cow? How can we make a nice nest for our duck to snuggle in?”

Sensory Table (materials include hay, Spanish moss, rubber ducks, perhaps a bowl of water)

“Look at this hay. What does it feel like? Would you like to curl up and sleep in this?”
“How could we build a nest for the ducks? We are using our hands. How does a bird build a nest with no hands? (It uses its bill.)”
“What does a bird do in its nest? (sleep, lay eggs, snuggle with the babies, get cozy)”

Science Center (materials include farm magazine, lima bean seeds, paper towels, zipper plastic bags, water)

“We can plant bean seeds without dirt. Then we can watch them grow. We won’t have to worry or wonder about how they’re doing because we will be able to see them.”
Dampen a paper towel with the water, set a seed on it and slide it into the zipper bag. Make sure the bag is "shut tight." Label it, hang it in a sunny window and keep the towel moist, but not soaking wet. Watch it grow. Use the words worry and shut tight when checking on them or dampening the towels.

Math Center (materials include various beans, trays, plastic tongs)

“Look at these seeds. If you were a bird, how would you pick them up to eat them? (with your bill). Try to use these tongs like the duck’s bill and sort / count these seeds.”

Art Center (materials include pencils, construction paper strips and any other art and collage items chosen by teachers)

Do you see how this paper curls up like a pig’s tail or like the animals in their cozy barn / stable? We can take this curled up paper and make a sculpture or picture out of it.”

Use phrases like “Make sure the glue is shut tight.”
“In your picture I see hay, a barn, a stable, a nest, a bill on a duck, etc.”
“Did you spill? Don’t worry about it; we’ll clean it up together.”

Music Center (materials include triangle / horse shoe and pencil, egg-shakers, cow bell)

“Make sure those egg shakers stay shut tight.”
“We don’t have to worry about breaking these shakers, but we still must treat them gently.”
“Be careful with the triangle / horseshoe. I would worry if anyone got hurt with it. It would make everyone scared and upset.”
“Do you think the cows hear this kind of bell and know it’s time to come back to their cozy barn?”

Book Area (make sure there are pillows, blankets, something soft)

Use terms like snuggle, cozy and nest while children are reading in this comfortable space.
Lunch and snack times

“What animals do you remember from our book, *Going to Sleep on the Farm*? Where do they live? (barn, stable, pig sty, hen house, pond)”

“How do you think farm animals stay warm in this cold weather? (stand close together and get cozy, snuggle up in the hay or in their nests)”

“How do you stay warm in the winter? (I snuggle into a blanket; get cozy in my bed, etc.)”

“Remember how we used the tongs to pick up the seeds like a bird uses its bill? Would you like to eat this ____ that way?”

“The duck in our story didn’t worry about a thing. Do you ever worry or feel scared or upset about anything? Can you tell us what it is?”

Nap times

Use phrases like: “Make sure your eyes are shut tight.”

“Get cozy on your cot.”

“Snuggle up with your blanket.”

“Don’t worry about what I’m doing, just….”

“Aren’t you glad we have nice, cozy cots instead of hay / a barn / a nest / a stable to sleep in?”
Vocabulary Tracking Checklist

Book: *Going to Sleep on the Farm*    Dates: February 26 – March 2, 2007

Words used by children as they play (make tally marks as heard):

- barn
- bill (of a bird)
- cozy
- curl up
- hay
- nest
- shut tight
- snuggle
- stable
- worry

Centers and Activities where words were used (use tally marks):

<table>
<thead>
<tr>
<th>Block Center</th>
<th>Music Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dramatic Play Center</td>
<td>Book / Library Center</td>
</tr>
<tr>
<td>Sensory Table</td>
<td>Writing Center</td>
</tr>
<tr>
<td>Science Center</td>
<td>Large Motor Play (in or out)</td>
</tr>
<tr>
<td>Math Center</td>
<td>Lunch / Snack Time</td>
</tr>
<tr>
<td>Art Center</td>
<td>Nap Time</td>
</tr>
</tbody>
</table>
## LESSON PLAN

