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I, Emily E. Hasselbeck, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Communication Sciences and Disorders.

It is entitled:
Children’s Story Retell Under Three Cuing Conditions

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Abstract

**Purpose:** This study investigated the story retell of preschool children with typical language skills under three different retell conditions (toy prop cues, picture-book cues, and no cues). Gender differences were also investigated. The results of both are presented in two papers.

**Method:** A picture book was read to 29 preschool children (ages 4;6 to 5;6) three times over the course of three weeks, and a naïve listener elicited story retells from the children under three conditions (toy prop cues, picture-book cues, and no cues). Retells were analyzed by the researchers for presence and sequence of story grammar elements and by SALT software for total number of words, number of different words, and mean length of communication unit (MLCU). Gender differences were also analyzed.

**Results:** Children’s retells under the picture-book cues condition contained a significantly higher number of story grammar elements (than the toy prop cues and no cues conditions), total number of words, and number of different words than the no cues condition. There was no significant difference in MLCU in any of the conditions. No significant differences were found between the toy prop cues and no cues conditions. Girls outperformed boys on measures of story grammar elements, total number of words, number of different words, and MLCU, but there was no significant difference between girls and boys on any of the story retell conditions.

**Conclusion:** The method of cuing used to elicit story retells from preschoolers can result in different language performance. Using pictures from the book resulted in the higher quality retells when measuring language skills than the no cues condition. There was only a significant difference between the picture-book cues condition and the toy prop cues condition on number of story grammar elements. Girls tend to perform better than boys on these selected narrative measures.
Key Words: preschool, story retell, picture-book cues, toy prop cues, story grammar, gender differences
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Jeremiah 29:11 “For I know the plans I have for you,” declares the Lord, “plans to prosper you and not to harm you; plans to give you hope and a future.”
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Chapter I

Introduction

Storybook interactions have been an important focus of education and speech-language pathology research for many years (See Bus, van Ijzendoorn, & Pellegrini, 1995; Snow, Burns, & Griffin, 1998 for reviews) because the vital role that storybook interactions play in later literacy and academic skills of young children has been documented (Bus, 2002; Cunningham & Zibulsky, 2011; Lonigan & Whitehurst, 1998; Wells, 2009). Storybook reading has been shown to be a productive means to facilitate language skills and literacy growth (Justice & Piasta, 2011; Mol, Bus, de Jong, & Smeets, 2008). In addition, repeated storybook reading has been viewed as an important contributor to children’s oral language development (Snow, 1983) and has been shown to positively affect vocabulary development (Moerk, 1985), syntax (Snow & Goldfield, 1983), phonological awareness (Justice & Ezell, 2000), and decontextualized language use (Sulzby, 1985).

One way that storybook reading has been used to facilitate language and literacy growth is through the use of story retell, which is a means to elicit a narrative. Hughes, McGillivray, and Schmidek (1997) defined a narrative as “oral or written discourse that relates real or fictional events that are temporally sequenced and convey meaning” (p.355). Narratives help children to develop oral language (Morrow, 1985), since telling stories requires the use of more complex language than daily conversation, as well as specific vocabulary and a command of pronouns and connecting words (such as “when” and “so”) to relate the story to a listener. Narrative skills are connected to literacy ability because a child must be able to relate to more abstract topics that happened in the past in order to convey a story (Hedberg & Westby, 1993). A story retell task involves telling a child a story and having him/her retell the same story in his/her own words.
Educators have been using story retell tasks for the past several decades to gain insight into specific aspects of children’s language abilities (Kalmbach, 1986; Morrow, 1985; Pickert & Chase, 1978).

The use of narratives, and more specifically story retell, is prevalent in both assessment and intervention tasks for children’s language and literacy skills; therefore, it is important that the results of various types of elicitation and the most effective means for collecting the best quality narratives are documented. In the past, researchers (Schneider, 1996; Schneider & Dubé, 2005) have focused on the different presentation modes of storybooks using spoken only, pictures, and combined methods. For example, Schneider and Dubé (2005) found that given different presentations of stories (spoken only, spoken combined with pictures, and pictures only), typically developing kindergarten and second grade children produced different numbers of story grammar units depending on the presentation method. While there have been positive findings from studies focusing on story retell given pictorial and spoken presentation methods, studies that have investigated the effectiveness of the use of prop cues during presentation and during story retell have shown inconsistent results, due to a variety of ages, situations, and settings being studied (Kaderavek & Justice, 2005; Kim, 1999; Soundy & Gallagher, 1993; Stadler & Ward, 2010).

Research has shown that active participation in literary experiences enhances a variety of language and literacy skills, such as oral language, comprehension, and overall awareness of story structure (Blank & Frank, 1971; Kaderavek & Justice, 2005). Classroom activity guides (Sharp, 2005, Chapter 4), online resources (Drake, n.d.; Drake, 2009), and childhood education guides (Soundy, 1993) provide information for teachers on using toy props as an effective tool for actively involving preschool and kindergarten students in story retells. These guides support the
general thinking that the use of story manipulatives or prop cues such as puppets or felt pieces can be utilized to help children remember stories, by helping them organize their thoughts so that they retain more detail about the sequence of the story, use longer and more sophisticated sentence structures, and add more description to their retellings. It is possible; however, that the addition of manipulatives could be distracting, and actually reduce the effectiveness of the story retell task (see Griffith, Ripich, & Dastoli, 1986, Roy, 2006).

The aim of the current study was to examine the influence of toy prop cues, picture-book cues, and no cues during story retell tasks to determine the relative effectiveness of the three modalities in eliciting the best quality narratives from preschool children with typical language development. In addition, differences between boys’ and girls’ performances with each condition were also investigated.
Chapter II

Review of the Literature

In the following sections, several areas related to narratives, and specifically, story retell, will be discussed. Those topics include: authentic assessment; story generation versus story retell; the components and structure of narratives for analysis (including communication-unit, story grammar, cohesion, contextual knowledge, and elaborated noun phrases); and gender differences in language and narratives. Specific information about story retells that is pertinent to this research study will also be provided. This includes findings regarding story presentation and retell with pictures cues and prop cues, and gender differences in story retell tasks.

Story Retell as an Authentic Assessment Task

Authentic assessment has become an important part of evaluating young children’s language and cognitive development. It includes using naturally occurring daily routines to evaluate a child’s performance on specific skills (see Bagnato & Yeh Ho, 2006). Authentic assessment has been shown to be an effective means of supplementing information from a standardized testing measure, and it is an important tool to use for children who do not respond well to standardized testing, as well as culturally diverse learners (Roseberry-McKibbin, 2007; Stockman, 1996). Because of these factors, authentic assessment has been recognized as an important piece of evaluating young children’s language and cognitive development. One authentic assessment tool that many educators and SLPs use involves having a child complete a story retell, or fictional narrative task. Story retell tasks elicit language from children in an authentic assessment context that often provides more information about a child’s language than can be gleaned from a standardized testing measure (Pickert & Chase, 1978).
A legitimate reason for using story retell as an authentic assessment tool is that story retelling abilities are linked to later reading and language abilities (Bishop & Edmundson, 1987; Catts, Fey, Tomblin, & Zhang, 2002; Catts, Hogan, & Fey, 2003; Dickinson & McCabe, 2001; Griffin, Hemphill, Camp, & Wolf, 2004; McCardle, Scarborough, & Catts, 2001; Tabors, Snow & Dickinson, 2001). Children are also usually familiar with the idea of reading story books with an adult and discussing them or answering questions about them. Speech-language pathologists often use story retell for assessment because in order to retell a story, all the skills required for reading comprehension must be synthesized and integrated with spoken language skills in order to perform a story retell task (Finestack, Fey, Sokol, Ambrose, & Swanson, 2006; Gillam, McFadden, & van Kleeck, 1995; Justice et al., 2006; Miller, Gillam, & Peña, 2001; Swanson, Fey, Mills, & Hood, 2005). Retelling narratives provides information regarding salience of events, memory for structure, use of propositions, and cohesion devices in reconstructing a body of discourse (Ripich & Griffith, 1998). In addition, Roney (1996) found that story telling builds on oral language learning by connecting language to the structure, vocabulary, and comprehension required for later literacy skills. Further, Paul and Smith’s (1993) research with at-risk four-year-olds found that narrative skill is one of the best predictors of later school success. Abbott and McCarthey (2001) correlated literacy achievement in the first grade with well-structured oral narratives.

In addition to the influences story retell has on later language and literacy skills, Culatta, Page, and Ellis (1983) explained the feasibility of using story retell as a language screening tool. They determined that story retell tasks provide the opportunity to observe communicative performance beyond the information given on a standardized assessment tool. Further support that narrative language assessment provides relevant information beyond standardized
assessment tools comes from Gorman, Fiestas, Peña, & Clark (2011). They state that wordless picture books have become a leading context for narrative language assessment and intervention in clinical practice, due to expectations that cultural bias that is inherent in many other tasks is reduced in this structured context.

**Narratives: Story Generation Versus Story Retell**

There are two methods to elicit narratives from children. They can be asked to generate a narrative or to retell a story that they have already heard. A story is defined as a “fictionalized account of animals, people, and/or created beings that relate past, present, or future events that are not real” (Hughes et al., 1997, p. 358). A story could be generated or retold. In order for a child to generate a story, he must produce the story grammar elements and details of his own created story. A story retell task is one method to elicit a narrative that involves telling a child a story and having him/her retell the same story in his/her own words. Story generation and story retell can be used as tasks for both assessment and intervention in language skills.

Merritt and Liles (1989) stated that both story generation and story retelling are effective measures of narrative ability and both activate a cognitive organization consistent with story schema, despite the fact that retelling a story is often regarded as an easier task than story production. They suggested that story retelling is more clinically useful than story generation with older children for an assessment of story grammar ability because the narrative productions were richer and allowed for more complete assessment of syntax and story cohesion. They were also easier to transcribe because they followed the model of the story. They found that story retells contained more story grammar elements and were longer than generated stories. In addition, more complete episodes were included in story retells for both children with language impairments and children with typical language skills. Hesketh (2004) also found evidence
supporting the assertion that the retelling of a previously heard narrative is easier than producing an original novel narrative. This could be because retelling a story is more of a comprehension task than a generation task (Hansen, 1978).

Story retell activities have also been used as a measure of intervention outcomes. One example of structural scaffolding through dialogic reading was investigated by Lever & Sénéchal (2011). They examined whether a shared reading intervention (dialogic reading) would improve kindergartners’ narrative ability compared to children receiving an alternative treatment (phoneme awareness program). Children were presented with a pretest, the intervention, and a posttest. During the pre- and posttest, children were asked to retell a narrative from a script that matched pictures in a wordless book and produce a narrative for the wordless book. Four books were read to the children in the dialogic reading group in a small group setting over the course of eight weeks. While there were significant differences in the children’s performance based on whether they were in the dialogic reading group (children in the dialogic group included more story grammar units in their production narratives, mentioned more internal thoughts and emotions, and used more appropriate decontextualized language during the story production task than the children in the alternative treatment group), more pertinent to the current study are the results found in the production versus retelling part of the research. Children included more story grammar units for the retelling narratives than for the production narratives and included more mental state references in the retelling task than the production task. The authors report that the most significant finding of their study was that interactive shared reading significantly increased children’s inclusion of story grammar elements in both their productions and retelling of fictional narratives. Their results show that the knowledge of the construction of fictional narratives can be learned through interactive book reading.
Lever and Sénéchal (2011) argued that there is no consensus on the best paradigm to assess children’s narrative abilities. One reason for their stance is that there has been much variation in the literature about how those tasks are completed. In fictional narratives, the child is asked to retell a story that has been told orally, but the procedures (prompt, listener, time period, and presentation method) have differed greatly in past research. For example, there have been the following different approaches to story retell in the research: familiar listener (Merritt & Liles, 1989), naïve listener (Botting, 2002), retell based on a series of pictures or a picture book (Hesketh, 2004), retell based on a video (Merritt & Liles, 1989), and retell with no props (Ukrainetz et al., 2005). No consensus has been made regarding the best procedures for eliciting children’s narratives because each study investigated different outcomes.

Schneider and Dubé (2005) point out that children’s narrative performances may be affected by story presentation effects, explaining that “a child may be judged to have good storytelling skills with one type of presentation method but may be perceived as a poor storyteller if a different type of presentation is used” (p. 54). It could be expected then that retell conditions might also affect a child’s retell ability. It is important to investigate how children respond to a variety of story retell conditions. Perhaps, their performance on one task may not demonstrate their overall story retelling ability. In order to use children’s fictional narratives as effective assessment tools, it is imperative that the method that will elicit children’s best quality language output be determined.

**Narrative Analysis**

There are two levels on which narrative samples can be analyzed: the macrostructure level and the microstructure level. Analysis of the macrostructure level of fictional narratives includes examining the synthesis of main ideas that include the processing of meanings
throughout the narrative, including story grammar analysis. Microstructure analysis includes the smaller units that consist of the network of ideas sequenced into sentences, including vocabulary and cohesive devices (Gerber, 1993; Hughes et al., 1997). Beyond knowing the levels of how to analyze narratives it is important to know what components and linguistic structure should be evident in the narratives.

Lever and Sénéchal (2011) identified four specific components of narrative skills that represent different areas of narrative knowledge that allow a child to create a complete, cohesive narrative. These include knowledge about narrative structure, linguistic knowledge, contextual knowledge, and cohesion knowledge or use of connectives. They describe narrative structure as consisting of story grammar elements, such as introductions, setting, character descriptions, responses of the characters, initiating events, plans and attempts at conflict resolution, reactions to events, and conclusions (Stein & Glenn, 1979). It is also essential to know where to segment a child’s utterance in order to perform a narrative analysis. A spoken or written language sample is used for analysis of narratives. A communication unit (c-unit) has been defined as an independent clause with all its modifiers (Hughes et al., 1997). Loban (1976) used this term for analyzing both spoken and written language samples. Separating children’s narratives into c-units provides a definitive way to signal the end of an utterance in order to conduct a narrative analysis. Mean length of utterance of the c-unit (MLCU) can then be calculated to compare the length of utterances within the narratives of multiple children. Both of these measures are used not only in narrative analysis, but also in discourse analysis.

According to Lever and Sénéchal (2011), linguistic knowledge in narratives includes measures of language complexity that demonstrate a child’s ability to use language components within the narrative, such as total number of words, mean length of utterance (MLU), and total
number of different words spoken over the course of the narrative. MLU was first used as a measure of language complexity by Brown (1973) and has been recommended as one measure of language skills for young children (Eisenberg, Fersko, & Lundgren, 2001; Miller & Chapman, 1981). Contextual knowledge in narratives as defined by Lever and Sénéchal (2011), refers to the use of anaphoric reference including the use of pronouns. This is also considered a component of cohesion (Halliday & Hasan, 1976). Cohesion knowledge in narratives also includes the connective ties (conjunctions) a child uses in a narrative (Lever & Sénéchal, 2011). An additional measure of linguistic complexity that can be analyzed is the use of elaborated noun phrases, which are a measure of literate language development (Greenhalgh & Strong, 2001). Each of these measures will be discussed further.

