

Oral Discourse and Reading Comprehension Abilities
of African American School-Age Children

BY

Nicole M. Koonce
B.S., University of Central Oklahoma, 1998
M.A., Oklahoma State University, 2000

THESIS

Submitted as partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Special Education
in the Graduate College of the
University of Illinois at Chicago, 2012

Chicago, Illinois

Defense Committee:

Mavis Donahue, Chair and Advisor
Marie Tejero Hughes
Elizabeth Talbott
Barbara Guillory, Monarch Center
Cheryl Scott, Rush University Medical Center

To my husband, Dan, whose patience, quiet confidence, and unwavering support made this work possible, and to our children, Nathan and Janelle, whose presence and love gave me the courage to dream big, beautiful dreams.

And in loving memory of my grandfather, Frank Kitchen.

ACKNOWLEDGEMENTS

I could not have completed this Ph.D. program without the support of many people. I am most grateful to Dr. Mavis Donahue for serving as my advisor and dissertation chair. Thank you for your time, seemingly infinite patience, and for treating my ideas and work with respect and care. Your insights and recommendations were simply invaluable as I moved through the various stages of my research project. Your example as a scholar and mentor is certainly one to which I aspire. I am also deeply indebted to my thesis committee, including Dr. Barbara Guillory, Dr. Marie Tejero Hughes, Dr. Cheryl Scott, and Dr. Elizabeth Talbott, for the time, interest, and expertise they gave to developing and enriching this research project. The input offered by each always fit the bill and I am grateful to have had such a cooperative and collaborative thesis proposal and defense experience.

Special thanks are extended to Drs. Marie Tejero Hughes and Michelle Parker-Katz for the financial support and mentorship provided through their STEP=UP Leadership Scholars Program funded by the U.S. Department of Education Preparation of Leadership Personnel Grant. My pursuit of a doctoral degree just would not have been possible without STEP=UP. To my fellow STEP=UP cohort members, thank you for the years of camaraderie. I have learned so much from each of you and wish you all the best that life has to offer.

I am also grateful to Dr. Cathy Balthazar and, again, to Dr. Cheryl Scott. The opportunity to work on your language intervention project was one of the highlights of my doctoral experience. To Dr. Scott, thank you seeing this possibility in me long, long ago in Stillwater. Words really cannot express what it has meant to have had you in my corner all of these years.

Thank you to Karimah Boyce for your fabulous transcription skills. Your work was always impeccable and right on time. Thanks also to Suzanne Williams for your help with data coding reliability. I am so glad for our friendship and can't wait for you to join me in the professoriate (soon!).

Doctoral study can take a toll on friendships but I have been blessed with the most understanding and caring friends. Thank you especially to Annamaria, Tasha, Pam, and Yvette for the laughs, encouragement, and prayers. I could not have asked for better friends. Thank you also to the many other friends and family members who cared for me, my husband, and children during this five year journey. If I had space I would name you all but know that each of you is written on my heart.

The work contained in this dissertation; however, ultimately would not have been possible without the generosity of the participants and their parents. It was my great privilege and honor to have had the opportunity to meet and work with this great group of young people. I must also extend my gratitude to the superintendent, school administrators, and teachers from the participating school district. Each of you was encouraging, generous, accommodating, and patient beyond all measure. I feel fortunate to have worked with such a wonderful district on this research project.

Finally, thank you to every teacher who inspired me to unabashedly love learning.

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LIST OF ABBREVIATIONS

AA	African American
AAE	African American English
ANOVA	Analysis of Variance
AR	Average Reading Comprehension
CD	Clausal Density
CELF-4	Clinical Evaluation of Language Fundamentals – Fourth Edition
DQ	Discourse Quality
ETNT	Expository Total Number of T-units
EMLTU	Expository Mean Length of T-unit
ECD	Expository Clausal Density
EDQ	Expository Discourse Quality
FGS	Favorite Game or Sport
FWAY	<i>Frog Where Are You</i>
GRADE	Group Reading Assessment and Diagnostic Evaluation
IEP	Individualized Education Plan
IPSyn	Index of Productive Syntax
IQ	Intelligence Quotient
ISAT	Illinois Standards Achievement Test
LR	Low Reading Comprehension
MANOVA	Multiple Analyses of Variance
MLTU	Mean Length of T-unit
NCES	National Center for Education Statistics,
NICHD-ECCRN	National Institute of Child Health and Human Development – Early Childcare Research Network
NICHD	National Institute of Child Health and Human Development,
NTNT	Narrative Total Number of T-units
NMLTU	Narrative Mean Length of T-unit