**Week of:** 2/20-2/3/2007  
**Theme:** Farm Life

### OUTCOMES – Theme Related Concepts

<table>
<thead>
<tr>
<th>Day</th>
<th>Outcomes</th>
<th>Activities – Materials</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>(Holiday)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tue</td>
<td>Identify and name farm animals and where they live on a farm</td>
<td>Farm photos and toys throughout room, nest materials in sensory table</td>
<td></td>
</tr>
<tr>
<td>Wed</td>
<td>Explore vocabulary words</td>
<td>Pictures, materials throughout room</td>
<td></td>
</tr>
<tr>
<td>Thu</td>
<td>What foods come from a farm?</td>
<td>Curly pig tail sculptures, popcorn sheep – construction paper, popcorn, glue, bean seeds</td>
<td></td>
</tr>
<tr>
<td>Fri</td>
<td>Sequence story</td>
<td>Story pictures</td>
<td></td>
</tr>
</tbody>
</table>

### GROUP TIME

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Activities – Materials</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>(Holiday)</td>
<td></td>
</tr>
<tr>
<td>Tue</td>
<td>ELA III.6</td>
<td>Picture walk and read the book, <em>Going to Sleep on the Farm</em></td>
</tr>
<tr>
<td>Wed</td>
<td>ELA II. 1,5</td>
<td>Reread book, point out and define target words.</td>
</tr>
<tr>
<td>Thu</td>
<td>S II. 1,3,5</td>
<td>Discuss food that comes from a farm – eggs, milk, meat, fruits, vegetables</td>
</tr>
<tr>
<td>Fri</td>
<td>ELA III.4</td>
<td>Sequence pictures from the book, discuss.</td>
</tr>
<tr>
<td><strong>Dramatic Play</strong></td>
<td><strong>Construction</strong></td>
<td><strong>Manipulative--Math</strong></td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>Outcome:</strong> Explore farm roles</td>
<td><strong>Outcome:</strong> Construct farm animal homes and use target words (barn, stable, etc.)</td>
<td><strong>Outcome:</strong> Sort bean by attributes, counting activity, use target word: (bird) bill</td>
</tr>
<tr>
<td><strong>Materials/Activity:</strong> Farm animal masks, farmer hat, gloves, catalog</td>
<td><strong>Materials/Activity:</strong> Blocks, animal props</td>
<td><strong>Materials/Activity:</strong> Beans, tongs</td>
</tr>
<tr>
<td><strong>Assessment:</strong> Observation – ELA V. 2</td>
<td><strong>Assessment:</strong> Observation</td>
<td><strong>Assessment:</strong> Observation - Math I.2, IV.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Discovery—Sand Water</strong></th>
<th><strong>Library</strong></th>
<th><strong>Woodworking</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome:</strong> Explore nesting materials – hay, moss</td>
<td><strong>Outcome:</strong> Explore fiction and non-fiction texts about farm, animals</td>
<td><strong>Outcome:</strong></td>
</tr>
<tr>
<td><strong>Materials/Activity:</strong> Hay, Spanish moss, rubber ducks, build nests for ducks</td>
<td><strong>Materials/Activity:</strong> Various books</td>
<td><strong>Materials/Activity:</strong></td>
</tr>
<tr>
<td><strong>Assessment:</strong> Observation - Science II. 3</td>
<td><strong>Assessment:</strong> Observation – ELA III.2</td>
<td><strong>Assessment:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Writing</strong></th>
<th><strong>Music--Listening</strong></th>
<th><strong>Art</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome:</strong> Write for various purposes</td>
<td><strong>Outcome:</strong> Explore rhythm instruments</td>
<td><strong>Outcome:</strong> Farm animal related representational projects</td>
</tr>
<tr>
<td><strong>Materials/Activity:</strong> Note pads, catalog. Write notes, order farm equipment</td>
<td><strong>Materials/Activity:</strong> Cow bell, horse shoe “triangle”, egg shakers, songs like Old MacDonald Had a Farm</td>
<td><strong>Materials/Activity:</strong> Construction paper strips to curl up, Play dough, farm animal cookie cutters, popcorn, paper, various art media</td>
</tr>
<tr>
<td><strong>Assessment:</strong> Observation, work samples ELA VI.3</td>
<td><strong>Assessment:</strong> Observation, participation Science III. 6</td>
<td><strong>Assessment:</strong></td>
</tr>
</tbody>
</table>
**Conversation Starters: Move Over, Rover!**