**Story grammar.**

As previously described, the ability to produce narratives has been shown to be a strong predictor of later literacy acquisition and overall school success (Bishop & Edmundson, 1987; Catts et al., 2002; Catts et al., 2003; Dickinson & McCabe, 2001; Griffin et al., 2004; McCardle et al., 2001; Tabors et al., 2001). Other researchers have found that improving children’s ability to use story grammar effectively (through story retell activities) improves reading comprehension from kindergarten through high school (Duke & Pearson, 2002). Story grammar elements were originally defined by Stein and Glenn (1979), and they have been used frequently in clinical practice as a measure of narrative skills (Schneider & Dubé, 2005). The components that create a story grammar, as defined by Stein and Glenn (1979) and derived from their story grammar model, include: introductions, setting, character descriptions, responses of the characters, initiating events, plans and attempts at conflict resolution, reactions to events, and conclusions. The story grammar model provides a map of knowledge about stories that includes
relevant content that adults identify as essential to good stories. This is content that is typically included in the stories told by adults and older children (Stein & Policastro, 1984). Hughes, et al. (1997) define story grammar as an “overall thematic organization of a story in terms of causal and temporal relationships, including setting and episode structure (i.e. initiating event, internal response, plan, attempt, consequence, reaction)” (p. 358).

Schneider and Dubé (2005) discussed structural patterns and story grammar units as the two major components to the story grammar model. The overall content and organization of stories is described by structural patterns. A “complete episode” is the basic pattern that would be considered adequate for a story because it includes at a minimum the story grammar units of initiating event, attempt, and outcome. They further explain that “story grammar units are the categories of information that are typically provided in a certain order within episodes. They can be considered core story content that would typically be included in good stories” (Schneider & Dubé, 2005, p. 53). Initiating events, attempts, and outcomes are story grammar units that are usually included more often than others, such as units describing inner thoughts and feelings.

Story grammar analysis has been used in multiple presentation conditions, including oral retelling with no visual prompts (Stein, 1988; Stein & Albro, 1997; Stein & Glenn, 1979), film retell (e.g., Liles, 1987; Merritt & Liles, 1987), and formulation from pictures (e.g., Ripich & Griffith, 1988) in order to measure narrative content.

**Length and vocabulary diversity in narratives.**

The length of narratives has been analyzed by number of utterances (Lee, 1971; Miller, 1981) as well as by a time-sampling technique (Barrie-Blackley, Musselwhite, & Rogister, 1978; Miller, 1981). Total number of words also provides a comparative measure of narrative length and was chosen as the measure used for this study, since all children were retelling the same
story. Another measure that is used in analyzing narratives is the number of different words (NDW). This measure has been shown to be a promising quantitative measure of vocabulary diversity (Miller, 1981). Mean length of the c-unit can also be used as a measure of language complexity for young children that has been documented to show stable growth with development during ages 3 to 11 years (Hughes, et al., 1997).

**Cohesion in narratives.**

Cohesion in narratives is achieved through the use of linguistic features that connect sentences together to form a whole, coherent narrative. Cohesive markers are those words that tie pieces from multiple sentences to complete meaning. Halliday and Hasan, (1976) identified five types of cohesion: conjunction, reference, substitution, and ellipsis. Cohesion in a narrative can be analyzed by the number and variety of connective ties (i.e. pronouns and conjunctions) a child uses. Lever and Sénéchal (2011) refer to the use of anaphoric references, including pronouns as contextual knowledge, but it is also considered to be a component of cohesion. The conjunctions “and” and “then” appear relatively early and frequently in young children’s narrative productions (Gopnik, 1986). When analyzing conjunctions in children’s narratives, it is common to exclude the use of “and” and “then” since they appear so frequently (Hughes et al., 1997; Stadler & Ward, 2010). The conjunction “and” serves many discourse purposes, including indicating coordinate, temporal, and causal relationships. The word “and” is one of the most common words in English and can be used to connect almost any utterance. (Peterson & McCabe, 1988). The use of pronouns and conjunctions was not analyzed in the current study, but could be investigated in future research.

**Elaborated noun phrases.**
Elaborated noun phrases (ENPs) have been defined by Greenhalgh and Strong (2001) as noun phrases that have more than two modifiers preceding the noun (e.g., the great big bear) or that have qualifiers such as prepositional phrases or relative clauses following the noun (e.g., the boy with the blue shirt). When children use noun modifiers, they describe and add information about nouns and pronouns (Westby, 1994). This elaboration helps clarify meanings and allows listeners to build a mental model of the characters and objects in a story (Greenhalgh & Strong, 2001). Elaborated noun phrases are a measure of literate language development (Nippold, 1998, Perera, 1986). Preschoolers often produce only single modifiers in noun phrases and rarely produce noun phrases containing two or more modifiers (Current & Justice, 2004). The use of noun phrase elaboration increases during the school years.

Eisenberg et al. (2008) investigated the use of elaborated noun phrases in story generation tasks elicited with either a single picture or a sequence of five pictures. They found that the use of increasingly complex noun phrases developed with age in 5-, 8- and 12-year old children. While the productions of ENPs reflected language growth with age, the contexts used in this study (picture sequence versus single picture) also influenced the use of elaborated noun phrases. The sequence of pictures provided more support to the narrative structure than the single picture. These two contexts seem to have different results for ENP production. The single picture context promoted more noun phrase elaboration. However, the contexts differed in genre (the single picture depicted a fantasy scene of unusual creatures, while the picture sequence showed a realistic event), so it is impossible to know which variables resulted in the difference in noun phrase elaboration.

Stadler and Ward (2010) found a difference in noun phrase elaboration based on condition of context, suggesting that context might play a role in ENP production. They
investigated the use of props versus no props during story retell in two comparable kindergarten/first grade classrooms. One key finding was that there was a significant difference in the use of elaborated noun phrases (descriptive details) in the group with props. Elaborated noun phrases could not be statistically analyzed for the current study, because too few children included them in their narratives. This is an area that could be considered in future research with children older than preschool age.

**Gender Differences in Language and Literacy**

Gender differences in language learning have been examined over the past several decades (Buckner & Fivush, 1998; Hyde & Linn, 1988). In the 1970s and early 1980s, research supported differences in boys’ and girls’ language abilities (Denno, 1982; Halpern, 1986), but more recent research has argued that any gender differences that exist in verbal ability are small in magnitude and often attenuate over time (Hyde & Linn, 1988; Bornstein, Haynes, & Painter, 1998). Statistically, results of meta-analyses have shown that most differences that are found between boys and girls are in the zero to small effect range (Hyde, 2005).

Despite the controversial research about gender differences in language learning there are more recent studies that have continued to suggest that girls have better literacy skills than boys. The differences between girls’ and boys’ reading comprehension skills have been documented. (Logan & Johnston, 2009; Mullis, Martin, Gonzalez & Kennedy, 2003; Mullis, Martin, Kennedy & Foy, 2007). Logan and Johnston (2009) found that in addition to girls having better reading comprehension skills than boys, girls read more often and use library books more frequently than boys. When their results were split by gender, it was only boys’ reading comprehension that correlated with their attitude toward reading; whereas previous studies have assumed that this relationship would hold for both genders. The results of these studies investigating gender
differences in language and literacy skills have indicated that the gender differences have been shown to be small, but significant.

**Learning Modalities**

It has been suggested that there may be a difference in the modalities that help boys and girls learn (Gurian, 2011). Research has shown that preschool boys choose activities like playing with blocks and action figures; while preschool girls often choose activities that involve fine motor skills and verbal mediation (see Ruble, Martin, & Berenbaum, 2006). Further, research has indicated that boys have better visual-spatial abilities than girls (Gurian, 2011; Linn & Petersen, 1985; Maccoby & Jacklin, 1974; Wittig & Petersen, 1979). This visual-spatial awareness may lead to preschool boys’ primary interest in objects and manipulatives (like blocks and action figures). Because of that interest, props have been suggested as a means to facilitate language learning in preschool classrooms, especially for boys (Gurian, 2011). It is possible that the use of multiple modalities (such as using toy prop cues or picture-book cues, rather than no cues) will give boys more opportunity to become interested in the task and perform better.

Barnett and Irwin (1994) showed that students’ attitudes are negatively impacted by worksheets and direct instruction. They suggested using instructional methods that avoid those types of activities to more positively influence reading attitudes. It seems logical that presenting reading and retell opportunities in a variety of ways could help to increase boys’ interest in reading and also their ability to comprehend and retell the story.

**Gender Differences in Narratives**

Research on gender differences in autobiographical narratives and memory is more common (Buckner & Fivush, 1998; Thorne, 1995) than research that has examined the differences between boys’ and girls’ fictional narrative productions (Stadler & Ward, 2010).
Buckner and Fivush (1998) examined children’s (about age 7;6 years) autobiographical narratives of past experiences. They found gender differences in both the structure and content of the narratives. The girls’ autobiographical narratives were longer and contained more descriptive detail than the boys’ narratives. The girls’ narratives were also more cohesive, and contained more emotion and references to others. Although the girls’ narratives were overall more complex than the boys’, there were no language skill differences between the participants in this study on measures of grammatical development, vocabulary, and overall literacy skills. The authors suggest that these gender differences were attributed specifically to differences in the autobiographical narratives of boys and girls. In a study that investigated differences in American and Chinese children’s (ages 5:6 to 6:11 years) narratives generated from story stems, girls were again found to produce longer narratives than boys. Language skills were again equal, and no cultural differences were found in regard to narrative length. (Wang & Leichtman, 2000).

Von Klitzing, Kelsay, Emde, Robinson, & Schmitz (2000) investigated the content and structure of children’s play narratives. They used the MacArthur Story Stem Battery (MSSB) (Bretherton, Oppenheim, Emde, & the MacArthur Narrative Working Group (2003), which uses standardized, developmentally appropriate beginnings of stories to elicit relevant play narratives, in order to determine if there were correlations with behavior ratings. The children in this study were asked to “show and tell me what happens next” after being presented with a story stem that builds up to a dramatic high point or conflict. Narratives were collected from same-sex twins at five years of age. Boys told more aggressive narratives, while girls had more affection themes in their narratives. Once again, even when controlling for language skills (as measured by the verbal and full scale Wechsler Intelligence Scale for Children – 3rd edition (Wechsler, 1991) and
overall cognition, girls told more coherent narratives than boys. As these studies show, boys and girls may demonstrate differences in their narrative retells, despite having equal language skills.

**Picture Cues: Story Presentation and Retell**

The method of presenting a story for retell as well as the method for eliciting the retell may affect the sophistication of the story retell. There have been mixed findings about the benefit or hindrance of different types of presentation methods. Schneider and Dubé (2005) found that given different presentations of stories (spoken only, spoken combined with pictures, and pictures only), typically developing kindergarten and second grade children produced different numbers of story grammar units depending on the presentation method.

Griffith et al. (1986) discovered that the use of pictures during the presentation and during retelling seemed to affect the subjects’ (ages 7;0-12;6 years) assumption of the listener’s “need to know”. During the story retells, the subjects all used increased numbers of pronouns and conjunctions when pictures were present. Students did not provide story information that was represented in the pictures, even though the listener needed verbal information to fully understand the story. The youngest group with typical language skills (7;0-8;0 years) produced reduced amounts of information when pictures were present. They made more referent errors and omitted more events. It may be that pictures distract children when they are required to use language or it may be that the ability to realize the needs of a listener with no background knowledge about a topic develops along with language sophistication and/or age. More carefully controlled study of the effect of pictures is needed.

**Toy Prop Cues: Story Presentation and Retell**

Several studies have investigated the use of toy props in language and reading tasks, but the purposes of those studies were varied. The use of toy props during story book reading has
been recommended as a way to engage children with disabilities in active participation (Muselwhite & King-DeBaun, 1997; King-DeBaun, 1990; King-DeBaun, 1999).

Roy (2006) investigated differences between young children (ages 18-27 months) classified into a “high engagement group” and a “low engagement” group (as measured by a literacy attitude and behavior scale completed by the child’s caregiver) during storybook interactions with toy props. She found increased engagement with the use of toy props with children who had low engagement during shared book readings with their mothers, but she found that the addition of toy props in the high engagement group actually resulted in decreased amounts of verbal/vocal acts and gestures. It was speculated that the toy props were distracting for children who typically demonstrate a high frequency of active engagement during storybook reading. Perhaps, toy props are best suited for children who typically have a difficult time attending during storybook activities, but are not necessary for those children who do not have difficulty maintaining attention. Further research is needed across a variety of ages and abilities of children to make this determination, since the children in this study were quite young.

In a small sample of preschool children, Highnam, Raschke, and Kohler (2008) found that, for some children, detachable images in story books produced better mental engagement as measured by nonverbal participation, including sitting appropriately, looking at the book or related materials, looking at the teacher or another child who was discussing the story, or pointing to or manipulating materials related to the story, and verbal participation- directing a verbal comment about the story to the teacher or another student. They measured a percentage of engagement score for a sampling of children in their study and found that two of the four children had increased engagement when there were manipulatives (detachable images) present with the books. The other two children had similar engagement levels regardless of the
condition. Their study did not examine story retell or comprehension ability. The small sample size for which these calculations were made leaves unanswered questions about this research. The authors questioned whether the effect of using detachable images is predictable and also whether or not the detachable images would enhance story comprehension or story retell.

Newton (1994) investigated the retells of children (ages 4;0-6;0 years) with half of them listening to a taped story and the other half listening to a taped story while looking at a single picture. After listening to the story, the group of children who saw the picture was also given four objects. They were asked to arrange the objects to depict the final scene of the story. The results suggested that the designated picture helped the children include the specific story grammar element of “character goal” in their retells. However, he did not speculate on the role the objects played in the results, which leaves unanswered questions about the usefulness of props in story retell.