LIST OF ABBREVIATIONS (continued)

NCD	Narrative Clausal Density
NDQ	Narrative Discourse Quality
PPVT-4	Peabody Picture Vocabulary Test – Fourth Edition
SAE	Standard American English
SALT	Systematic Analysis of Language Transcripts
SS	Standard Score
TNT	Total Number of T-units
T-unit	Terminal Unit

SUMMARY

African American (AA) school-age children continue to lag behind their same age peers on state and national tests of reading achievement and obtain lower levels of academic success and graduation rates than the general population of American students (Burchinal, Roberts, Zeisel, & Rowley, 2008; Ladson-Billings, 2006; Hernandez, 2011). Unfortunately, there are relatively few studies designed to uncover the source or sources of these reading achievement differences, especially in children beyond early elementary grades. Some studies suggest that oral language skills such as those required to produce oral narrative and expository discourse are positively linked to reading comprehension outcomes in older children. Very little research, however, exists on the connections between reading comprehension and narrative discourse in AA children and no studies explore oral expository discourse in this population (Bliss & McCabe, 2006; Gillam, Peña, & Miller, 1999; Norris and Bruning, 1988; Hester 2010). Given the critical role of language development in academic achievement, it is important to explore relationships among oral and written language domains in this population. Such information has important educational implications related to assessment identification, and remediation of language and literacy problems of children in need of supplemental reading instruction (as in Response to Intervention, RtI) and special education services.

This investigation examined the relationship between language features of oral discourse, both narrative and expository, and reading comprehension abilities of AA children. A comparative group designed was employed to reading comprehension group differences in productivity (total number of T-units), syntactic (mean length of T-unit and clausal density), and

SUMMARY (continued)

discourse (discourse quality) features of language. Forty-three African American third- and fourth-grade children with average ($N = 22$) or low ($N = 21$) reading comprehension ability participated in the study. Each participant produced one oral expository explanation of a favorite game or sport and one oral fictional narrative, elicited via a wordless picture book in an individual session. The oral discourse samples were transcribed, coded, and analyzed for productivity (total number of T-units), syntactic (mean length of T-unit and clausal density), and discourse (discourse quality) features of language.

The two groups performed similarly on the productivity measure for both the narrative and expository tasks. Reading comprehension group differences emerged on the narrative task. Children in the average comprehender group outperformed those in the low comprehender group on mean length of T-unit (MLTU), clausal density (CD), and discourse quality (DQ). On the expository explanation task, grade by gender interactions were detected with third grade boys producing more total number of T-units (TNT) in their explanations than the fourth grade boys. However, fourth grade boys outperformed third grade boys and fourth grade girls on the amount of clausal density they produced in their explanations. Results validated a continuing relationship between oral discourse, particularly narrative, and reading comprehension in older, school-age children. Relative strengths and needs in the oral discourse of African American children with differing reading comprehension profiles are discussed. Implications for the use of oral language assessment to understand and treat reading comprehension difficulties in African American children as well as suggestions for future research are presented

I. INTRODUCTION

A. Background

African American (AA) school-age children continue to lag behind their same age peers on state and national tests of reading achievement (Champion, Rosa-Lugo, Rivers, & McCabe, 2010; Craig, Zhang, Hensel, & Quinn, 2009; Flowers, 2007; National Center for Education Statistics, NCES, 2010, 2011; Snow & Biancarosa, 2003). According to the latest National Assessment of Educational Progress reading achievement data, only 16% of AA fourth graders scored at the proficient or advanced level (NCES, 2011). These disparities in reading achievement lead to lower levels of academic success and graduation rates than the general population of American students (Burchinal, Roberts, Zeisel, & Rowley, 2008; Ladson-Billings, 2006; Hernandez, 2011). AA students also continue to be disproportionately over and under-identified for special education services particularly in categories that use more subjective criteria for educational diagnosis (Donovan & Cross, 2002; Harry, 2007). Over-identification often occurs in the special education categories of intellectual disability and emotional/behavior disorder (Donovan & Cross, 2002; Harry, 2007; Hosp & Reschly, 2004; Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006), while under-identification is more common in language and literacy-based disorders, such as specific learning disabilities and speech-language impairment (Laing & Kamhi, 2003; Skiba, et al., 2006).