**Target words:** romp, mighty (adj.), frightening, pouring (as rain), whiff, scatter, scamper, scurry, sopping.

**Block Center** (props include animals as suggested in book)

“Look at the animals romp, (or scamper, scurry) (make animals play and run together). What do you see them doing?”

“This ____ looks mighty frightening, very scary. Is there anything that makes you feel mighty frightened when you see it? What is it?”

**Dramatic Play Center** (props include pet masks, pet bowls, vet books, calendar/appointment book, smocks, “doctor” toys)

“Look at the cat/dog! Are you playing together? Is there a mighty frightening storm? It’s pouring rain and you look sopping wet! What are you going to do?” (describe children’s actions using the words scurry, scamper, and move over)

“I’m glad you came to the vet. You’re a mighty sick dog/cat. We will try to make you better.”

**Sensory Table** (material includes water, cups, sand sifter, sponges)

“We’re making a rain storm like in the book, Move Over, Rover! What things can we do here to show rain and thunder?” As children respond by pouring water from cups, through the sifter, squeezing the sponges, use the words pouring, sopping, mighty wet.

**Science Center** (material includes nonfiction books about thunderstorms, a drum, a shaker, a flashlight)

“What noises can you make with the drum and shaker? Does this sound like anything in our story? What might we use this flashlight to make?” (use the words mighty frightening in reference to the storm noises and light flashes)

When looking at the books, use as many of these words as appropriate mighty frightening, sopping wet, pouring.
**Art Center** (materials include any art and collage items chosen by teachers)

Use phrases like “That’s a mighty fine picture you’re created!” or “Scatter the confetti (or ____ ) over the glue.” or “That paper is really sop​ping with paint. Maybe it’s time for a fresh piece.”

**Math Center** (materials include scent jars and a graph to fill in)

“In the book, the animals got a whiff of something they didn’t like. What was it? I’ve got some things here that you can take a whiff of. Smell them and tell me if you like the way they smell.

**Lunch and snack times**

“We’ve been talking about the storm in Move Over, Rover! The animals were mighty frightened. How do you feel in storms? What do you do to keep safe? Was that the same way the animals in the storm tried to stay safe and dry?”

“MMM, something smells good. Take a whiff!” What do you smell?”

“In our book, the animals ended up in the rain, all sopping wet. Have you ever run around in the rain? Did you scurry as fast as you could to find a dry place?

**Large Motor Play** (materials include the dog and cat balls)

“We’re going to use a pet toy for a game. This is a ball you’d use to play with your dog. What do you see on it? We’re going to toss it to each other and try to catch it. Have you ever seen a dog catch ball? How did he do it? Well it’s not safe for us to do that, so we’ll use our hands. Have you ever seen a dog throw a ball? I have, but not far. We’ll have to use our hands for that, too. But we can pretend, so one of us can be the person and the rest can be dogs and try to catch the ball and take it back to the person to throw again.”

As children and teachers play, use phrases like “I like to romp and play. It’s fun!” or “Scurry over there and get that ball!” or “Scamper after the ball before the other dog gets it!” or “Scatter out so one of us can get the ball!”

“We’re going to use some balls that cats might use to play. See, they are different colors and make different sounds. Have you ever seen a cat play with a toy? What did he do? These balls are small and our feet are large. Can we play with these
that way, or is there another way to do use them? What if we play this game: put all 3 balls together and kick them all at once and see how far we can scatter them? Where do you think they’ll go? Let’s see!”