Similarly, Kaderavek & Justice (2005) analyzed four mother-child interactions during an at-home shared book reading program as a pilot study. Mothers of children (ages 4;0-5;6 years) were asked to complete three repeated readings of two target books (narrative-only or narrative + manipulative, i.e. “lift-the-flap” books) as they would typically read at home. The analyzed data consisted of spontaneous talk between the mothers and children during the book reading. The reading of the text was not considered part of the mother’s dialogue. The results showed that children produced significantly longer MLUs during the reading of the narrative + manipulative story book condition than those children in the narrative-only storybook condition. All four children asked more questions during the reading of manipulative story books. Kaderavek and Justice (2005) suggest that the child’s ability to participate (with unfolding pages or lifting flaps) provided an opportunity to encourage the child’s language output. Manipulative books or books
with added toy props may be a means to increase the interest of at-risk children, since physical participation may increase their interest and engagement in the book reading task (Justice & Kaderavek, 2002; Kaderavek & Sulzby, 1998). In addition, manipulative type story books (“lift-the-flap”, turn the dial, etc) may make book reading more “play-like” and reduce the directiveness of adult language output, which results in more child utterances, increased word variety, more word combinations, and increased child sentence length (Girolametto, Weitman, van Lieshout, & Duff, 2000).

Soundy & Gallagher (1993) found that four- and five-year-old children's story retellings had increased number of words and t-units when they used story props. Further, Kim (1999) found that children told more elaborate narratives during book related pretend play using props and in dramatic play than during storytelling alone. These findings show potential for increasing children’s ability to retell stories when toy props are added to the task, yet other studies have found conflicting results. Costume props were found to be beneficial in a limited sample of preschoolers in a study by Crowe, Haar, and Agne (2003). The props resulted in several students telling longer story retells and including more detail and greater vocabulary diversity. However, other children did not demonstrate any evidence of benefitting from having the props. Regardless, when they were allowed to practice retelling, all the children in the sample, showed improved results in length of story and comprehension. This suggests that repeated retellings, regardless of story retell condition might increase the quality of children’s retells.

Stadler and Ward (2010) investigated the use of props in two comparable kindergarten/first grade classrooms. Both classroom teachers read the same story to their students each week for eight weeks, but one teacher used miniature props while reading the story. The props were chosen to match key elements in each story (e.g. characters, problem, and
events). Children in both classrooms drew a story map for the book, as was established practice in their rooms, and all children had access to story grammar cue cards for visual clues for story grammar elements. The day following the teachers’ reading, a naive listener asked a group of students to practice retelling the story. The listener modeled the retellings (with or without the props, depending on the students) and asked the students to practice retelling the story. Throughout the rest of the week, props were available for student use to practice retells during free choice time. Stadler and Ward (2010) reported that the differences between lengths of story retell for the groups with and without the props were not significant. No significant differences between story grammar elements were found for the groups, but the number of story grammar elements included was significant for grade (first graders included one additional element). Descriptive analysis indicated that more pronouns and conjunctions were used by the group with no props. The authors suggested that the use of props may have kept the children focused on including the characters and events, but not on tying the story together. One other key finding was that there was a significant increase in the use of elaborated noun phrases in the group with props. This suggests that props were engaging and also provides support for the use of props by teachers to enhance the skill of using descriptive details. Overall, Stadler and Ward (2010) suggested that balanced literacy programs that sometimes use props and sometimes do not are the most beneficial to students. They also suggest using oral and visual stimuli other than props. There are two key differences in this study’s design compared to the current study. The design was developed as an intervention technique rather than an assessment technique, and the children in the experimental group could see the props during retells to serve as a reminder, but they were not permitted to handle them.

**Gender differences in story retell with props.**
Only one study was found that investigated gender differences with the use of props. Stadler and Ward (2010) reported significant differences in gender. Girls told longer stories and also used more clauses than boys. No significant differences for story grammar elements were found for gender.

Previous studies have found gender differences relating to narrative length, descriptive details, and overall story structure (Buckner & Fivush, 1998; Stadler & Ward, 2010; von Klitzing et al., 2000; Wang & Leichtman, 2000). Investigating the responses of preschool boys and girls with three different story retell conditions may illuminate some of these differences within a story retell context while providing direction as to which retell conditions (toy prop cues, picture-book cues, no cues) allow boys and girls to produce the best quality narrative.

Based on this literature review, two studies were completed that investigated narrative production within a story retell task. The purpose of the first study was to determine which condition (toy prop cues, picture-book cues, no cues) elicits the highest quality retell as measured by a) presence and sequence of story grammar elements, b) total number of words, c) number of different words, and d) MLCU. The purpose of the second study was to determine if there is a difference in the performance of boys and girls on each measure listed above under the three story retell conditions (toy prop cues, picture-book cues, no cues), and regardless of retell condition.
Chapter III

Children’s Story Retell under Three Cuing Conditions

Abstract

Purpose: This study investigated the story retells of preschool children with typical language skills under three retell conditions (toy prop cues, picture-book cues, no cues).

Method: A repeated measures design was implemented. A picture book was read to 29 preschool children (ages 4;6 to 5;6) three times over three weeks, and a naïve listener elicited story retells from the children under three conditions that were counter-balanced and randomized. Retells were analyzed by the researchers for presence and sequence of story grammar elements and by SALT software for total number of words, number of different words, and MLCU.

Results: Pictures cues resulted in significantly higher quality retells than the no cues condition on the measures of story grammar, total number of words, and number of different words. There was a significant difference between the number of story grammar elements in the picture-book cues and the toy prop cues conditions. There was no significant difference for MLCU.

Conclusion: The method of cuing used to elicit story retells from preschoolers can result in different language performance. Balancing the use of pictures and props is suggested.

Key Words: preschool, story retell, picture-book cues, props, story grammar, MLCU
Narrative production has been shown to be a strong predictor of later literacy acquisition and overall school success (Griffin, Hemphill, Camp & Wolf, 2004; McCardle, Scarborough, & Catts, 2001; Tabors, Snow & Dickinson, 2001). Hughes, McGillivray, and Schmidek (1997) defined a narrative as “oral or written discourse that relates real or fictional events that are temporally sequenced and convey meaning” (p.355). Five types of narratives have been documented in the literature: recounts, accounts, event casts, fictional stories, and scripts (Engel, 1995; Heath, 1986; Hughes et al., 1997). A story is defined as a “fictionalized account of animals, people, and/or created beings that relate past, present, or future events that are not real” (Hughes et al., 1997, p. 358). A story retell task is one type of fictional story narrative that involves telling a child a story and having him/her retell the same story in his/her own words.

Narratives help children to develop spoken language (Morrow, 1985) because telling narratives requires the use of more complex language than daily conversation, as well as specific vocabulary and a command of pronouns and connecting words (such as “when” and “so”) to effectively relate the narrative to a listener. Narrative skills are related to literacy skills because to convey the information in a narrative, a child must understand the structure of a narrative or story, consider other structural issues such as sequence and cause and effect, that occur in written text, and refer to abstract concepts and events that happened in the past (Hedberg & Westby, 1993).

Storybooks are one representation of the story form of narratives. Because research has documented the role that storybook interactions play in later literacy and academic skills of young children (Bus, 2002; Cunningham & Zibulsky, 2011; Lonigan & Whitehurst, 1998; Wells, 2009), narrative interactions using storybooks have been an important focus of education and speech-language pathology research (Bus, van Ijzendoorn, & Pellegrini, 1995; Snow, Burns, &
Griffin, 1998). Storybook reading has been shown to be a productive means to facilitate language skills and literacy growth (Justice & Piasta, 2011; Mol, Bus, de Jong, & Smeets, 2008). In addition, repeated storybook reading has been viewed as a contributor to children’s spoken language development (Snow, 1983) and has been shown to positively affect vocabulary development (Moerk, 1985), syntax (Snow & Goldfield, 1983), phonological awareness (Justice & Ezell, 2000), and decontextualized language use (Sulzby, 1985). One way that storybook reading has been used to facilitate language and literacy growth is through the use of story retell (Morrow, 1985).

Research has shown that active participation in literacy experiences enhances a variety of language and literacy skills, such as spoken language, comprehension, and overall awareness of story structure (Blank & Frank, 1971; Kaderavek & Justice, 2005). The opportunity to retell a story after having a storybook read aloud provides children an opportunity to practice spoken language and comprehension skills in an interactive manner with adults, as the adults ask questions about what happened and react to the story. In addition, educators have used story retell tasks to gain insight into specific aspects of children’s language (Kalmbach, 1986; Morrow, 1985; Pickert & Chase, 1978), but there are still questions about which methods of eliciting retell allow children to produce the highest quality narrative in response to a storybook (Lever & Sénéchal, 2011; Schneider & Dubé, 2005). Wordless picture books have been utilized to assess children’s language and literacy skills during fictional narrative productions. While preschool children are able to produce personal narratives, they tend to engage in isolated event description when producing fictional narratives (Berman, 1995). It has also been reported that children with typical language produce longer fictional narratives that contain more action sequences and multiple episodes than their personal narratives (Allen, Kertoy, Sherblom, &
Traditionally, in clinical settings, speech-language pathologists often ask children to retell a story without cues to assess language and literacy skills; however, the use of wordless picture books is a common research practice, suggesting that picture cues may be useful for eliciting a narrative. No related studies examining the use of no cues in story retell procedures were located.

The use of toy props during story book reading has been recommended as a way to engage children in active participation (Kaderavek & Justice, 2005; King-DeBaun, 1990; King-DeBaun, 1999; Musselwhite & King-DeBaun, 1997). Research has shown that active participation in literacy experiences enhances a variety of language and literacy skills, such as oral language, comprehension, and overall awareness of story structure (Blank & Frank, 1971; Kaderavek & Justice, 2005). Classroom activity guides (Sharp, 2005), online resources (Drake, n.d.; Drake, 2009), and childhood education guides (Soundy, 1993) provide information for teachers on using toy props as an effective tool for actively involving preschool and kindergarten children in story retells. While some studies suggest that props are beneficial in increasing the quality of narratives (Highnam, Raschke, & Kohler, 2008; Kaderavek & Justice, 2005; Kim, 1999; Soundy & Gallagher, 1993; Stadler & Ward, 2010), others state that the addition of manipulatives could be distracting, and actually reduce the quality of a storybook interaction (Roy, 2006) or have no influence on story retell (Crowe, Haar, & Agne, 2003).

Researchers who have investigated the quality of story retells as a result of retell condition have examined narrative length, story grammar elements, number of t- or c-units, mean length of utterance of t- or c-units, vocabulary diversity, literate language measures (use of mental and linguistic verbs, conjunctions, elaborated noun phrases and adverbs), and correct use of pronoun reference (Crowe et al., 2003; Newton, 1994; Soundy & Gallagher, 2003; Stadler &
Ward, 2010). There have been mixed findings regarding the effect of different retell prompting methods on narratives produced by children with typical language.

Benefits of using toy props in story retells have been reported, but the variety of conditions under which the props were used make it difficult to generalize the findings. Soundy & Gallagher (1993) investigated children’s retells of several story books with no cues and with props. An adult read a story and asked children to immediately retell the story with no cues. After the children finished, the adult then retold the story with props and had the children do the same. They found that the story retellings of 4- and 5-year-old children with typical language skills had increased number of words and t-units when they used the story props, but they did not investigate the influence of the repeated readings or the different story books that they used. Kim (1999) also found that 4- to 5-year old children with typical language skills included more complex story structure during the retell of a story when using props for book-related pretend play than during retelling with pictures. Measures of story grammar, vocabulary, and narrative length were not reported.

Stadler and Ward (2010) investigated the use of props during story retells in one kindergarten and one first grade classroom. Both teachers read the same stories to their students, but one teacher used miniature props while reading the stories. The props were chosen to match key elements in each story (e.g. characters, problem, and events). The children practiced retelling the story with or without props, depending on the group. The difference between the number of story grammar elements and between the length of the story retell in the prop and no-prop condition was not significant. The authors suggested that the use of props may have kept the children focused on including the characters and events, but not on tying the story together. One other finding was that the group with props used significantly more elaborated noun
phrases. This suggests that props were engaging and also provides support for the use of props by teachers to enhance use of descriptive details.

While these studies have reported beneficial findings for the use of props, other research has shown different results. Crowe et al. (2003) reported mixed results about whether props are beneficial to children’s retells. In a limited sample of four preschoolers, costume props resulted in several children producing longer story retells and including more detail and greater vocabulary diversity; however, other children did not demonstrate evidence of benefitting from the props. Regardless, when they were allowed to practice retelling, all the children in the sample had improved retells in regard to length of the story and comprehension. This suggests that repeated retells, regardless of story retell condition might increase the quality of children’s retells. Newton (1994) investigated the retells of preschool children (4-6 years old), with half of them listening to a taped story and the other half listening to a taped story while looking at a single picture. After listening to the story, the children who saw the picture were given four objects and were asked to arrange the objects to depict the final scene of the story. The results suggested that the designated picture helped the children include the specific story grammar element of “character goal” in their retells. However, the researcher did not speculate on the role the objects played in the results, which leaves unanswered questions about the usefulness of props in story retell.

One investigation from a shared reading context provides further support for using props during story retell. Kaderavek & Justice (2005) found that children produced significantly longer MLUs during the reading of a narrative + manipulative story book (i.e. “lift-the-flap”) condition than those children in the narrative-only storybook condition during an at-home shared book reading program. All children asked a larger number of questions during the reading of
manipulative story books. The authors suggested that the opportunity to participate (unfolding pages or lifting flaps) encouraged the child’s language output. Toy props may provide similar opportunity for children to engage motorically in the shared reading experience. Manipulative books or using toy props with books may be a means to increase the interest and engagement of at-risk children, resulting in changes in language output during a retell task (Justice & Kaderavek, 2002; Kaderavek & Sulzby, 1998). While some research suggests potential for increasing children’s story retell skills when toy props are added to the retell task, there are conflicting results.

The use of story retell narratives is prevalent in both intervention and assessment tasks for children’s language and literacy skills; therefore, it is important that the results of various types of elicitation and the most effective means for collecting children’s best narratives are documented. The aim of the current study was to examine the influence of toy prop cues, picture-book cues, and no cues during story retells from preschool children with typical language development.

Language Analysis

Lever and Sénéchal (2011) identified four specific components of narrative skills that represent areas of narrative knowledge that enable a child to create a complete, cohesive narrative. These include knowledge about narrative structure, linguistic knowledge, contextual knowledge, and cohesion knowledge. They describe narrative structure as consisting of story grammar, including introductions, settings, character descriptions, responses of the characters, initiating events, plans and attempts at conflict resolution, reactions to events, and conclusions (Stein & Glenn, 1979). According to Lever and Sénéchal (2011), linguistic knowledge is indicated by measures of language complexity that demonstrate a child’s ability to use language
within the narrative, such as total number of words, total number of different words spoken over the course of the narrative, and mean length of utterance (MLU). Contextual knowledge refers to the use of anaphoric references, including pronouns. Cohesion knowledge is indicated by the number and variety of connective ties (conjunctions) a child uses in a narrative (Halliday & Hasan, 1976; Lever & Sénéchal, 2011). Conjunctions typically counted in narratives include those other than “and” and “and then”, because “and” is used by children frequently and serves many discourse purposes, including indicating coordinate, temporal, and causal relationships. It can also be used to connect almost any utterance (Peterson & McCabe, 1988) and is often used as a filler to continue talking rather than to demonstrate meaningful relationships. An additional measure of linguistic complexity is the use of elaborated noun phrases (ENPs). ENPs can contribute to the demonstration of literate language development because they can be used for specific descriptions of characters and objects (Pellegrini, 1985), and help the child provide the listener with a mental model of the story (Greenhalgh & Strong, 2001). ENPs become more prevalent as children progress through school (Nippold, 1988), whereas preschoolers often produce only single modifiers in noun phrases and rarely produce noun phrases containing two or more modifiers (Current & Justice, 2004). These components have been used to analyze and provide a comparison measure for children’s narrative productions (Lever and Sénéchal, 2011; Stadler & Ward, 2010).