Given the intense focus on the reading underachievement and special education disproportionality placement of AA youth, one would expect a plethora of research designed to uncover the source or sources of these phenomena. Unfortunately, this is not the case. Several important studies have examined emergent and early literacy skills in racially, ethnically, and socio-economically diverse populations of preschool and early elementary-aged children

(National Institute of Child Health and Human Development – Early Childcare Research Network , NICHD-ECCRN, 2005; Reese, Suggate, Long, & Schaughency, 2010; Roth, Speece, & Cooper, 2002; Roth, Speece, Cooper, & De La Paz, 1996; Tabors, Snow, & Dickinson, 2001). These studies have shown that some AA children, especially those from low-income backgrounds, begin school with different language experiences and skills than their peers (Champion, Hyter, McCabe, & Bland-Stewart, 2003; Craig & Washington, 2002; Price, Roberts, & Jackson, 2006 ; van Kleeck, 2007. Facility with language skills has been shown to positively impact the acquisition of early literacy skills (NICHD-ECCRN, 2005; Reese, et al., 2010; Roth, et al., 2002; Roth, et al., 1996; Tabors, Snow, & Dickinson, 2001). Specifically, broad-based language skills such as those required to produce oral discourse have been cited as a predictor of reading achievement in AA children (Craig, Connor, & Washington, 2003; Hester, 2010; Hooper, Roberts, Sideris, Burchinal, & Zeisel, 2010).

Few studies; however, have explored whether there is a continuing connection between language and reading problems experienced by AA children in the middle elementary grades and beyond. Narrative and expository language have been shown to influence reading achievement in White school-aged children (Feagans, 1984; Ripich & Griffith, 1988; Westerveld, 2008; Bishop & Edmundson, 1987; Fazio, Naremore, & Connell, 1996; Feagans & Applebaum, 1986; Feagans & Short, 1984; Griffin, Hemphill, Camp, & Wolf, 2004; O’Neill, Pearce, & Pick, 2004; Roth, et al., 1996). As with their White counterparts, it is believed that narrative and expository discourse have important implications in the reading development of AA children (Bliss & McCabe, 2006; Gillam, Peña, & Miller, 1999; Hester, 2010). Unfortunately, research on the language profiles of AA school-age children is quite limited in scope. Most research on the developing language skills of AA school-age children has focused on describing African

American English (AAE) dialect features and cultural styles of narratives. Recently, researchers have contributed to a burgeoning database on the narrative skills of preschool and school-age AA children (Bliss, Covington, & McCabe, 1999; Bloome, Champion, Katz, Morton, & Muldrow, 2001; Champion, 1998; Champion, Seymour, & Camarata, 1995; Curen-ton & Justice, 2004; Hester, 1996; Horton-Ikard & Miller, 2004; Hicks, 1991; Hyon & Sulzby, 1994; Mainess, Champion, & McCabe, 2002). Several researchers have also begun to explore the relationship between oral narrative skills and literacy skills in AA children (McClure, Mason, & Williams, 1983; Norris and Bruning, 1988; Hester 2010; Hester, Johnson, and Brown, 1998; McCabe & Rollins, 1994).

The relationship between has broad oral language skills and reading has been explored using many different research methods. The comprehensive language approach to reading is a theoretical perspective particularly useful in explaining the continuing influence of oral language development on higher level reading ability (i.e., reading comprehension) in older children from low-income and culturally and linguistically diverse populations (Dickinson, McCabe, Anastasopoulous, Peisner-Feinberg, & Poe, 2003). Research rooted in a perspective that embraces the continuum of language from oral to written, as in the comprehensive language approach to reading, also provides a framework that is ripe for uncovering the specific problems of struggling readers that are not wholly explained by phonological or word decoding deficits as well as for developing appropriate interventions (Myers & Botting, 2008; Nation, Clarke, Marshall & Durand, 2004). A thorough review of literature associated with this theoretical frame will be provided in chapter two; however, there remain many other reasons why exploration of the language-literacy connection is vitally important. Narrative and expository discourse play significant roles in the academic lives of children. Narratives are an important