As the children scatter the balls by kicking them, ask them to scurry or scamper to pick them up and bring them back.

While playing freely in the gym or on the playground, use the word romp about their running and having fun.
Vocabulary Tracking Checklist

**Book:** *Move Over, Rover!*  
**Dates:** March 5 – 16, 2007

Words used by children as they play (make tally marks as heard):

- romp
- mighty (adjective)
- frightening
- pouring (like rain)
- whiff
- scatter
- scamper
- scurry
- sopping

Centers and Activities where words were used (use tally marks):

<table>
<thead>
<tr>
<th>Block Center</th>
<th>Music Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dramatic Play Center</td>
<td>Book / Library Center</td>
</tr>
<tr>
<td>Sensory Table</td>
<td>Writing Center</td>
</tr>
<tr>
<td>Science Center</td>
<td>Large Motor Play (in or out)</td>
</tr>
<tr>
<td>Math Center</td>
<td>Lunch / Snack Time</td>
</tr>
<tr>
<td>Art Center</td>
<td>Nap Time</td>
</tr>
</tbody>
</table>
LESSON PLAN

Week of: 3/19 – 30/2007  Theme: Animals in our World: Pets

<table>
<thead>
<tr>
<th>Mon</th>
<th>OUTCOMES – Theme Related Concepts</th>
<th>ACTIVITY - Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduce story</td>
<td>Book: <em>Move Over, Rover!</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tue</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduce and explore vocabulary words</td>
<td>Various toys, pictures, and props</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discuss pets and proper care for them</td>
<td>Toys and vet props</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thu</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Review story sequence</td>
<td>Props and pictures</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fri</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Explore thunderstorms</td>
<td>Non-fiction book</td>
</tr>
</tbody>
</table>

GROUP TIME

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Activities – Materials</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>ELA III.6</td>
<td>Picture walk and read the book, <em>Move Over, Rover!</em></td>
</tr>
<tr>
<td>Tue</td>
<td>ELA II. 1,5</td>
<td>Reread book, point out and define target words</td>
</tr>
<tr>
<td>Wed</td>
<td>ELA X.2</td>
<td>Children share about their pets and how they are cared for</td>
</tr>
<tr>
<td></td>
<td>S II. 1,3,5</td>
<td></td>
</tr>
<tr>
<td>Thu</td>
<td>ELA III.4</td>
<td>Sequence pictures or actions from the book, discuss.</td>
</tr>
<tr>
<td>Fri</td>
<td>S I.7</td>
<td>Read non-fiction book about thunderstorms, discuss</td>
</tr>
<tr>
<td>Dramatic Play</td>
<td>Construction</td>
<td>Manipulative--Math</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td><strong>Outcome:</strong> Explore pet and vet roles</td>
<td><strong>Outcome:</strong> Retell story, order animals by size</td>
<td><strong>Outcome:</strong> Smell various scents, graph likes, dislikes</td>
</tr>
<tr>
<td><strong>Materials/Activity:</strong> Pet masks, vet office</td>
<td><strong>Materials/Activity:</strong> Blocks with animal pictures</td>
<td><strong>Materials/Activity:</strong> Scent bags and graph poster</td>
</tr>
<tr>
<td>materials and props</td>
<td><strong>Assessment:</strong> Observation – ELA V.2</td>
<td><strong>Assessment:</strong> Observation - Math V.2</td>
</tr>
<tr>
<td><strong>Assessment:</strong> Observation – ELA V. 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Discovery—Sand Water</strong></td>
<td><strong>Library</strong></td>
<td><strong>Woodworking</strong></td>
</tr>
<tr>
<td><strong>Outcome:</strong> Explore how materials pour, sift, etc.</td>
<td><strong>Outcome:</strong> Explore fiction and non-fiction texts about pets, weather</td>
<td><strong>Outcome:</strong></td>
</tr>
<tr>
<td><strong>Materials/Activity:</strong> Dry dog food, water, scoops, sifters, etc.</td>
<td><strong>Materials/Activity:</strong> Various books</td>
<td><strong>Materials/Activity:</strong></td>
</tr>
<tr>
<td><strong>Assessment:</strong> Observation - Science III. 2</td>
<td><strong>Assessment:</strong> Observation – ELA III.2</td>
<td><strong>Assessment:</strong></td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td><strong>Music--Listening</strong></td>
<td><strong>Art</strong></td>
</tr>
<tr>
<td><strong>Outcome:</strong> Write for various purposes</td>
<td><strong>Outcome:</strong></td>
<td><strong>Outcome:</strong> Pet related representational projects</td>
</tr>
<tr>
<td><strong>Materials/Activity:</strong> Note pads. Write notes,</td>
<td><strong>Materials/Activity:</strong></td>
<td><strong>Materials/Activity:</strong> Various collage materials, drawing materials</td>
</tr>
<tr>
<td><strong>Assessment:</strong> Observation, work samples</td>
<td><strong>Assessment:</strong></td>
<td><strong>Assessment:</strong> Work samples, observation</td>
</tr>
<tr>
<td>ELA VI.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D: Samples of Picture Vocabulary Assessment Materials
Sample picture vocabulary assessment items with cue scripts.