Lever and Sénéchal (2011) argued that there is no consensus regarding the best paradigm to assess children’s narratives. One reason is that there has been much variation in the literature about how those tasks are completed. In fictional narratives, the child is asked to retell a story that has been told orally, but the procedures (prompt, listener, time period, and presentation method) have differed greatly in past research. The following are different conditions that have
been used in story retell research: familiar listener (Merritt & Liles, 1989), naïve listener (Botting, 2002), retell based on a series of pictures or a picture book (Hesketh, 2004), retell based on a video (Merritt & Liles, 1989), retell with no prop cues (Ukrainetz et al., 2005), and retell with props (Soundy & Gallagher, 1993; Stadler & Ward, 2010). It is difficult to draw general conclusions about children’s narrative abilities within these contexts because the researchers measured different outcomes. In order to use children’s fictional narratives as effective assessment tools, it is important that the method that will elicit children’s best language output be determined.

**The Current Study**

Because story retell is a common practice for eliciting fictional narratives for the purpose of language assessment, when gathering language samples for speech-language assessment, it is important to know that the sample represents the child’s language. Misdiagnosis of a language problem is possible if children do not demonstrate their best or typical language skills during the assessment. Researchers have examined language and story structure analyses from a variety of narrative tasks, but none have reported findings comparing the effects of retell conditions on story retell when the presentation method is controlled. Despite the fact that story retell tasks are a common practice among speech-language pathologists and educators, it is unclear which is the most effective means to elicit story retells, in which children best demonstrate their language skills. The purpose of this study was to investigate the effects of three retell conditions on children’s retells of a story from a storybook. The three conditions include 1) retelling the story with toy prop cues that relate to the story, 2) retelling the story with picture-book cues, and 3) retelling the story with no cues. The research question was:

Is there a significant difference among the story retells of typical children when they are
asked to retell a story under three different conditions (toy prop cues, picture-book cues, and no cues) as measured by: a) presence and sequence of story grammar elements, b) total number of words, c) number of different words, and d) MLCU?

**Method**

**Participants**

After receiving approval from an Institutional Review Board, participants were recruited from Head Start and childcare/preschool programs through the use of flyers hung at the participating sites, and a cover letter explaining the research project and consent forms that were given to teachers to distribute to parents of the children in their classrooms. Teachers sent the letters and consent forms home and/or asked parents to sign them when they dropped off or picked up their children. Parents signed consent forms indicating that their child/ren could participate in the research process, and each child participant indicated consent on an assent form. In addition, parents and children provided permission for video recording the child during the reading and retelling tasks. To ensure that the children had not been repeatedly exposed to the selected book, the parents were asked about the level of familiarity their child had with the selected book on the parental consent form. Any child who was familiar with the book was not included in the study.

Parental consent and child assent was received for 48 total children. All of the children were administered the *Preschool Language Scale Fourth Edition-Screening Test (PLS-4 Screening Test)* (Zimmerman, Steiner, & Pond, 2005), and 37 children passed. Eleven did not pass the screening test and were administered the *Preschool Language Scale-Fourth Edition (PLS-4)* (Zimmerman, Steiner, & Pond, 2002). Four of these children demonstrated typical language skills, as defined by standard scores above 85 on the Total Language score. Seven
children failed the screening and had a Total Language score below 85 on the PLS-4, and were not included in the study. The PLS-4 was chosen instead of the Preschool Language Scale-5 (Zimmerman, Steiner, & Pond, 2011) due to the reduced administration time of the PLS-4 (20-45 minutes as opposed to 50-60 minutes). Eleven children were lost to attrition throughout the study.

The participants for the project included 30 children with typical language skills. One child’s data could not be transcribed due to poor video quality; therefore, 29 participants were included in the data analysis. The participants were 4 years, 6 months to 5 years, 6 months in age. They were enrolled at a head start, day care, or preschool program that agreed to allow recruitment of subjects and use of space for research activities. There were 16 male and 13 female children. The participants were a mix of ethnicities (Caucasian, African American, and Hispanic); all participants spoke English as their primary language. No other exclusionary criteria were established; however, no subject presented with any observable or reported disability.

**Training of Research Assistants**

The research team was comprised of the primary investigator (PI) and four graduate and four undergraduate students who served as research assistants. The research assistants were trained to act as naïve listeners during the story retell tasks. At a training session before the research began, they listened to each other retell the story and made comments following the guidelines of the script (Appendix A). All of the research assistants performed with at least 90% accuracy for script fidelity during the training procedure for acting as a naïve listener. This was calculated by determining the number of times they responded using the script compared to everything they said. The PI observed the research assistants listening to each other and
practicing the prompts on two occasions to ensure that they maintained script fidelity. The research assistants were provided with a copy of the script during data collection, and their performance during the data collection process was monitored via video recordings. They performed with at least 90% accuracy for script fidelity during the data collection retells as calculated by determining the number of times they responded using the script compared to everything they said.

Data Collection

The readings and retells took place in a quiet location provided by each of the participating facilities. The child sat beside the researchers at a table as the story was being read and as he/she was completing the story tell. There was enough space for the child to use the picture-book cues and toy prop cues on the table to complete the retell for these two conditions. The primary investigator read the book to the children using a fidelity–to-script model. This included reading the text from the book and asking only text-to-life and yes/no questions to encourage child engagement, while ensuring that the readings of the book were as standardized as possible. The research assistants acted as naïve listeners for the story retell and were trained to make specific comments throughout the children’s story retells, including “uh huh”, “oh really”, and “tell me more” to indicate interest and encourage the children to keep going during the retell. Additional comments and questions (e.g. “can you tell me one thing you remember about the story?”) were used when a child did not respond to the initial prompt, “Tell me about the story you just read with (investigator’s name)”. When the child stopped talking, the research assistants asked, “Is that the end?” to ensure that the child had completed the retell task to his/her satisfaction (see Schneider, 1996, Schneider & Dubé, 2005). See Appendix A for scripts for the primary investigator and the research assistants.
The investigator and research assistants met one on one with each participant three times, one time per week for three weeks for approximately 20 minutes each week. The storybook, *It’s the Bear!* (Alborough, 1994), was read to the children by the primary investigator during each meeting. The children were asked to retell the story to an unfamiliar listener (a research assistant) who was not present when the book was being read to the children. A different research assistant was present each time a child completed the retell in order to have a naïve listener each time. The child was given a different condition (toy prop cues, picture-book cues, and no cues) each time he/she was asked to retell the story. The order of presentation of the cues was counter-balanced, and each sequence was randomized across subjects.

For each condition, the investigator read the story and then told the child, “Now you will tell the story to my friend (research assistant’s name). Tell him/her everything you remember.” For the toy prop cues condition, the children were presented with access to the prop cues after the story was read. The prop cues were presented to the children along with the question “what is this?” to ensure they made the connection between the story and each prop after the reading of the story. If the child did not recognize a prop in relation to the story, they were told what it was. (“Here’s the bear, the boy, the boy’s teddy bear, the mom, the picnic basket, and all the food”). They were asked to “tell the story to my friend (research assistant’s name) using the toys I just showed you. Tell him/her everything you remember”. For the picture-book cues condition, the children were presented with a duplicate copy of the storybook with the words covered after hearing the story. They were asked to “use the pictures to tell my friend (research assistant’s name) the story we just read. Tell him/her everything you remember”. During the no cues condition, the children listened to the story and were asked to tell the research assistant the story “just from your head. Tell him/her everything you remember.”
Book/prop selection.

The storybook, *It’s the Bear!* (Alborough, 1994), that was chosen for the tasks was age appropriate for children ages three and up and has been shown to be appealing to children (see Kaderavek & Justice, 2005). The selected props (a bear, the bear’s teddy bear, a boy, the boy’s teddy bear, a mom, a picnic basket, and relevant plastic food items) reflected the important components of the story. They were purchased through a variety of online toy stores. This technique was chosen, rather than selecting a book with a pre-made kit of props, in order to keep the method as authentic as possible, since that is how speech-language pathologists likely perform this task in clinical settings (see Soundy, 1993).

Book analysis.

The Systematic Analysis of Language Transcripts (SALT) (Miller, 2012) was used to calculate complexity measures of the book. They are as follows: 49 total utterances, 6.65 MLU, and 148 different words. The book also had 29 pages and 4 characters. The primary investigator and two research assistants independently determined the story grammar components for the selected book. Following that, total agreement regarding story grammar elements of the story was reached through discussion. The complete story grammar analysis is available in Appendix B. The researchers agreed that some of the story (and story grammar units) are portrayed within both the text and the pictures in the book. Some are portrayed only within the text, and some only within the pictures. Therefore, the story grammar analysis includes in parentheses those elements which are shown in pictures, but are not explicitly stated in the text.

Data Analysis

Each participant was videotaped during the readings and retells, and their retells were
transcribed orthographically. Only relevant components of the narratives that related to the story book were analyzed to eliminate influencing the total number of words and number of different words. All other utterances (off topic comments and statements like, “I can’t remember”) were coded as comments in the transcriptions and were eliminated from analysis. Loban (1976) used the term communication-unit in both spoken and written narratives to refer to an independent clause with all its modifiers. The children’s utterances were divided into communication units (c-units) in the transcriptions in order to maintain a consistent place to terminate an utterance for the narrative analysis. Story items that a child listed were transcribed all on one line and counted as one utterance, even though they were not a c-unit by definition (included no independent clause). At least two research assistants and the investigator listened to the recordings as many times as necessary to reach total agreement about the transcription of the children’s utterances. The investigator and research assistants analyzed the transcripts for presence and sequence of story grammar elements and number of elaborated noun phrases (ENP). Measures of cohesion and contextual knowledge were not included in the analysis because the participants were preschool age children. The following were analyzed from the transcripts by SALT (Miller, 2012): total length of retell measured by total number of words, number of different words, and MLCU. Elaborated noun phrases were not included in the results because only ten children used them, and statistical analysis could not be completed.

**Scoring of story grammar elements.**

Story grammar elements were analyzed based on a modified version of the analysis used by Lever and Sénéchal (2011), and guided by definitions provided by Hughes et al. (1997). Lever and Sénéchal (2011) created a scoring scheme for a retell task based on the *Edmonton Narrative Norms Instrument (ENNI)* (Schneider, Dubé, & Hayward, 2002), a storytelling
assessment tool for children ages four to nine years. They coded 12 story grammar units including: formal beginning statement (such as a cliché story opening like “Once upon a time” or “One day”), informal beginning statement (the use of an opening phrase that is not a cliché, but is outside the timeline of the story), character, setting, initiating event, internal response, internal plan, attempt, outcome, reaction of the character, formal closing statement (such as a cliché story ending like, “The end” or “They lived happily ever after”), and informal closing statement (a statement that is not a cliché but summarizes the story). They assigned each element one point except for initiating event, attempt, and outcome, which were given scores of two because they are considered to be “essential to the creation of a good story that is meant to convey a plot” (Lever & Sénéchal, 2011, p.7).

In this study, characters, setting, initiating event, internal plans, attempts, consequences, resolution, and ending were coded as the story grammar elements. Each element included received a score of one. Children were given credit for the element of “character” if they used names or pronouns to refer to the characters in the book. Schneider and Dubé (2005) discussed structural patterns and story grammar units as the two major components of the story grammar model. The overall content and organization of stories is described by structural patterns. A “complete episode” is the basic pattern that would be considered adequate for a story because it includes at a minimum the story grammar units of initiating event, attempt, and outcome. Beyond story grammar elements, each complete episode (consisting of plan, attempt, and consequence) received one additional point, and another additional point was given for including story elements in sequence if the children provided at least five story elements in order. The total points possible for story grammar elements in the book was 27. A detail of the points can be seen in Table 1.
Reliability

The investigator and at least two research assistants completed the data transcription and analysis procedures together for each story retell. Total agreement was reached for each story retell transcription. The investigator and at least two research assistants analyzed each transcript to obtain a total number and sequence of story grammar elements, with points assigned as described above. Total agreement was reached on the measures (with further discussion occurring on 6% (5/87) of the transcripts). Test-retest reliability for word by word transcription was performed on 10% of randomly selected transcripts with 98% agreement. Inter-rater reliability on 10% of randomly selected transcripts was 92%.

Results

Story Retell Conditions

This study examined the story retells of preschoolers under three conditions (toy prop cues, picture-book cues, and no cues). Because each child retold the same story three times, once for each condition, a repeated measures analysis of variance (ANOVAs), with an overall alpha level of .05 was conducted for the four dependent variables to determine the potential relationship between repeated retells and condition. While the children showed improvement with each retell, there was no significant interaction, $F(8,21) = .870, p = .556$, which indicates that there was no significant relationship between repeated retells and condition. The counter-balancing of the order of conditions was effective in eliminating potential bias based on repeated practice of the retell task.

The research question asked whether there were differences among story retell conditions (prop cues, picture-book cues, and props) on a variety of measures when controlling for gender differences. The outcomes were found to be highly correlated ($r = 0.84-0.95$) with one another,
which would have influenced the results of a multivariate analysis of variance. Therefore, four separate repeated measures analyses of variance (ANOVAs) were conducted with an overall alpha level of .05 to examine the differences among conditions for the following measures: story grammar elements, total number of words, number of different words, and MLCU. The compound symmetry covariance structure was utilized in the repeated measures mixed models since it provided the best fit based on the overall lower AIC values. There is a slight degree of over-dispersion due to the presence of zero scores; however, since it affects less than 15% of the data there is no commonly used statistical method to account for this. Results of the ANOVAs showed significant main effects for story grammar, $F(2,56) = 8.93, p = .0004$; total number of words, $F(2,56) = 5.41, p = .0071$; and number of different words, $F(2,56) = 6.07, p = .0041$. There was no significant main effect for MLCU, $F(2,56) = 0.57, p = .569$. Pairwise follow-up comparisons using the Bonferroni correction (adjusted alpha level of .0125) were calculated for each condition. The post hoc analysis revealed that the picture-book cues condition was related to significantly greater outcomes than the no cues condition for measures of story grammar ($p = .0001$), total number of words ($p = .0020$), and number of different words ($p = .0010$). The picture-book cues condition was related to significantly higher scores than the toy props condition only on the measure of story grammar ($p = .0122$). There was no significant difference on the measure of MLCU, for any conditions and there were no significant differences on any measure for the toy prop cues and no cues conditions. Table 2 presents means and standard deviations for each measure and condition.