type of social language that transfers readily into educational environments. Teachers use narratives to introduce children to new academic material, build background knowledge, and share experiences relevant to building a classroom culture of learning and cooperation. In schools, children are expected to relate their past experiences to classroom content, tell and write creative stories relevant to instructional goals, and build relationships through narratives. Expository discourse is also critical to literacy and academic success. Teachers use exposition to explain relationships between new concepts, define new vocabulary, scaffold students' learning about new content, and give instructions about assignments. Children use exposition to participate in group discussions about text, answer teacher questions about newly learned material, deliver oral reports, and provide answers to reading comprehension questions.

School-age children must learn to use language in spoken and written formats depending on the purpose, goal, and context of the communicative interaction. In educational contexts, narrative and expository discourse have distinct communicative goals, functions, and structures. Narrative discourse tends to focus on people (or anthropomorphized characters), and their actions and motivations to obtain a particular goal within a temporal framework (Berman & Slobin, 1994; Hickmann, 2003). The production of narratives calls for speakers to plan, sequence, and organize a real past experience, an imagined past or future story, or a real-time account of a current event (McCabe & Bliss, 2003). Specific types of narratives have been identified in the research literature, including personal experience narratives, story retellings, and fictional story generation. These types fall along the continuum of narrative structure from informal and social to formal and literate forms. In contrast, expository discourse is typically topic-oriented and focuses on concepts and issues organized within a primarily logical framework (Berman & Nir-Sagiv, 2007; Mosenthal, 1985). The production of exposition

requires speakers to plan and organize language for the purpose of explaining, analyzing, or conveying information about a particular topic (Nippold & Scott, 2010; Schleppegrell, 2004). Expository language can be further divided into specific sub-genres, including explanation, description, compare-contrast, causation, and problem-solution. Expository language is generally considered literate, schooled discourse but also occurs outside of school contexts to discuss sports and politics, to explain complex social relationships, and to analyze world events (Scott, 2010).

The discourse of school is often significantly different from the discourse used in social and conversational contexts familiar to children. Children are expected to use decontextualized, explicit, complex, and highly structured language to communicate in both spoken and written formats (Schleppegrell, 2004). When the cultural, literacy, and language practices of a child's home are closely aligned with those of school, the child may have an easier time transferring those practices into the school environment (Schleppegrell, 2004; van Kleeck, 2007). In America, the practices of modern public schools closely adhere to middle class, mainstream cultural practices and values. Language and literacy practices that support school success include early experiences of being read to, having access to a variety of books and print materials, and interactive language experiences (Craig, et al., 2009; Hart & Risley, 1995). Mismatches in these experiences can lead to lags in language development, attainment of literacy, and overall decreased academic achievement (Champion, et al., 2010; Craig, et al., 2009; Gillam, et al.; Schleppegrell, 2004).

B. Statement of the Problem

Gathering oral narrative and expository discourse data on AA children is vitally critical to expanding knowledge about their language and literacy development. It is especially important in the middle to upper elementary grades for several reasons. Evidence of language and literacy problems begins to emerge quite rapidly between the third and fourth grades. Literacy instruction in early elementary grades is largely focused on embedding awareness of print, phonemic awareness skills, phonics, word decoding, and reading fluency (National Institute of Child Health and Human Development, NICHD, 2000). In fact, these skills are encapsulated in three of the five foundations of a quality beginning reading program endorsed by Reading First (phonemic awareness, phonics, and fluency; the others are vocabulary and comprehension). The reading curriculum at these early stages gives children much needed access to print to support their learning and academic progress. With the fundamentals of reading fluency and comprehension firmly established, the reading curriculum of middle elementary and beyond concentrates on expanding children's ability to interpret, integrate, explain, and synthesize knowledge gained from a variety of complex narrative and content-heavy expository texts (see Common Core State Standards English Language Arts Standards: Reading, 2010).