**Shut tight**
This dog’s eyes are closed.
We could say they are……
When we slam a door, it is…..

**Cozy**
What do you see here?
Maybe the cats feel comfy and…?

**Sopping (wet)**
When something is soaked like this cat, we say it is ……wet.

**Whiff**
This dog is sniffing a flower.
We can say he is getting a …. of its scent.
<table>
<thead>
<tr>
<th>Vocabulary Growth</th>
<th>104</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture Vocabulary Card Tracking Checklist</td>
<td></td>
</tr>
<tr>
<td>Teacher ___________________    No. of Children _____  Date ________</td>
<td></td>
</tr>
<tr>
<td>barn</td>
<td></td>
</tr>
<tr>
<td>bill (of a bird)</td>
<td></td>
</tr>
<tr>
<td>cozy</td>
<td></td>
</tr>
<tr>
<td>curl up</td>
<td></td>
</tr>
<tr>
<td>hay</td>
<td></td>
</tr>
<tr>
<td>nest</td>
<td></td>
</tr>
<tr>
<td>shut tight</td>
<td></td>
</tr>
<tr>
<td>snuggle</td>
<td></td>
</tr>
<tr>
<td>stable</td>
<td></td>
</tr>
<tr>
<td>worry</td>
<td></td>
</tr>
<tr>
<td>romp</td>
<td></td>
</tr>
<tr>
<td>frightening</td>
<td></td>
</tr>
<tr>
<td>pouring (like rain)</td>
<td></td>
</tr>
<tr>
<td>whiff</td>
<td></td>
</tr>
<tr>
<td>scatter</td>
<td></td>
</tr>
<tr>
<td>scamper</td>
<td></td>
</tr>
<tr>
<td>scurry</td>
<td></td>
</tr>
<tr>
<td>sopping</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E: Summaries of Data for Books 1, 2 and 3
Data Summary – Book 1

Book Title: *Bunnies on the Go: Getting from Place to Place*

There was no published list of target words for this book. Researcher chose 6 words that she would have emphasized had she been teaching: *Vacation, Traveling, Highway, Plowing, Anchor, Ferry*. Other points were noticed from the tape transcripts and classroom observations.

Data gathered from transcripts of tapes (2 per class, plus 1 small group interview per class)

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th># Times Words Used By Adults</th>
<th># Times Words Used By Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Control AA</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th>Specific Target Words Used by Adults or Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>traveling, ferry</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>traveling, vacation, ferry</td>
</tr>
<tr>
<td>Control AA</td>
<td>vacation, highway, ferry</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>ferry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th>General Story-Reading and Comprehension Strategies Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>Review events</td>
</tr>
<tr>
<td></td>
<td>Define new terms and relate to children’s experience</td>
</tr>
<tr>
<td></td>
<td>Call attention to rhyming words</td>
</tr>
<tr>
<td></td>
<td>Invite children to share experiences</td>
</tr>
<tr>
<td></td>
<td>Connected children’s experiences to their feelings</td>
</tr>
<tr>
<td></td>
<td>Tell a story about a personal experience</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>Highlight rhyming words</td>
</tr>
<tr>
<td></td>
<td>Review events</td>
</tr>
<tr>
<td></td>
<td>Attempt to relate overall concept to children’s experiences</td>
</tr>
</tbody>
</table>
Control AA | Review events  
Specifically relate events to children’s experiences  
Engage in extended conversations about experiences  