**Discussion**

The statistical results of this study show that the picture-book cues condition elicited higher quality retells than the no cues condition, based on the measures of story grammar, total number
of words, and number of different words and also elicited a greater number of story grammar elements than the props condition. The toy prop cues condition and the no cues condition did not elicit significantly better responses than the other conditions for any of the measures. The mean length of utterance of c-unit (MLCU) was not significantly affected by the condition of the story retell. Since there was no difference between any measure except story grammar in the picture-book cues condition and in the toy props condition, and no difference between any measure in the toy prop cues and no cues conditions, it is difficult to draw conclusions regarding which of these two conditions (toy prop cues, no cues) might elicit the best quality fictional narratives from children.

The picture-book cues condition appeared to be most effective in eliciting higher quality language from preschool children as performance was better than the other two conditions on one measure, story grammar, and better than no cues on two additional measures, total number of words and number of different words. The picture-book cues support the inclusion of story grammar elements because they provide structure for the retell by illustrating individual story events and the sequence of the entire story. Although the prop cues condition provided prompts to characters and objects in the story and hints for the events, they were not as effective in helping children remember story grammar elements as the picture-book cues. In comparison to the pictures which were integrated into the story book, sequenced to represent the story, and provided a more illustrative “picture” of the events in the story, the toy props were decontextualized from the storybook. While the pictures clearly demonstrate the actions and events of the story, the children must connect the props to the actions and events in order to tell the story. Picture-book cues helped children tell longer narratives than the no cues condition because the visual cues of the pictures helped structure the children’s retells. They did not have
to rely on their memory to complete the task. The picture-book cues condition did not elicit longer narratives than the toy prop cues condition. Although the picture-book cues helped children remember specific story grammar elements, the toy prop cues may have engaged the children and encouraged them to talk about the toys while playing with them without referring to specific story grammar elements.

The picture-book cues condition also elicited more varied vocabulary than the no cues condition as measured by number of different words. Having the entire story in pictures influenced the vocabulary the children used because they had pictures that prompted the words to be used in the retell. They could look at the pictures and name the events and items in the story. Some children remembered specific words from the text during the picture-book cues condition as they were prompted by looking at the actual pages that had been read to them. The pictures prompted them, not only to talk about what they saw in the pictures, but also to remember things not pictured. For example, at the beginning of the story, they saw the mom looking into the picnic basket which prompted them to remember that she had forgotten the pie. At the end of the story, they saw the bear eating the pie and were prompted to remember the words that accompany that page in the book, often stating “yum, yum” from the story text.

While picture-book cues elicited a wider range of vocabulary than no cues, the picture-book cues did not elicit a significantly larger vocabulary than the toy prop cues conditions. The items provided as props appeared to serve the same purpose as the pictures in the book, reminding children of characters, actions, objects and events in the story. For example, seeing the character figures and the picnic food reminded them of those words in the book and prompted them to include those items as well as words to describe events in their narratives. Children often used specific labels for characters and objects when they were using the picture-book cues and toy
prop cues.

In contrast to the picture-book cues encouraging significantly higher language measure scores than no cues, the toy prop cues condition was not found to elicit significantly different performance than the no cues condition on any measure, although the scores for the toy prop cues condition were higher than the scores for the no cues condition on every measure. Stadler and Ward (2010) also did not find a difference between inclusion of story grammar elements under the toy props and no cues conditions, but they, as well as Soundy & Gallagher (1993) found that children produced longer narratives with prop cues when they watched an adult model the story with the props, and then the child repeated the task. The scaffolding to produce longer narratives may have resulted from the adult modeling as opposed to the prop cues. Children in the current study tended to provide longer narratives with the toy prop cues condition than the no cues condition, but the difference was not statistically significant.

There was also no significant difference between the number of different words during the toy prop cues and no cues conditions. In the toy prop cues condition, children used more specific labels for the props, such as for characters (e.g. boy, mom) and food items (e.g. bread, chips, pie) that were represented by the toys. In the no cues condition, the children used vague terms for the characters (e.g. everybody) and food (e.g. stuff). While these words may have been counted as different words, the measure is not sensitive to the kind of vocabulary being used. The children’s labels were more specific and informational with toy props. Previous research by Crowe et al. (2003) with four children found that some children used more varied vocabulary with prop cues, but that others did not. Stadler and Ward (2010) did not investigate this measure.

The three story retell conditions did not elicit differences among the mean length of communication units in the children’s narratives. Kaderavek and Justice (2005) found that when
a small sample of children participated in shared story book reading with a manipulative component, they had significantly longer MLU than when there was no manipulative component. This was a repeated shared reading experience rather than a retell task. The authors suggested that the opportunity to participate during the shared reading experiences encouraged language output. For the current study, the children’s narratives were produced with limited interaction from the naïve listener, and the children were asked to produce their story retells independently. The measure of MLCU in this context may better reflect the children’s developmental levels without verbal prompting rather than the effects of the different story retell conditions. Because MLCU is a developmental language measure that reflects grammar in preschool children, it is not likely to be affected by the amount of information included in a retell, understanding, or interest in the story, but instead reflects the child’s syntactic development. This representation of development is unlikely to be affected by a condition because it is a stable measure of the children’s syntax. The children in this study produced similar c-unit lengths because they had typical language skills and were of similar age.

Limitations and Future Research

Factors that limit the application of the results of this study include adherence to the conditions of retell and possibility relevant variations among the children. While the research assistants performed with 90% reliability for script fidelity, there was some variation in the prompting given by the research assistants to the children in order to elicit responses for the other 10%. The research assistants were given a script to follow, but they used their own judgment about what they said when the prescribed prompts did not elicit a response from the children during the story retell tasks. The variations in prompting could have encouraged some children to say more than others.
The standard deviations for all the measures were very high due to individual variation. This was caused by some children being unwilling or not remembering enough to produce a narrative. Those children received zero scores on each measure in that condition. The amount of variability for these findings makes accurate interpretation difficult. Parents provided information about their child’s exposure to the selected book, but preschool teachers were not asked about that information. It is possible that some children were familiar with the story book from classroom exposure, although the parents reported no familiarity. Information about family ethnicity, culture, parental education level, and socio-economic status was not collected. It would be worthwhile to consider these factors in future research to examine potential relationships among these factors, and retell condition. Gorman, Fiestas, Peña, and Clark (2011), found significant differences among the retells of first and second grade children from different cultural groups, including African-American, Latino American, and Caucasian children, on measures of creative and stylistic devices included in their storybook narratives. Further questions remain about what age children use elaborated noun phrases in their fictional narratives and if their use is related to retell condition, as was reported by Stadler and Ward (2010) for older children. It is important to continue this investigation with children with language impairment to determine if they respond differently to the three conditions (toy prop cues, picture-book cues, no cues) in story retell tasks.

A further consideration for investigating the use of cues is to offer both props and picture book cues so that children have the opportunity to use both in their retells or choose one or the other. This study used picture books to examine the effect of picture cues. Investigating picture cues outside of a book context (in both a sequenced and non-sequenced order) may provide further insight into how children benefit from cues in their retellings.
Clinical Implications

These findings can aid the understanding of how educators can elicit the best quality fictional narratives from preschool children. They suggest that depending on the language measure being assessed (story grammar elements, narrative length, or vocabulary included in the narrative) it might be best to choose a specific retell condition to administer a retell task. Picture-book cues were better than no cues for eliciting story grammar units, longer narratives, and more varied vocabulary, but toy prop cues and picture-book cues elicited similar narrative lengths and specific vocabulary. These results support the findings from Stadler and Ward (2010) that balanced literacy programs that sometimes use props and sometimes do not are the most beneficial to children. In order to fully assess children’s fictional narratives, it might be best to use both the picture-book cues condition and the toy props condition for all measures. Using spoken and visual stimuli in addition to props seems to be the best choice for eliciting high quality fictional narratives from children.
References


Table 1

Distribution of Points and Total Points for Story Grammar Elements

<table>
<thead>
<tr>
<th>Story Grammar Element</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters (bear, boy, mom, teddy)</td>
<td>4</td>
</tr>
<tr>
<td>Setting (picnic, woods, scared)</td>
<td>3</td>
</tr>
<tr>
<td>Initiating event</td>
<td>1</td>
</tr>
<tr>
<td>Plan1, attempt1, consequence1</td>
<td>3</td>
</tr>
<tr>
<td>Plan2, attempt2, consequence2</td>
<td>3</td>
</tr>
<tr>
<td>Attempt3, consequence3</td>
<td>2</td>
</tr>
<tr>
<td>Attempt4, consequence4</td>
<td>2</td>
</tr>
<tr>
<td>Attempt5, consequence5</td>
<td>2</td>
</tr>
<tr>
<td>Attempt6, consequence6</td>
<td>2</td>
</tr>
<tr>
<td>Resolution</td>
<td>1</td>
</tr>
<tr>
<td>Ending</td>
<td>1</td>
</tr>
<tr>
<td>2 complete episodes</td>
<td>2</td>
</tr>
<tr>
<td>Correct sequence</td>
<td>1</td>
</tr>
<tr>
<td>Total points</td>
<td>27</td>
</tr>
</tbody>
</table>
Table 2

*Means and Standard Deviations for Measures Under Each Condition*

<table>
<thead>
<tr>
<th></th>
<th>Story Grammar</th>
<th>Total Number of Words</th>
<th>Number of Different Words</th>
<th>MLCU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Toy Prop Cues</td>
<td>8.93</td>
<td>4.47</td>
<td>96.14</td>
<td>70.48</td>
</tr>
<tr>
<td>Picture-book Cues</td>
<td>11.62</td>
<td>6.76</td>
<td>111.28</td>
<td>82.29</td>
</tr>
<tr>
<td>No Cues</td>
<td>7.28</td>
<td>5.20</td>
<td>66.59</td>
<td>51.58</td>
</tr>
</tbody>
</table>
Appendix A

Scripts for Story Telling and Story Retelling

Comments Used by Story Teller When Telling the Story to the Children

Have you ever been on a picnic?

Do you have a teddy bear?

Would you be scared?

Comments Used by Naïve Listener During Story Retelling by the Children

Uh, huh.

Oh really?

Tell me more.

Tell me what happened in the story.

Tell me one thing you remember that happened in the story.

Is that the end? (when child stops talking)
## Appendix B

### Story Grammar Analysis for *It's the Bear!* (Alborough, 1994)

<table>
<thead>
<tr>
<th>Story Grammar Element</th>
<th>Reference from the Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characters/Setting</strong></td>
<td>Eddie doesn’t want to come and picnic in the woods with Mom. “I’m scared,” he said, “about the bear, the great big bear that lives in there.” “A bear?” said Mom. “That’s silly, dear! We don’t get great big bears around here.” “There’s just you and me and your teddy, Freddie. Now let’s all get the picnic ready.”</td>
</tr>
<tr>
<td><strong>Initiating Event</strong></td>
<td>“We’ve got lettuce, tomatoes, and cream cheese spread, with hard-boiled eggs and crusty brown bread. There’s orange juice, cookies, some chips, and OH MY! I’ve forgotten to pack the blueberry pie…”</td>
</tr>
<tr>
<td><strong>Plan 1</strong></td>
<td>“I’ll dash back and get it,” she said. “Won’t be long.”</td>
</tr>
<tr>
<td><strong>Attempt 1</strong></td>
<td>“BUT MOM!” gasped Eddie…Too late- SHE HAD GONE!</td>
</tr>
<tr>
<td><strong>Consequence 1</strong></td>
<td>He sat on the basket and tried not to cry. Then…”I can smell food!” yelled a voice from nearby.</td>
</tr>
<tr>
<td><strong>Plan 2</strong></td>
<td>“IT’S THE BEAR,” cried Eddie. “WHERE CAN I HIDE?”</td>
</tr>
<tr>
<td><strong>Attempt 2</strong></td>
<td>Then he opened the basket and clambered inside.</td>
</tr>
<tr>
<td><strong>Consequence 2</strong></td>
<td>Out of the trees stepped a big hungry bear, licking his lips and sniffing the air. “A teddy bear’s picnic”, he bellowed. “Hooray!” “Help,” whispered Eddie. “He’s coming this way.”</td>
</tr>
<tr>
<td><strong>Attempt 3</strong></td>
<td>He cuddled his teddy, he huddled and hid…</td>
</tr>
<tr>
<td><strong>Consequence 3</strong></td>
<td>Then a great big bear bottom sat down on the lid. The bear munched and he crunched. He chomped and he chewed, and greedily gobbled up all of the food. “Now what’s for dessert?” said the bear. “Let me see…”</td>
</tr>
<tr>
<td><strong>Attempt 4</strong></td>
<td>“Oh please,” whimpered Eddie, “don’t let it be me.” “Don’t let him see me! DON’T LET HIM COME…” (bear opens basket)</td>
</tr>
<tr>
<td><strong>Consequence 4</strong></td>
<td>“HELP!” shouted Eddie. “I WANT MY MOM!”</td>
</tr>
<tr>
<td><strong>Consequence 5</strong></td>
<td>“Don’t be silly,” said Mom. “There can’t be… There just can’t be… There isn’t…” “A BEAR!” (Mom throws blueberry pie up) “I TOLD you!” cried Eddie.</td>
</tr>
<tr>
<td><strong>Attempt 6</strong></td>
<td>“RUN!” shouted Mom.</td>
</tr>
<tr>
<td><strong>Consequence 6</strong></td>
<td>“Blueberry pie,” said the bear. “I LOVE it…”</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>“YUM YUM!”</td>
</tr>
</tbody>
</table>
Chapter IV

Gender Differences in Three Story Retell Task Cuing Conditions

Abstract

Purpose: This study investigated the story retell performance of preschool children under three different conditions (toy prop cues, picture-book cues, no cues) to determine if there are gender differences in the quality of story retells based on those conditions.

Method: A picture book was read to 29 preschool children (ages 4;6 to 5;6) three times over the course of three weeks, and a naïve listener elicited story retells from the children under three counter-balanced conditions (toy prop cues, picture-book cues, and no cues). Retells were analyzed using SALT software for the following measures: total number of words, total number of different words, and mean length of c-unit, and by the researchers for presence and sequence of story grammar elements. Differences between boys’ and girls’ performances were analyzed.