By the fourth grade; however, national statistics show AA children already lagging behind their peers in reading achievement (NCES, 2010, 2011; Snow & Biancarosa, 2003). The intense focus on school performance and accountability as measured by high stakes testing may in fact make AA children particularly vulnerable to being identified with special education needs. Sociodemographic variables, teacher referral patterns, poor schooling, and language differences may be significant factors in the reading underperformance and special education identification of these students (Coutinho, Oswald, & Best, 2002; Craig, et al., 2009; Harry,

2007; Snow, 2002). The very pillars of quality reading instruction advocated by the Reading First Initiative may also disadvantage elementary school AA children who are concentrated in urban and poor communities. School districts in poor and underperforming areas, pressured by threats of funding cuts, state takeover, and public shaming, tend to over-teach basic reading skills to prepare students for high stakes testing without appropriately balancing the literacy curriculum with language and metacognitive instruction to effectively engage children in higher level reading skills (Cummins, 2007; Teale, Paciga, & Hoffman, 2007). While it is clear that the reading underachievement of AA children is a multi-faceted issue, this does not negate the role that oral language ability, linguistic knowledge, and knowledge of school-based discourse play in the reading success of these children, particularly in the area of reading comprehension (Hester, 2010; Snow & Biancarosa 2003). In the same way that research has uncovered links among word decoding and phonological awareness skills, reading comprehension and oral vocabulary, and reading comprehension and listening comprehension (Nation, et al., 2004; Nation & Snowling, 2004; Serry, Rose, & Liamputtong, 2008; Snowling & Hayiou-Thomas, 2006; Storch & Whitehurst, 2002; Verhoeven & van Leeuwe, 2008), it is equally important to know what specific linguistic and discourse level skills contribute to enriching the reading achievement and instruction of AA children.

A large body of research exists on the narrative and expository discourse of typically developing, school-age children in the mainstream population. These data have been used to develop descriptions of language skills and provide theoretical bases for the nature of language development and impairment (Scott & Windsor, 2000). Numerous studies have also explored the relationship between language and literacy skills in mainstream children. These studies have yielded information about the role of phonological, semantic, syntactic, and discourse features at

particular stages in the acquisition of reading decoding and comprehension. This critical research has strengthened the knowledge base on the nature of language involvement in reading acquisition, instructional methodology, teacher education, and the learning problems of school-age children.

Research on the narrative and expository language of children from AA children with typical language, language impairment, and learning disabilities is quite limited (Klecan-Acker & Caraway, 1997; Stockman, 2010). This is problematic because normative information collected on White children is not always readily generalizable to children from other racial and ethnic groups. Language is culturally determined and the experiences of racial subgroups vary widely enough to yield significant inter-group differences in language use (van Kleeck, 2007). The evidence that oral language is related to reading comprehension skills also needs to be adequately addressed in this population of children. Specifically, language structure and quality demonstrated through spontaneous conversation and narratives appear related to reading comprehension ability in AA children (Craig, et al., 2003; Hester, 2010; Klecan-Aker & Caraway, 1997). Results regarding the specific features of language impacting reading comprehension; however, have been inconsistent (Hester, 2010).

C. Purpose of the Study and Research Questions

Currently no studies exist that examine both oral narrative and expository discourse skills of AA children. Further while studies have begun to examine the relationship between oral narratives and reading comprehension in AA children, there are no studies investigating the role of oral expository discourse in reading comprehension. The present investigation address these gaps in the literature by describing the productivity, syntactic, and discourse quality features of

these two genres of discourse and their relationship to reading comprehension ability in third and fourth grade AA children. This information has important educational implications related to assessment identification, and remediation of language and literacy problems of children in need of supplemental reading instruction (as in Response to Intervention, RtI) and special education services.

Research Questions

The following research questions guided this investigation:

- 1) Do third and fourth grade AA children with low reading comprehension ability perform differently on productivity, syntactic, and discourse features that they produce on an oral narrative task compared to children with average reading comprehension ability?
- 2) Second, do third and fourth grade AA children with low reading comprehension ability perform differently on productivity, syntactic, and discourse features that they produce on an oral expository task compared to children with average reading comprehension ability?