Exper. AA | Review events  
Relate to a class field trip experience  
Invite children to share experiences  
Engage in extended conversation about experiences  

**Note:** This book was used to establish how the four teachers approached vocabulary within the context of a book. No follow-up assessments of vocabulary word usage were made.

**Researcher’s classroom observation highlights**

**Control BA:** Theme is Transportation. Dramatic play is set up as a Bus. Activity table set as car track with props.

**Experimental BA:** car-shaped books in writing center, some transportation books in classroom.

**Control AA:** Car color interactive chart in book area. Travel and transportation books displayed throughout room. During large muscle play, class played “Truck, truck, car” (like Duck, duck, goose).

**Experimental AA:** Some transportation-related toys and books in use in the classroom.
Data Summary – Book 2

Book Title: *Going to Sleep on the Farm*

The list of target words for this book was given only to experimental class teachers. These words were: *barn, bill (of a bird), cozy, curl up, hay, nest, shut tight, snuggle, stable, worry*. Other points were noticed from the tape transcripts and classroom observations.

**Data gathered from transcripts of tapes (2 per class, plus 1 small group interview per class)**

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th># Times Words Used By Adults</th>
<th># Times Words Used By Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Control AA</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>34</td>
<td>12</td>
</tr>
</tbody>
</table>

**Specific Target Words Used by Adults or Children**

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th>Specific Target Words Used by Adults or Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>n/a (interview tape missing)</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>bill, worry, hay, cozy, nest, snuggle, barn</td>
</tr>
<tr>
<td>Control AA</td>
<td>bill, worry, nest, snuggle, barn, hay, shut tight</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>barn, stable hay, nest bill cozy, worry</td>
</tr>
</tbody>
</table>

**General Story-Reading and Comprehension Strategies Used**

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th>General Story-Reading and Comprehension Strategies Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>n/a</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>Engage in dramatic play scenarios related to story, using target words in conversations Define new terms in situations/contexts using words familiar to children Ask open-ended questions during play Relate story and play to children’s experiences through play Relate target words to concrete objects (by appearance or function)</td>
</tr>
</tbody>
</table>
### Teachers’ Observations of Use of Target Words

<table>
<thead>
<tr>
<th>Experimental Class BA:</th>
<th>Words used by children in play</th>
<th>Centers, Activities in which words were used</th>
</tr>
</thead>
<tbody>
<tr>
<td>no data turned in</td>
<td>no data turned in</td>
<td></td>
</tr>
</tbody>
</table>

**Experimental Class AA:**
- **Words targeted in class:**
  - Barn
  - Hay
  - Shut tight
  - Worry
- **Words used by children in play**
  - Barn – 5
  - Hay – 13
  - Shut tight – 2
  - Stable – 1
  - Worry - 7
- **Centers, Activities in which words were used**
  - Blocks – 6
  - Dramatic Play – 0
  - Sensory Table – 10
  - Science – 0
  - Math – 6
  - Art – 0
  - Music – 0
  - Books – 4
  - Writing – 0
  - Large Motor Play – 0
  - Lunch/Snack – 0
  - Nap - 1
Picture Vocabulary Assessment
(Activity completed with 2 pairs of children from each class)