Results: Girls exhibited significantly higher quality retells than boys in all conditions based on the following measures: total number of words, number of different words, and MLCU. There were no significant differences in the number of story grammar elements included by boys and girls in their retells. There was no significant interaction between gender and story retell condition.

Conclusion: There were gender differences on some measures of quality of children’s story retells, but boys and girls responded similarly to retell conditions using toy prop cues, picture-book cues, and no cues.

Key words: gender differences, story retell, narrative, toy prop cues, picture-book cues
Language and literacy skills such as comprehension, complex syntax, vocabulary, and text structure, are critical for school success (Ukrainetz, 2007). Because these language skills are reflected in narrative production, the ability to tell stories has been shown to be a strong predictor of later literacy acquisition and overall school success (Bishop & Edmundson, 1987; Catts, Fey, Tomblin, & Zhang, 2002; Catts, Hogan, & Fey, 2003; Dickinson & McCabe, 2001; Griffin, Hemphill, Camp & Wolf, 2004; McCardle, Scarborough, & Catts, 2001; Tabors, Snow & Dickinson, 2001). Narratives are often used as a means for assessing reading comprehension in education, but they can also be useful to examine language production in areas such as story structure and sequence and expressive language skills such as syntax (Kalmbach, 1986; Morrow, 1985; Pickert & Chase, 1978). As with many other language skills in childhood, research has shown that there are gender differences in narrative productions, in the areas of structure and content (Buckner & Fivush, 1998; Stadler & Ward, 2010; Thorne, 1995; Wang & Leichtman, 2000). It is important to consider these gender differences in areas that are critical for narrative production, such as story structure/sequence and syntax, because they impact students’ literacy and academic success. This paper will consider gender differences in the areas of language and literacy, specifically in the production of fictional narratives, in order to determine if there is a gender difference in story retell based upon the type of structural scaffold (toy prop cues, picture-book cues, no cues) used.

Research has suggested that there are differences between male and female brains and approaches to learning and behavior (Anastasi, 1958; Gurian, 2011; Maccoby & Jacklin, 1974; McKenna, Kear, & Ellsworth, 1995; Tyler, 1965; Von Klitzing, Kelsay, Emde, Robinson, & Schmitz, 2000). Advances in technology, such as positron emission tomography (PET) scans and magnetic resonance imaging (MRI) have enabled scientists to confirm sex differences in the
brain’s form and function. These sex differences begin early, as sex hormones start to exert their influence during fetal development and include increased aggressive tendencies in males, earlier language learning in females, and general differences in impulse control between the sexes (Baron-Cohen, 2004; Bear, Connors, & Paradiso, 2007; Buckner, Raichle, & Petersen, 2004; Luders et al., 2008; Moir & Jessel, 1989; Sommer, Aleman, Bouma, & Kahn, 2004; Sylwester, 1995; Xie, Chen, & De Bellis, 2012). Some scientists dispute these differences. For example, Hyde (2005) argues that males and females are similar on most, but not all, psychological variables, including language. Personality and individuality can outweigh the differences in gender. Despite those exceptions, there may be gender differences that should be taken into consideration in order to aid student learning and success.

**Gender differences in language and literacy**

Gender differences in language learning have been examined over the past several decades (Buckner & Fivush, 1998; Hyde & Linn, 1988). In the 1970s and early 1980s, research supported differences in boys’ and girls’ language abilities (Denno, 1982; Halpern, 1986). However, other research has argued that any gender differences that exist in verbal ability are small in magnitude and often attenuate over time (Hyde & Linn, 1988; Bornstein, Haynes, & Painter, 1998). Statistically, results of meta-analyses have shown that most differences that are found between boys and girls are in the zero to small effect range (Hyde, 2005).

Despite the controversial research about gender differences in language learning, more recent studies have continued to suggest that girls have better literacy skills than boys. For example, a number of studies have identified differences in reading comprehension (Logan & Johnston, 2009; Mullis, Martin, Gonzalez & Kennedy, 2003; Mullis, Martin, Kennedy & Foy, 2007). Logan and Johnston (2009) found that in addition to girls having better reading
comprehension than boys, girls read more often and use library books more frequently than boys. The results of these studies investigating gender differences in language and literacy skills have indicated that the gender differences are small, but significant.

**Gender Differences in Narratives**

Many researchers have examined gender differences in narrative production. Although research on gender differences in autobiographical narratives and memory is more common (Buckner & Fivush, 1998; Thorne, 1995) than research that has examined the differences between boys and girls in fictional narrative production (Stadler & Ward, 2010), we still know a great deal about how boys and girls tell stories. Buckner and Fivush (1998) examined children’s (ages 7;6 years) autobiographical narratives of past experiences. They found gender differences in both the structure and content of the narratives. The girls’ autobiographical narratives were longer and contained more descriptive detail than the boys’ narratives. The girls’ narratives were also more coherent, and contained more emotion and references to others. Although the girls’ narratives were overall more complex than the boys’, there were no language skill differences between the male and female participants in this study on measures of grammatical development, vocabulary, and overall literacy skills. The authors suggest that the gender differences were attributed specifically to differences between the autobiographical narratives of boys and girls, perhaps because boys and girls have different experiences in discussing memories with their parents and friends, as girls focus more on people and relationships and are more likely to share their experiences than boys. These gender differences might also stem from a difference in the kinds of events in which boys and girls participate. In a study that investigated differences in American and Chinese children’s (ages 5:6 to 6:11 years) narratives generated from story stems,
girls were found to produce longer narratives than boys. Language skills were equal, and no cultural differences were found in regard to narrative length (Wang & Leichtman, 2000).

Another study investigated the content and structure of children’s play narratives. Von Klitzing et al. (2000) used the MacArthur Story Stem Battery (MSSB) (Bretherton, Oppenheim, Emde, & the MacArthur Narrative Working Group, 2003) which uses standardized, developmentally appropriate beginnings of stories to elicit relevant play narratives in order to see if there were correlations with behavior ratings. The children in this study were asked to “show and tell me what happens next” after being presented with a story stem that builds up to a dramatic high point or conflict. Narratives were collected from five-year-old same-sex twins who were part of a larger, longitudinal twin study. Boys told more aggressive narratives, while girls had more affection themes in their narratives. Once again, even when controlling for language skills (as measured by the verbal and full scale Wechsler Intelligence Scale for Children – 3rd edition (Wechsler, 1991)) and overall cognition, girls told more coherent narratives than boys. As these studies show, boys and girls may demonstrate differences in their narrative retells, despite having equal language skills.

**Methods for Eliciting Narratives**

Research investigating the use of picture cues and toy prop cues to elicit children’s narratives has shown mixed results. Most research has considered school aged children. Differences have been found in children’s inclusion of story grammar units (Schneider, 1996; Schneider & Dubé, 2005), participation (Highnam, Raschke, & Kohler, 2008; Roy, 2006), and language use (Crowe, Haar, & Agne, 2003; Kaderavek & Justice, 2005; Soundy & Gallagher, 1993; Stadler & Ward, 2010).
Schneider and Dubé (2005) found that given different presentations of stories (spoken only, spoken combined with pictures, and pictures only), typically developing kindergarten and second grade children produced different numbers of story grammar units depending on the presentation method. Toy prop cues have been shown to have positive (Crowe, Haar, & Agne, 2003; Kaderavek & Justice, 2005; Roy, 2006; Soundy & Gallagher, 1993; Stadler & Ward, 2010), negative (Roy, 2006), and neutral (Highnam, Raschke, & Kohler, 2008) effects on children’s participation and language use during shared reading and retell tasks. Roy (2006) found increased engagement, as measured by a literacy attitude and behavior scale completed by the child’s caregiver, when young children with low engagement had toy props during shared readings. However, children who had higher engagement had decreased numbers of verbal and vocal acts when toy props were introduced. Some preschool children’s narrative length and vocabulary use in narratives improved with toy props (Crowe, Haar, & Agne, 2003; Kaderavek & Justice, 2005; Soundy & Gallagher, 1993). Stadler and Ward (2010) found increased use of descriptive details, pronouns, and conjunctions in narratives with toy props in kindergarten and first grade children.

**Learning Modalities**

Boys and girls may respond differently to the use of different scaffolding techniques (toy prop cues, picture-book cues, no cues) because there may be a difference in the modalities that support boys’ and girls’ learning (Gurian, 2011). Research has shown that preschool boys choose activities like playing with blocks and action figures, while preschool girls often choose activities that involve fine motor skills and verbal mediation (see Ruble, Martin, & Berenbaum, 2006). Additionally, research has indicated that boys have better visual-spatial abilities than girls (Gurian, 2011; Linn & Petersen, 1985; Maccoby & Jacklin, 1974; Wittig & Petersen, 1979). This
visual-spatial awareness may lead to preschool boys’ primary interest in objects and manipulatives, like blocks and action figures. Because of that interest, props have been suggested as a means to facilitate language learning in preschool classrooms, especially for boys (Gurian, 2011). It is possible that the use of multiple modalities (such as using toy prop cues or picture-book cues, rather than no cues) will give boys more opportunity to become interested in the task and perform better. Barnett and Irwin (1994) showed that students’ attitudes are negatively impacted by worksheets and direct instruction. They suggested using instructional methods that avoid those types of activities to more positively influence reading attitudes. It seems logical that presenting reading and retell opportunities in a variety of ways could help to increase children’s, but especially boys’, interest in reading and also their ability to comprehend and retell a story.

**Gender Differences in Story Retell with Props**

Only one study was found that investigated gender differences with the use of props. Stadler and Ward (2010) conducted a study in two comparable kindergarten/first grade classrooms. Both classroom teachers read the same story to their students each week for eight weeks, with the only difference being that one teacher used miniature props while reading the story. The props were chosen to match key elements in each story (e.g. characters, problem, and events). Children in both classrooms drew a story map for the book, which was established practice in their rooms. The day following the teachers’ reading, a naive listener asked a group of students to practice retelling the story. The listener modeled the retellings with or without the props, depending on the students and asked the students to practice retelling the story. Throughout the rest of the week, props were available for student use to practice retells during free choice time. Stadler and Ward (2010) found no significant difference between length of story retell of the groups with and without props, but there were significant differences in gender.
Girls told longer stories and also used more clauses than boys. No significant gender differences for story grammar elements were found.

Previous studies have found gender differences relating to narrative length, descriptive details, and overall story structure (Buckner & Fivush, 1998; Stadler & Ward, 2010; von Klitzing et al., 2000; Wang & Leichtman, 2000). Investigating the responses of preschool boys and girls with three different story retell conditions may illuminate the effects of story retell context while providing direction as to which retell conditions (toy prop cues, picture-book cues, no cues) allow boys and girls to produce the best quality narratives.

The Current Study

Because the ability to produce story retells is predictive of later school success (Catts, Fey, Tomblin, & Zhang, 2002; Catts, Hogan, & Fey, 2003; Dickinson & McCabe, 2001; Griffin, Hemphill, Camp & Wolf, 2004; McCardle, Scarborough, & Catts, 2001; Tabors, Snow & Dickinson, 2001), and storybook interactions have been shown to play a role in later literacy and academic skills of young children (Bus, 2002; Cunningham & Zibulsky, 2011; Lonigan & Whitehurst, 1998; Wells, 2009), narrative interactions using storybooks have been an important focus of education and speech-language pathology research (see Bus, van Ijzendoorn, & Pellegrini, 1995; Snow, Burns, & Griffin, 1998 for reviews). Despite the fact that story retell tasks are a common practice among speech-language pathologists and educators, it is unclear whether the use of different conditions might elicit different retells based on gender. The purpose of this research was to investigate the effect of three conditions on boys’ and girls’ retells of a story from a storybook. The three conditions included 1) retelling the story with toy prop cues that relate to the story 2) retelling the story with picture-book cues, and 3) retelling the story with no cues. The research question was:
Is there a significant difference between the performance of boys and girls on each measure a) presence and sequence of story grammar elements, b) total number of words, c) number of different words, and d) MLCU during three retell conditions (toy prop cues, picture-book cues, no cues)?

**Method**

**Participants**

After receiving approval from an institutional review board, participants were recruited from Head Start and childcare/preschool programs. Flyers were hung at the participating sites and a cover letter explaining the research project and consent forms were given to teachers to distribute to parents of the children in their classrooms. Teachers sent the letters and consent forms home and/or asked parents to sign them when they dropped off or picked up their children. Parents signed consent forms indicating that their child/ren could participate in the research process, and each child participant indicated consent on an assent form. In addition, parents and children provided permission for video recording the child during the reading and retelling tasks. To ensure that the children had not been repeatedly exposed to the selected book, the parents were asked about the level of familiarity their child had with the selected book on the parental consent form. Any child who was familiar with the book was not included in the study.

Parental consent and child assent were received for 48 children. All of the children were administered the *Preschool Language Scale Fourth Edition-Screening Test (PLS-4 Screening Test)* (Zimmerman, Steiner, & Pond, 2005), and 37 children passed. Eleven did not pass the screening test and were administered the *Preschool Language Scale-Fourth Edition (PLS-4)* (Zimmerman, Steiner, & Pond, 2002). Four of these children demonstrated typical language skills (standard scores above 85 on the Total Language score). Seven children failed the
screening and had a Total Language score below 85 on the PLS-4, and were not included in the study. The PLS-4 was chosen instead of the Preschool Language Scale-5 (Zimmerman, Steiner, & Pond, 2011) due to the reduced administration time of the PLS-4 (20-45 minutes as opposed to 50-60 minutes). Eleven children were lost to attrition throughout the study.

The participants for the project included 30 children with typical language skills. One child’s data could not be transcribed due to poor video quality; therefore 29 participants were included in the data analysis. The participants were 4 years, 6 months to 5 years, 6 months in age. They were enrolled at a Head Start, day care, or preschool program that agreed to allow recruitment of subjects and use of space for research activities. There were 16 male and 13 female children. The participants were a mix of ethnicities (Caucasian, African American, and Hispanic), but all participants spoke English as their primary language. No other exclusionary criteria were established; however, no subject presented with any observable or reported disability.

**Training of Research Assistants**

The research team was comprised of the primary investigator and four graduate and four undergraduate students who served as research assistants. The research assistants were trained to act as naïve listeners during the story retell tasks. At a training session before the research began, they listened to each other retell the story and made comments following the guidelines of the script (Appendix A). All of the research assistants performed with at least 90% accuracy for script fidelity during the training procedure for acting as a naïve listener. This was calculated by the number of times they responded using the script compared to everything they said. The investigator observed the research assistants listening to each other and practicing the prompts on two occasions to ensure that they maintained script fidelity. The research assistants were
provided with a copy of the script during data collection, and their performance during the data collection process was monitored via video recordings. They performed with at least 90% accuracy for script fidelity during the data collection retells as calculated by the number of times they responded using the script compared to everything they said.