II. LITERATURE REVIEW

A. Introduction to Review of Related Literature

This research study explored micro-linguistic and macro-linguistic features of oral discourse as a function of reading comprehension performance. The literature review that follows addresses two major areas: 1) definitions of oral discourse and reading comprehension, and 2) the conceptual framework for the study and supporting research.

1. Defining oral narrative discourse

Narrative is one method of conveying real or imagined memories or stories (McCabe & Bliss, 2003). Oral narratives give verbal shape to the experiences of an individual. These narratives, however, are not for solitary enjoyment but occur in social interactions as individuals seek to share life events, perspectives, feelings, thoughts, and attitudes with others (Georgakopoulou & Goutsos, 2004). Many types of narratives have been identified in the research literature, including personal experience narratives, story retellings, and fictional story generation (Hester, 1996). This study used fictional story generation from a well-established wordless picture book protocol.

Fictional story generation has been studied extensively. Elicitation of fictional stories using wordless picture books has been successful in eliciting narratives from children and adults from a variety of social, cultural, and linguistic backgrounds (Berman, 1988; Botting, 2002; Fiestas & Peña, 2004; Isbell, Sobol, Lindauer, & Lowerance, 2004; Muñoz, Peña, Gillam, & Gulley-Faehnle, 2003; Olley, 1989; Pearce, 2003; Peña, Gillam, Malek, Ruiz-Felter, Resendiz, ...Sabel, 2006; Wetherell, Botting, & Conti-Ramsden, 2007). Fictional narratives are goal directed and framed by a chronological sequence of events experienced by a character or cast of

characters. Creation of fictional narratives is a common academic activity throughout the school years and has ecological validity in the assessment of the oral and written language skills of school-age children (Bliss & McCabe, 2006; Boudreau, 2008; Gillam, et al., 1999; Merritt & Liles, 1989).

2. Defining oral expository discourse

Expository discourse is another form of verbal communication, distinguished from narratives in that it is primarily thematic. Expository discourse has also been referred to as non-narrative text (Georgakopoulou & Goutsos, 2004). Exposition is typically topic-oriented and focuses on concepts and issues organized within a primarily logical or categorical framework (Berman & Nir-Sagiv, 2007; Mosenthal, 1985). The production of exposition requires speakers to plan and organize language for the purpose of explaining, analyzing, or conveying information about a particular topic (Nippold & Scott, 2010; Schleppegrell, 2004). Narratives are widely accepted as a vehicle for social interaction; however, expository discourse serves academic as well as social goals in human interaction. While generally considered literate, schooled discourse, expository language also occurs outside of school contexts in discussions of sports and politics, explanations of complex social relationships, and analysis of world events (Scott, 2010). In the research literature, expository discourse has been divided into specific sub-genres, including explanation, description, compare-contrast, causation, persuasion, argumentation, and problem-solution (Berman & Nir-Sagiv, 2007; Nippold & Scott, 2010). The proposed study will explore explanations of a favorite game or sports as a vehicle for eliciting connected expository discourse.

Explanations have been cited as a gateway to the diversity of expository discourses needed in academic environments (Colletta & Pellenq, 2010). Oral explanations have been studied in young, preschool children most often in the context of parent-child, teacher-child, peer-peer verbal exchanges (Blum-Kulka, Hamo, & Habib, 2010; Callanan, Shrager, & Moore, 1995; Peterson, 2009; Veneziano & Sinclair, 1995). Callanan, Shrager, & Moore (1995) categorized early explanatory exchanges in three ways: 1) *prior cause* explained a prior event, 2) *purposive* explained a consequence for a behavior), and 3) *interpretive* explained the reasoning that an observation must be true. Studies conducted in elementary science classes demonstrated that children readily used explanations to provide support for a set of observations, make a claim about a scientific fact, and synthesize information about a set of facts (Brown & Spang, 2008; Kurth, Kidd, Gardner, & Smith, 2002; Peterson, 2009).