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th># pictures identified – Group 1</th>
<th># pictures identified – Group 2</th>
<th>Words correctly identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Exper. BA</td>
<td>1.5</td>
<td>3 + 2 with hints</td>
<td>Hay, shut__, barn, bill W/hints: nest, snuggle</td>
</tr>
<tr>
<td>Control AA</td>
<td>1 + 1 with hint</td>
<td>2</td>
<td>Hay, nest With hint: snuggle</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>4 + 2 substituted for correct word</td>
<td>3 + 2 substituted + 2 definitions</td>
<td>Barn, hay, cozy, nest, snuggled Substituted words: snuggle for cozy, barn for stable Definitions: like a ball for curl up, basket where birds sleep for nest</td>
</tr>
</tbody>
</table>

Researcher's classroom observation highlights

**Control BA:** The book, *Going to Sleep on the Farm*, is not used in lesson plans. Classroom materials do not differ from previous visits to the classroom. Later discovered that the teacher changed the schedule. The book was read, but related activities were not planned.

**Experimental BA:** Researcher-provided materials and props are in use in some centers (farm catalog and notebooks in writing center; farm animals in block center, straw used in art project, egg shakers in art, farm clothes in dramatic play, farm books throughout room, moss in sensory table). Conversation starter cards are not posted in centers.

**Control AA:** Farm books are throughout room. Farm toys are in blocks and small building centers, other materials do not differ from previous visits to classroom.

**Experimental AA:** Researcher-provided materials and props are in use in most centers (egg shakers and horse shoe-chime are in music center; beans/seeds in math center; farm animals are in blocks, farm clothes and masks and catalog are in dramatic play; farm pictures are posted around room; moss and hay in sensory table). Farm related books throughout room. Song chart is “Old MacDonald…” Wooden animals are in block center. Conversation starter cards are posted in each center.
Data Summary – Book 3

Book Title: *Move Over, Rover!*

The list of target words for this book was given only to experimental class teachers. These words were: *romp, frightening, mighty (adj.), pouring (like rain), whiff, scatter, scamper, scurry,* and *sopping.* Other points were noticed from the tape transcripts and classroom observations.

Data gathered from transcripts of tapes (2 per class, plus 1 small group interview per class)

<table>
<thead>
<tr>
<th>Class Name/ Number</th>
<th># Times Words Used By Adults</th>
<th># Times Words Used By Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Control AA</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Name/ Number</th>
<th>Specific Target Words Used by Adults or Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>mighty, frightening, pouring, whiff, scatter, scamper, scurry</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>mighty, frightening, whiff</td>
</tr>
<tr>
<td>Control AA</td>
<td>(no tapes audible, interview only)</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>(no tapes audible, interview only) frightened, whiff, romping, sopping</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Name/ Number</th>
<th>General Story-Reading and Comprehension Strategies Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>Asked some questions about story events while reading; did not use target words outside story text.</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>Engaged with children in play with story-related props Allowed children to use their background knowledge and experience in play with props Related materials and props to the storybook Related activities/materials to children’s feelings and experiences</td>
</tr>
<tr>
<td>(Exper. BA)</td>
<td>Defines target word in terms of concrete activity Uses target word interchangeably with already-known synonym</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Control AA</td>
<td>None recorded audibly</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>None recorded audibly</td>
</tr>
</tbody>
</table>

**Teachers’ Observations of Use of Target Words**

<table>
<thead>
<tr>
<th>Experimental Class BA: no data turned in</th>
<th>Experimental Class AA: no data turned in</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Words used by children in play</strong></td>
<td><strong>Centers, Activities in which words were used</strong></td>
</tr>
<tr>
<td>Frightening – 6</td>
<td>Blocks – 2</td>
</tr>
<tr>
<td>Pouring – 2</td>
<td>Dramatic Play Center – 3</td>
</tr>
<tr>
<td>Whiff – 1</td>
<td>Sensory – 0</td>
</tr>
<tr>
<td>Sopping – 2</td>
<td>Science – 0</td>
</tr>
<tr>
<td>(teacher added Regurgitate, did not track its use)</td>
<td>Math – 0</td>
</tr>
</tbody>
</table>

**Picture Vocabulary Assessment**

(Activity completed with 2 pairs of children from each class)