**Data Collection**

The readings and retellings took place in a quiet location provided by each of the participating facilities. The child sat beside the researchers at a table as the story was being read and as he/she was completing the story retell. There was enough space for the child to use the picture-book cues and toy prop cues on the table to complete the retell for these two conditions. The primary investigator read the book to the children using a fidelity-to-script model. This included reading the text from the book and asking only text-to-life and yes/no questions to encourage child engagement, while ensuring that the readings of the book were as standardized as possible. The research assistants acted as naïve listeners for the story retell and were trained to make specific comments throughout the children’s story retells, including “uh huh”, “oh really”, and “tell me more” to indicate interest and encourage the children to keep going during the retell. Additional comments and questions (e.g. “Can you tell me one thing you remember about the story?”) were used when a child did not respond to the initial prompt, “Tell me about the story you just read with (investigator’s name)”. When the child stopped talking, the research assistants asked, “Is that the end?” to ensure that the child had completed the retell task to his/her satisfaction (Schneider, 1996, Schneider & Dubé, 2005). See Appendix A for scripts for the primary investigator and the research assistants.

The investigator and research assistants met one on one with each participant three times, one time per week for three weeks for approximately 20 minutes each week. The storybook, *It’s*
The *Bear!* (Alborough, 1994) was read to the children by the primary investigator during each meeting. The children were asked to retell the story to a research assistant acting as an unfamiliar listener, who was not present when the book was being read to the children. A different research assistant was present each time a child completed the retell in order to have a naïve listener each time. The child was given a different condition (toy prop cues, picture-book cues, and no cues) each time s/he was asked to retell the story. The order of presentation of the cues was counter-balanced, and each sequence was randomized across subjects.

Because each child retold the same story three times, a repeated measures analysis of variance (ANOVA) was conducted, with an overall alpha level of .05, to determine the potential relationship between repeated retellings and condition. While the children showed improvement with each retell, there was no significant interaction, \(F(8,21) = .870, p = .556\), which indicates that there was no significant relationship between repeated retellings and condition. The counter-balancing of the order of conditions was effective in eliminating potential bias based on repeated practice of the retell task.

For each condition, the investigator read the story and then told the child, “Now you will tell the story to my friend (research assistant’s name). Tell him/her everything you remember.” For the toy prop cues condition, the children were presented with access to the prop cues after the story was read. The prop cues were presented to the children along with the question “what is this?” to ensure they made the connection between the story and each prop after the reading of the story. If the child did not recognize a prop in relation to the story, they were told what it was: “Here’s the bear, the boy, the boy’s teddy bear, the mom, the picnic basket, and all the food”. They were asked to “tell the story to my friend (research assistant’s name) using the toys I just showed you. Tell him/her everything you remember”. For the picture-book cues condition, the
children were presented with a duplicate copy of the storybook with the words covered after hearing the story. They were asked to “use the pictures to tell my friend (research assistant’s name) the story we just read. Tell him/her everything you remember”. During the no cues condition, the children listened to the story and were asked to tell the research assistant the story “just from your head. Remember all the parts that you can.”

**Book/prop selection.**

The storybook, *It’s the Bear!* (Alborough, 1994), that was chosen for the tasks was age appropriate for children ages three and up and has been shown to be appealing to children (see Kaderavek & Justice, 2005). The selected props (a bear, the bear’s teddy bear, a boy, the boy’s teddy bear, a mom, a picnic basket, and relevant plastic food items) reflected the important components of the story. They were purchased through a variety of online toy stores. This technique was chosen, rather than selecting a book with a pre-made kit of props, in order to keep the method as authentic as possible, since that is how speech-language pathologists likely perform this task in clinical settings (see Soundy, 1993).

**Book analysis.**

The Systematic Analysis of Language Transcripts (SALT) (Miller, 2012) was used to calculate complexity measures of the book. They are as follows: 49 total utterances, 6.65 MLU, and 148 different words. The book also had 29 pages and 4 characters. The primary investigator and two research assistants used the definitions of story grammar in Appendix A to independently determine the story grammar components for the selected book. Following that, total agreement regarding story grammar elements of the story was reached through discussion. The complete story grammar analysis is available in Appendix B. The researchers agreed that some of the story (and story grammar units) are portrayed within both the text and the pictures in
the book. Some are portrayed only within the text, and some are portrayed only within the pictures. Therefore, the story grammar analysis includes in parentheses those elements which are shown in pictures, but are not explicitly stated in the text.

**Data Analysis**

Each participant was videotaped during the readings and retellings, and their retellings were transcribed orthographically. Only relevant components of the narratives that were related to the story book were analyzed to eliminate influencing the total number of words and number of different words. All other utterances (off topic comments and statements like, “I can’t remember”) were coded as comments in the transcriptions and were eliminated from analysis. Loban (1976) used the term communication-unit in both oral and written narratives to refer to an independent clause with all its modifiers. The children’s utterances were divided into communication units (c-units) in the transcriptions in order to maintain a consistent place to terminate an utterance for the narrative analysis. Story items that a child listed were transcribed all on one line and counted as one utterance, even though they were not a c-unit by definition (included no independent clause). At least two research assistants and the investigator listened to the recordings as many times as necessary to reach total agreement about the transcription of the children’s utterances. The investigator and research assistants analyzed the transcripts for presence and sequence of story grammar elements and number of elaborated noun phrases (ENP), and the following were analyzed from the transcripts by SALT (Miller, 2012): total length of retell measured by total number of words, number of different words, and MLCU. Elaborated noun phrases were not included in the results, due to the fact that few children included them in their narratives and statistical analysis could not be completed.

**Scoring of story grammar elements.**
Story grammar elements were analyzed by the researchers based on a modified version of the analysis used by Lever and Sénéchal (2011) and guided by the definitions provided by Hughes, McGillivray, and Schmidek (1997). Lever and Sénéchal (2011) created a scoring scheme for a retell task based on the *Edmonton Narrative Norms Instrument (ENNI)* (Schneider, Dubé, & Hayward, 2002), a storytelling assessment tool for children ages four to nine years. They coded 12 story grammar units including: formal beginning statement (such as a cliché story opening like “Once upon a time” or “One day”), informal beginning statement (the use of an opening phrase that is not a cliché, but is outside the timeline of the story), character, setting, initiating event, internal response, internal plan, attempt, outcome, reaction of the character, formal closing statement (such as a cliché story ending like, “The end” or “They lived happily ever after”), and informal closing statement (a statement that is not a cliché but summarizes the story). They assigned each element one point except for initiating event, attempt, and outcome, which were given scores of two, because they are considered to be “essential to the creation of a good story that is meant to convey a plot” (Lever & Sénéchal, 2011, p.7).

In this study, characters, setting, initiating event, internal plans, attempts, consequences, resolution, and ending were coded as the story grammar elements. Each element included received a score of one. Children were given credit for the element of “character” if they used names or pronouns to refer to the characters in the book. Schneider and Dubé (2005) discussed structural patterns and story grammar units as the two major components of the story grammar model. The overall content and organization of stories is described by structural patterns. A “complete episode” is the basic pattern that would be considered adequate for a story because it includes at a minimum the story grammar units of initiating event, attempt, and outcome. Beyond story grammar elements, each complete episode (consisting of plan, attempt, and
consequence) received one additional point, and another additional point was given for including story elements in sequence if the children provided at least five story elements in order. The total points possible for story grammar elements in the book was 27. A detail of the points can be seen in Table 1.

**Reliability**

The investigator and at least two research assistants completed the data transcription and analysis procedures together for each story retell. Total agreement was reached for each story retell transcription. The investigator and at least two research assistants analyzed each transcript to obtain a total number and sequence of story grammar elements, with points assigned as described above. Total agreement was reached on each of those measures (with further discussion occurring on 5/87 transcripts). Test-retest reliability for word by word transcription was performed on 10% of randomly selected transcripts with 98% agreement. Inter-rater reliability on 10% of randomly selected transcripts was 92%.

**Results**

This study examined the story retell performance of preschoolers under three conditions (toy prop cues, picture-book cues, and no cues). The research question asked whether there was a significant difference between the retells of boys and girls when asked to retell a story using three different conditions: toy prop cues, picture-book cues, and no cues, as measured by a variety of outcomes. Table 2 presents means and standard deviations for each measure displayed by condition and gender. The outcomes (story grammar elements, total number of words, number of different words, and MLCU) were found to be highly correlated ($r = 0.84-0.95$) with one another, which would have influenced the results of a multivariate analysis of variance. Therefore, four separate repeated measures analyses of variance (ANOVAs) were conducted to
examine the effect of gender and condition on the following measures: story grammar elements, total number of words, number of different words, and MLCU. The alpha level was set at .05. The compound symmetry covariance structure was utilized in the repeated measures mixed models since it provided the best fit based on the overall lower AIC values.

For story grammar, results of the ANOVA did not show a significant main effect for gender, $F(1,27) = 3.88, p = .0592$, but there was a significant main effect for condition, $F(2,56) = 8.93, p = .0004$, with the picture-book cues condition producing the highest story grammar score. There was no significant interaction between gender and condition, $F(2,54) = 1.90, p = .160$, which indicates that, although story grammar was related to the condition, boys and girls performed similarly in each of the three conditions (toy prop cues, picture-book cues, and no cues). This was the only outcome on which girls did not perform significantly better than boys. There was a significant difference only on the measures of story grammar for the picture-book cues condition and the toy props cues condition. No significant differences were found among any measures for the toy prop cues condition and no cues condition.

For total number of words, results of the ANOVA showed a significant main effect for gender, $F(1,27) = 4.67, p = .0398$, with girls providing longer retells (increased number of words). There was also a significant main effect for condition, $F(2,56) = 5.41, p = .0071$ with children producing the highest total number of words during the pictures condition. There was no significant interaction between gender and condition, $F(2,54) = 1.31, p = .278$, which indicates that, although the length of the narratives was related to condition, boys and girls performed similarly in each of the three conditions. Girls had longer retellings across the three conditions (toy prop cues, picture-book cues, and no cues).
For number of different words, results of the ANOVA showed a significant main effect for gender, \( F(1,27) = 4.55, p = .0421 \), with girls producing a larger number of different words in their retells than boys. There was also a significant effect for condition, \( F(2,54) = 6.07, p = .0041 \), with picture-book cues eliciting the largest number of different words. There was no significant interaction between gender and condition, \( F(2,54) = 0.70, p = .499 \), which indicates girls had a larger number of different words in their retells across the three conditions (toy prop cues, picture-book cues, and no cues). For MLCU, results of the ANOVA showed a significant main effect for gender, \( F(1,27) = 6.28, p = .0186 \), with girls producing longer c-units than boys, but there was no significant main effect for condition, \( F(2,56) = 0.57, p = .569 \). There was no significant interaction between gender and condition, \( F(2,54) = 0.06, p = .939 \), which indicates girls had longer c-units, across the three conditions (toy prop cues, picture-book cues, and no cues).

In summary, the statistical results of this study show that there was an effect of condition on many of the outcome measures (story grammar, total number of words, and total number of different words). However, there was no relationship between gender and story retell condition. Girls outperformed boys on every measure of story retell, except for the measure of story grammar.

**Discussion**

This study examined whether there was a gender difference in the narrative productions of typically developing children under three different conditions (toy prop cues, picture-book cues, and no cues). In this research, girls produced significantly better narratives than boys in all conditions, indicating that boys and girls may not have a preference for the use of props or pictures during a story retell task. The hypothesis that boys would prefer to play with props as
they retold a story and thus produce a higher quality narrative in that condition was not supported. Based on these results, it appears that there is no advantage to using a specific structural scaffold (i.e. toy prop cues, picture-book cues, or no cues) with boys versus girls.

There are many factors that could explain why there were no gender differences in narrative production across conditions. One reason may be that the book selected for the story retell task did not include a great number of gross motor movements among the characters in the storyline. Research has shown that preschool boys tend to be interested in activities that involve gross motor actions and play with action figures (Ruble et al., 2006). As a reason for this preference Varney (2002) suggests that action figures encourage strong motoric actions that may help boys learn and demonstrate masculinity and strength. Perhaps if the story used in this research involved characters that demonstrated a great deal of action, boys would have been able to re-enact the action of the story easier with the props and thus, may have produced higher quality narratives in that condition. In addition to this, some of the props used in this study (the teddy bears and mom and boy figures) may have been perceived as feminine in nature by the boys. Thus, they did not have a preference for the props and as a result their narratives were not different in that condition. Further research with different types of books, including expository and storybooks that include action and more gender-neutral props is warranted.

Another possible reason that this research did not reveal a gender difference in narrative production based on condition may be that the researcher did not scaffold the children to use the props. If the props had been used by the primary investigator as a model during the reading of the story, as has been done in previous research (Soundy & Gallagher, 1993; Stadler & Ward, 2010), more children, especially boys, might have used the props to retell the story. Several children did not use the props at all during their retells, even though they were spread out on the
table in front of them and they were prompted to use them. Although 75% (12/16) of boys and 77% (10/13) of girls at least held the props during their retells, not all of them portrayed the story retell with the props. Soundy and Gallagher (1993) read each story aloud and then had adults retell the story with props before the children were asked to do the same. Similarly, Stadler and Ward (2010) modeled the retelling of the stories with props in their practice retellings before asking children to retell the stories with props. Based upon the reported results of these other researchers, children may require scaffolding/modeling of prop use during a story retell task in order to use the props in an appropriate way in during their own narratives. Models were not provided in this study, because the purpose was to determine the best method to elicit quality narratives from preschool children without influencing the story retells in any condition. However, providing models in all of the retell conditions may have improved the children’s performance.

Another possible reason for the absence of a relationship between gender and story retell condition is that, regardless of gender, all children may produce better narratives while using the book (picture-book cues) during a story retell task. They are familiar with storytelling with picture books, which is a frequent routine in the classroom and at home. Asking children to retell a story using toy props or no cues is not as frequent. Comfort with the actual book and the integrated picture-book cues may have resulted in the best narratives regardless of gender.

While there were no differences in the language in boys’ and girls’ narratives based on story retell conditions, differences between the language of boys and girls were revealed regardless of condition. Girls outperformed boys on all but one measure, number of story grammar units. Stadler and Ward (2010) found similar results for kindergarten and first grade boys and girls. Boys and girls recalled similar numbers of story grammar elements in a retelling
task after having time to practice retelling stories with both props and no cues.