Other researchers have been interested in studying developmental changes in the explanations of children. Such research created a need for more extended discourse samples than could be generated in a classroom context. The explanation of a game task emerged as a standardized means of collecting spoken language samples for comparison across age groups (Evans & Rubin, 1983; Leadholm & Miller, 1992). The procedures employed in these elicitations proved useful in gaining extended discourse samples and were initially categorized by the aforementioned researchers as extended text or description, respectively. The Favorite Game or Sport (FGS) Task was further developed by Nippold, Hesketh, Duthie, & Mansfield (2005) and proved an effective way of eliciting extended discourse that required the speaker to convey information about a well-known topic. With its focus on description, procedure, elaboration, and strategy, the FGS Task also approximates language skills children might use in the classroom when asked, for example, to provide their rationale for steps in a science

experiment or explain the strategy used by George Washington at the Battle of Trenton while reducing memory load.

In summary, narrative and expository discourse is defined by its particular communicative goals, functions, and structures in educational contexts. Narrative discourse tends to focus on people (or anthropomorphized characters), and their actions and motivations to obtain a particular goal within a temporal framework (Berman & Slobin, 1994; Hickmann, 2003). The production of exposition requires speakers to plan and organize language for the purpose of explaining, analyzing, or conveying information about a particular topic (Nippold & Scott, 2010; Schleppegrell, 2004). Both genres fall along the continuum of structure from informal and social to formal and literate forms and provide an avenue for display of academic and social competence.

3. Defining reading comprehension

The term comprehension is used so frequently in educational settings that educators and practitioners rarely question just what reading comprehension means. Broadly defined, comprehension involves “the ability to interpret and makes sense of spoken and written language.” (Miller & Paul, 1995). The process of reading comprehension focuses on the ability to make sense of written language. This process occurs at the word-, sentence-, and text-level (Torgeson, 2000). Readers must actively extract and construct meaning from text (RAND, 2002). To do so, requires readers to tap into a host of cognitive and linguistic skills. Verbal intelligence, phonological processing, vocabulary, syntax, working memory, attention, motivation, background knowledge, and many other factors are all vital to the process of reading (Perfetti, Landi, & Oakhill, 2007;). This study explores those dimensions of reading

comprehension that connect to broad-based language skills, such as those used in constructing oral discourse.

4. Conceptual framework

The conceptual framework for this study is grounded in three different fields of inquiry: reading models and supporting research that acknowledge the contribution of oral language to reading comprehension, research on narrative and expository discourse skills of children with and without reading comprehension difficulties, and research on the relationship between oral discourse skills and reading comprehension in AA children. The research from these areas comes from different perspectives but share unique aspects that form a cohesive frame for the goals of this study.

5. Reading models that acknowledge contributions of oral language

Reading is a complex cognitive process and over time theorists have developed models to explain the constituent skills that lead to successful reading or those that disrupt the development of reading. Research now supports that reading development finds its foundation in oral language abilities (Catts, Adlof, & Weismer; 2006; Dickinson, Golinkoff, & Hirsh-Pasek, 2010, Duke, Pressley, & Hilden, 2004; McArthur, Hogben, Edwards, Heath, & Mengler, 2000; Nation, et al., 2004; Storch & Whitehurst, 2002). However, the specific nature of the relationships among oral language skills and reading development has been difficult to pinpoint. It is well documented that early reading development is most impacted by phonologically-based language skills. Phonologically-based language skills refer to the ability to identify and manipulate the sounds of language as they are applied to newly acquired and developing reading and writing tasks (Catts, Fey, Zhang, & Tomblin, 1999). These phonological language skills

contribute most significantly to the acquisition of word reading (Goswami & Bryant, 1990; Snowling, 2000; Storch & Whitehurst, 2002).

The goal of reading, however, is more than merely reading words but is centered firmly in deriving meaning from those words, i.e., reading comprehension (Nation & Snowling, 2004). As children progress in school, the comprehension of text becomes a major focus of academic work. Evidence is mounting that other, non-phonological skills, such as vocabulary, listening comprehension, syntax, and discourse contribute to the acquisition and development of reading comprehension skills (Catts, Fey, Zhang, & Tomblin, 2001, Nation & Snowling, 2004; RAND Reading Study Group, 2002).