<table>
<thead>
<tr>
<th>Class Name/Number</th>
<th># pictures identified – Group 1</th>
<th># pictures identified – Group 2</th>
<th>Words correctly identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control BA</td>
<td>1 + 1 synonym</td>
<td>0 + 1 synonym</td>
<td>Pouring Synonym: scary for frightening</td>
</tr>
<tr>
<td>Exper. BA</td>
<td>0</td>
<td>0 + 1 synonym</td>
<td>Synonym: scared for frightening</td>
</tr>
<tr>
<td>Control AA</td>
<td>0 + 1 synonym</td>
<td>0 + 1 synonym</td>
<td>Synonym: scary for frightening</td>
</tr>
<tr>
<td>Exper. AA</td>
<td>0 + 1 definition + 1 target word not pictured</td>
<td>1 + 1 synonym</td>
<td>Pouring Synonym: scared for frightening Definition: smell for</td>
</tr>
</tbody>
</table>
Researcher’s classroom observation highlights

**Control BA:** Nothing in materials selection has changed from previous visit. Lesson plan focus is not Pets, as scheduled. Teacher informs researcher that she has changed schedule and will do Pets theme later. The book was read, but related activities were not planned.

**Experimental BA:** Researcher-provided materials and props are in use in one center (vet materials and other pet props are in dramatic play). Pet-related books are around the room. Pet-themed art projects are in evidence. Conversation starter cards are not posted in centers. Teacher tells researcher that her assistant does not participate; she keeps the cards put away for safekeeping. Researcher observes other materials provided still in the prop box. They may have come out during the second week of the theme.

**Control AA:** Materials do not differ from previous visits to classroom. Teacher tells researcher that she is has changed schedule and will do Pets theme later. The book was read, but related activities were not planned.

**Experimental AA:** Researcher-provided materials and props are available in some centers (dog food in sensory table; pet and vet materials and props in dramatic play; shakers and aluminum pan thunder maker in music; blocks with animal pictures are in block area). Pet-related books throughout room. Conversation cards are posted throughout room. Children in dramatic play are using the shakers to play beauty shop and in the dog bowls (makes a neat sound). Children ask to be taped while playing in the block area. House-shaped books are available in the writing center. Teacher tells researcher she has added regurgitate to her vocabulary list since she brought in her pet bird, which feeds its babies by regurgitating food for them. Researcher heard children use the target words *hay* and *nest.*
Appendix F: Sample Post-Study Survey for Teachers
Oral Language Development: Vocabulary Follow-up Survey

Teacher’s Name __________________________    Date ___________

Please answer the questions below honestly and completely. Thank you.

1. What did you know about oral language development in general before participating in this study?

2. What did you know about vocabulary development before participating in this study?

3. Did you intentionally work to help children develop oral language skills before participating in this study?    _______ Yes       _______ No
   If yes, how did you do so?
   Did children gain these skills? What did you observe?

4. Did you intentionally work to help children increase their vocabulary before participating in this study?  ________ Yes
   ________ No
   If yes, how did you do so?
   Did children learn the new words? What did you observe?

5. What new concepts and strategies did you learn from this study?
6. Did you try these strategies in your classroom?
   ______ Yes   ______ No

   If yes, please answer the following:
   When did you try them?

   How did you use them?

   If no, please share why you did not try them.

7. Did children use better oral language skills? ______ Yes
   ______ No
   What did you observe?

8. Did children learn the target vocabulary words? ______ Yes
   ______ No
   What did you observe?

9. Were the planning strategies helpful as you created lesson plans?
   ______ Yes   ______ No
   If yes, please answer the following:

   How did the strategies affect the amount of time you spent in planning?

   How did the strategies affect the way you planned for learning centers?

   What other ways did the strategies affect your work?
10. If your answer to question 7 was **no**, please share why the strategies were not helpful for you.

11. Would you continue to use these strategies in some form in your planning?  ______ Yes  ______ No  
Please explain.

12. What other thoughts and observations do you have about using these strategies?