Girls told longer narratives than boys, as measured by total number of words. This result supports the findings of Buckner and Fivush (1998) and Wang and Leichtman (2000). Despite the difference between the ages of the children in these studies and those in the current study and the different types of narratives collected (autobiographical, generated from story stems, or fictional retell), girls consistently produced longer narratives than boys. Furthermore, girls in the current study used a greater variety of vocabulary in their narratives as measured by number of different words. Even though boys’ narratives were significantly shorter than girls’, they still included similar numbers of story grammar elements in their retellings. In other words, boys provided as much information about the story as girls, but in fewer words. In addition to producing longer narratives, girls in the current study also produced longer e-units than boys. When the language of the narratives was examined more closely, girls used more descriptive language (adjectives) than boys and provided more commentary about the story. For example, several girls included statements, such as “This book is silly” in their narratives. Boys more often included the main points of the story without providing commentary about it. Girls also used sequencing words more often in the story, with the word “first” occurring more times in the girls’ retells than in the boys’. These results support previous findings that girls and boys exhibit different language skills (Denno, 1982; Halpern, 1986).

**Limitations and Future Research**

Factors that limit the application of the results of this study include relevant variations among the children and the limited sample size used in the study, resulting in large standard deviations for all measures. For example, some children did not produce a narrative at all, and had zero scores on the measures, while others produced narratives that retold the complete story,
and had high scores on the measures. The sample used in the current study was small, which may have limited its power to detect gender differences in story retell conditions. The results are similar to those of previous studies in detecting differences in language measures between boys and girls (Buckner & Fivush, 1998; Stadler & Ward, 2010; von Klitzing et al., 2000; Wang & Leichtman, 2000), but the question of whether there are qualitative differences in preference of story retell conditions between genders needs further investigation.

Several important directions for future research are suggested. Investigation of the possible relationship between types of stories and the story retells of boys and girls could include gender-neutral, masculine, and feminine, and action-based stories. Likewise varying the types of pictures and props according to the interests of boys and girls may produce different results for the two groups. Further consideration can be given to the manner in which cues are presented and the potential value of modeling the retell tasks.

Asking children about their preference for one story retell condition over another may be useful in determining if boys’ and girls’ interest in the activity is related to their performance. Including children of varying ages can illuminate whether gender preference for story retell tasks do not emerge until later in development.

Clinical Implications

In the classroom and clinical settings, narratives provide an opportunity for educators and speech-language pathologists to assess a variety of language skills including, story structure/sequence, syntax, and complex language use (Kalmbach, 1986; Morrow, 1985; Pickert & Chase, 1978). When eliciting retells from children, it does not appear from this study that boys and girls respond differently to retell conditions using toy prop cues, picture-book cues, or no cues. However, picture-book cues resulted in higher quality narratives than toy prop cues or no
cues for both boys and girls on several measures. Girls outperformed boys on a variety of narrative measures. It is therefore important for educators and speech-language pathologists to recognize these differences when using story retell as an evaluation measure and be aware of how to support boys in telling their best stories. Allowing boys to act out stories may provide them with the opportunity to use more gross motor skills (Ruble et al., 2006).
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doi: 10.1097/00004583-200008000-00017


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doi:10.1177/0883073811419260


Table 1

*Distribution of Points and Total Points for Story Grammar Elements*

<table>
<thead>
<tr>
<th>Story Grammar Element</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters (bear, boy, mom, teddy)</td>
<td>4</td>
</tr>
<tr>
<td>Setting (picnic, woods, scared)</td>
<td>3</td>
</tr>
<tr>
<td>Initiating event</td>
<td>1</td>
</tr>
<tr>
<td>Plan1, attempt1, consequence1</td>
<td>3</td>
</tr>
<tr>
<td>Plan2, attempt2, consequence2</td>
<td>3</td>
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<tr>
<td>Attempt3, consequence3</td>
<td>2</td>
</tr>
<tr>
<td>Attempt4, consequence4</td>
<td>2</td>
</tr>
<tr>
<td>Attempt5, consequence5</td>
<td>2</td>
</tr>
<tr>
<td>Attempt6, consequence6</td>
<td>2</td>
</tr>
<tr>
<td>Resolution</td>
<td>1</td>
</tr>
<tr>
<td>Ending</td>
<td>1</td>
</tr>
<tr>
<td>2 complete episodes</td>
<td>2</td>
</tr>
<tr>
<td>Correct sequence</td>
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</tr>
<tr>
<td><strong>Total points</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
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Table 2
Means and Standard Deviations for Girls’ and Boys’ Performance on Each Measure Under Each Condition.

<table>
<thead>
<tr>
<th></th>
<th>Story Grammar M (SD)</th>
<th>Total Number of Words</th>
<th>Number of Different Words</th>
<th>MLCU M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toy Prop Cues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>7.63 (4.62)</td>
<td>75.81 (51.28)</td>
<td>33.81 (23.54)</td>
<td>4.03 (2.45)</td>
</tr>
<tr>
<td>Girls</td>
<td>10.54 (3.87)</td>
<td>121.15 (84.12)</td>
<td>51.00 (25.28)</td>
<td>5.61 (2.37)</td>
</tr>
<tr>
<td>Total</td>
<td>8.93 (4.47)</td>
<td>96.14 (70.48)</td>
<td>41.52 (25.43)</td>
<td>5.08 (1.84)</td>
</tr>
<tr>
<td><strong>Picture-book cues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>9.25 (6.63)</td>
<td>83.81 (74.48)</td>
<td>39.06 (28.86)</td>
<td>3.98 (2.22)</td>
</tr>
<tr>
<td>Girls</td>
<td>14.54 (5.91)</td>
<td>145.08 (81.40)</td>
<td>60.00 (28.98)</td>
<td>5.39 (1.76)</td>
</tr>
<tr>
<td>Total</td>
<td>11.62 (6.76)</td>
<td>111.28 (82.29)</td>
<td>48.45 (30.31)</td>
<td>4.61 (2.12)</td>
</tr>
<tr>
<td><strong>No Cues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>6.69 (5.86)</td>
<td>58.94 (57.74)</td>
<td>27.50 (23.10)</td>
<td>4.52 (2.07)</td>
</tr>
<tr>
<td>Girls</td>
<td>8.00 (4.38)</td>
<td>76.00 (43.19)</td>
<td>37.15 (18.23)</td>
<td>5.77 (1.26)</td>
</tr>
<tr>
<td>Total</td>
<td>7.28 (5.20)</td>
<td>66.59 (51.58)</td>
<td>31.83 (21.26)</td>
<td>4.74 (2.50)</td>
</tr>
<tr>
<td><strong>Total Across Conditions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>7.85 (5.74)</td>
<td>72.85 (61.51)</td>
<td>33.46 (25.22)</td>
<td>4.18 (2.22)</td>
</tr>
<tr>
<td>Girls</td>
<td>11.02 (5.41)</td>
<td>114.08 (75.88)</td>
<td>49.38 (25.74)</td>
<td>5.59 (1.81)</td>
</tr>
</tbody>
</table>
Appendix A

Script for Story Telling and Story Retelling

Comments Used by Story Teller When Telling the Story to the Children

Have you ever been on a picnic?
Do you have a teddy bear?
Would you be scared?

Comments Used by Naïve Listener During Story Retelling by the Children

Uh, huh.
Oh really?
Tell me more.
Tell me what happened in the story.
Tell me one thing you remember that happened in the story.
Is that the end? (when child stops talking)
Appendix B
Story Grammar Analysis for *It’s the Bear!* (Alborough, 1994)

<table>
<thead>
<tr>
<th>Story Grammar Element</th>
<th>Reference from the Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters/Setting</td>
<td>Eddie doesn’t want to come and picnic in the woods with Mom. “I’m scared,” he said, “about the bear, the great big bear that lives in there.” “A bear?” said Mom. “That’s silly, dear! We don’t get great big bears around here.” “There’s just you and me and your teddy, Freddie. Now let’s all get the picnic ready.”</td>
</tr>
<tr>
<td>Initiating Event</td>
<td>“We’ve got lettuce, tomatoes, and cream cheese spread, with hard-boiled eggs and crusty brown bread. There’s orange juice, cookies, some chips, and OH MY! I’ve forgotten to pack the blueberry pie…”</td>
</tr>
<tr>
<td>Plan 1</td>
<td>“I’ll dash back and get it,” she said. “Won’t be long.”</td>
</tr>
<tr>
<td>Attempt 1</td>
<td>“BUT MOM!” gasped Eddie...Too late- SHE HAD GONE!</td>
</tr>
<tr>
<td>Consequence 1</td>
<td>He sat on the basket and tried not to cry. Then...”I can smell food!” yelled a voice from nearby.</td>
</tr>
<tr>
<td>Plan 2</td>
<td>“IT’S THE BEAR,” cried Eddie. “WHERE CAN I HIDE?”</td>
</tr>
<tr>
<td>Attempt 2</td>
<td>Then he opened the basket and clambered inside.</td>
</tr>
<tr>
<td>Consequence 2</td>
<td>Out of the trees stepped a big hungry bear, licking his lips and sniffing the air. “A teddy bear’s picnic”, he bellowed. “Hooray!” “Help,” whispered Eddie. “He’s coming this way.”</td>
</tr>
<tr>
<td>Attempt 3</td>
<td>He cuddled his teddy, he huddled and hid...</td>
</tr>
<tr>
<td>Consequence 3</td>
<td>Then a great big bear bottom sat down on the lid. The bear munched and he crunched. He chomped and he chewed, and greedily gobbled up all of the food. “Now what’s for dessert?” said the bear. “Let me see…”</td>
</tr>
<tr>
<td>Attempt 4</td>
<td>“Oh please,” whimpered Eddie, “don’t let it be me.” “Don’t let him see me! DON’T LET HIM COME…”</td>
</tr>
<tr>
<td>Consequence 4</td>
<td>(bear opens basket) “HELP!” shouted Eddie. “I WANT MY MOM!!”</td>
</tr>
<tr>
<td>Consequence 5</td>
<td>“Don’t be silly,” said Mom. “There can’t be... There just can’t be... There isn’t...” “A BEAR!” (Mom throws blueberry pie up) “I TOLD you!” cried Eddie.</td>
</tr>
<tr>
<td>Attempt 6</td>
<td>“RUN!” shouted Mom.</td>
</tr>
<tr>
<td>Consequence 6</td>
<td>“Blueberry pie,” said the bear. “I LOVE it…”</td>
</tr>
<tr>
<td>Resolution</td>
<td>“YUM YUM!”</td>
</tr>
</tbody>
</table>
Chapter V
Conclusion

The purpose of this study was to determine which condition (toy prop cues, picture-book cues, no cues) was most effective at eliciting the best quality fictional narrative from preschool children and to determine if one retell condition elicited better results from boys and girls. Overall, the picture-book cues condition elicited significantly better responses than the no cues condition on measures of story grammar, total number of words, and number of different words. The picture-book cues condition elicited significantly more story grammar units than the toy props condition, but there were no other significant differences between those two conditions. Although the scores on each measure of the toy prop cues condition were higher than the scores in the no cues condition, no significant differences were detected, which makes it difficult to draw conclusions about the usefulness of toy prop cues in story retell tasks. There were no significant differences between the conditions for the measure of MLCU.

When the narratives of girls and boys were compared, there were no significant differences between the story retell conditions. Girls and boys responded similarly to all three conditions. This may have been due to a variety of factors, including the type of story book selected for this study, not modeling the use of props before asking the children to use them, and a limited sample size that might not have been powerful enough to detect differences. However, the girls outperformed the boys on all measures, excluding story grammar units, regardless of retell condition. The girls produced longer narratives, more varied vocabulary, and longer MLCUs.

There are several areas for future research related to this study. Factors regarding family ethnicity, culture, parental education level, and socio-economic status would be worthwhile to
include in future research. Significant differences on measures of creative and stylistic devices have been found among the story retells of first and second grade children from different cultural groups, including African–American, Latino American, and Caucasian children (Gorman, Fiestas, Peña, & Clark, 2011). Additionally, elaborated noun phrases could be investigated with regard to when they emerge and if their use is related to retell condition, as was reported for older children by Stadler and Ward (2010). Children with language impairment should also be included in further research in order to determine how story retell conditions affect their narrative productions. In the area of gender differences, further research should include different types of storybooks, including action-based stories and gender-specific as well as gender-neutral stories to determine the impact of the book genre on story retell. Measures of preference regarding which condition children prefer might also provide additional information regarding interest in the story retell task with certain conditions. Finally, replicating the study with a larger sample size could provide further support for this investigation.

The results of this current study have important implications with regard to how speech-language pathologists and educators use fictional story retells in order to elicit the best narrative performance from children. Depending on the language measure being assessed (story grammar, narrative length, or vocabulary included in the narrative), it might be best to choose a specific retell condition to administer a retell task. Picture-book cues were better than no cues for eliciting story grammar units, longer narratives, and more varied vocabulary, but the toy prop cues and picture-book cues elicited similar narrative lengths and specific vocabulary. In order to fully assess children’s fictional narratives, it might be best to use both the picture-book cues and toy prop cues for all measures. These results support the findings from Stadler and Ward (2010) that balanced literacy programs that sometimes use props and sometimes do not are the most
beneficial to children. Boys and girls responded similarly to the use of the conditions, but it is important for speech-language pathologists and educators to recognize that boys and girls do perform differently on language measures and to be aware of how to support boys in telling their best stories. Allowing boys to act out stories might provide them with the opportunity to use more gross motor skills which they have been reported to prefer (Ruble et al., 2006). Using spoken and visual stimuli in addition to props seems to be the best choice for eliciting high quality fictional narratives from children.
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### Appendix A

Table A1

*Spearman Correlation Coefficients Among Outcome Measures*

<table>
<thead>
<tr>
<th></th>
<th>Story Grammar</th>
<th>Total Number Words</th>
<th>Number Different Words</th>
<th>MLCU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story Grammar</td>
<td>0.9262*</td>
<td>0.9282*</td>
<td>0.8386*</td>
<td></td>
</tr>
<tr>
<td>Total Number Words</td>
<td>0.9514*</td>
<td>0.8704*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Different Words</td>
<td>0.8602*</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

*p < .0001
## Definitions of Story Grammar

<table>
<thead>
<tr>
<th>Story Grammar Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>Reference to time and place, can include characters</td>
</tr>
<tr>
<td>Initiating Event</td>
<td>An event that sets the story in motion, including a problem that requires a solution</td>
</tr>
<tr>
<td>Plan</td>
<td>A statement of an idea that might fix the problem</td>
</tr>
<tr>
<td>Attempt</td>
<td>Some action taken by the character that is meant to solve the problem</td>
</tr>
<tr>
<td>Consequence</td>
<td>The event(s) following the attempt and causally linked to it</td>
</tr>
<tr>
<td>Resolution</td>
<td>The final state or situation triggered by the initiating event; it does not lead to other actions or states</td>
</tr>
<tr>
<td>Ending</td>
<td>A sentence or phrase that clearly states the story is over.</td>
</tr>
</tbody>
</table>

From Hughes et al. (1997)