Dickinson et al. (2003) outlined two approaches to reading development and difficulties that attempt to shed light on the nature of the relationship between oral language and reading: the phonological sensitivity approach and the comprehensive language approach. The phonological sensitivity approach contends that the ability to perceive, retrieve, and manipulate the sounds of language is the most critical aspect of oral language related to reading acquisition. The phonological sensitivity approach also identifies oral vocabulary as a powerful predictor of reading achievement and acknowledges a role for grammatical knowledge as well. The comprehensive language approach argues four specific points: 1) a variety of oral language skills provide the foundation for early reading development, 2) oral language skills continue to impact reading achievement beyond preschool and early elementary, 3) the way in which these oral language skills impact reading achievement changes over time, and 4) individual oral language skills are not necessarily functionally independent in the reading process. This portion of the literature review will focus on the comprehensive language approach to reading as it is most pertinent to the current study.

6. Associations between oral language and word reading

It is important to acknowledge the connections between oral language and reading comprehension. The education community now widely accepts that reading is a language-based skill (Catts & Kamhi, 2005). By the time children reach school age, receptive and expressive language skills are typically well established. It is on this foundation that reading comprehension is established. To understand text, a child must begin by understanding the code of spoken language, such as vocabulary, syntax, and pragmatics (i.e., functions of language). This relationship between oral language and reading comprehension can be affected by development (e.g., age), skill development (e.g., decoding), and other cognitive process (e.g., attention, memory, executive function). Good language skills do not guarantee good reading comprehension but it appears that poor language skills certainly can hinder the process (Donahue & Foster, 2004; Oakhill & Cain, 2007).

Several studies have assessed the relationship between oral language skills in early childhood and later reading outcomes in both word reading and reading comprehension. Researchers through carefully constructed studies have provided evidence that the oral language skills of preschool and early elementary aged children are associated with word reading (Bowey, 1994; Bowey & Patel, 1988; Catts et al., 2001; Chaney, 1998; NICHD-ECCRN, 2005; Tunmer, Herriman, & Nesdale, 1988). Bowey and Patel's 1988 study of first grade children found that broad language skills including vocabulary, receptive syntax, and expressive syntax skills were related to word reading ability. In a later study, Bowey (1994) found associations among phonological awareness, single word reading, and a variety of oral language measures in a groups of kindergarten-aged children with differing levels of early reading skill (i.e., novice versus nonreaders). The inter-related nature of word reading and oral language skills is also

supported by Tunmer et al. (1988). They conducted research with a group of first grade student who they followed through the end of second grade. Their research concurred with the other presented findings. Findings revealed that phonological awareness skills combined with syntactic awareness skills tested in early first grade contributed to reading achievement at the end of first grade and at the end of second grade. These associations were found for word reading as well as reading comprehension.

Longitudinal studies that followed students from early childhood into their school age years have bolstered the argument that an array of oral language skills contribute to reading success. Chaney (1998) followed a group of three-year olds through the end of first grade. Her research found that overall language development at age three was strongly correlated with reading achievement at age seven. A longitudinal study conducted by the NICHD Study of Child Care and Youth Development (2005) investigated the association between preschool oral language skills and reading achievement in a large group of typically developing children. The children, followed from age three through third grade, were assessed on oral language measures of vocabulary, morphology, syntax, communicative competence, and, phonological awareness skills. Measures of word reading and reading comprehension were also collected at 54 months, first grade, and third grade. Broad oral language skills at 36 months were strongly related to letter identification and word reading skill at 54 months and in first grade. These associations at those data points were only revealed by including a variety of oral language measures. For example, vocabulary scores alone did not predict word reading in the first grade. The oral language measures in combination were most predictive of word reading ability. Reading comprehension ability was assessed at third grade in the same cohort of children and a similar pattern emerged. Analyses revealed that comprehensive language skill at preschool contributed

to third grade reading comprehension performance. The findings provided evidence that a unique and complex relationship exists between preschool language oral language and reading skills.

In a series of studies, Catts, Fey, Zhang, and Tomblin (1999, 2002) investigated the role of oral language in reading development by exploring the phenomenon in a large group of children followed from kindergarten through the tenth grade. The children were a part of a larger epidemiological study on the prevalence of language impairment in kindergarten children (see Tomblin, Records, Buckwalter, et al., 1997). The first study (Catts, Fey, Zhang, & Tomblin, 1999) reported on a subset of children classified as good and poor readers (N = 604). The results provide strong support for the claim that multi-factorial oral language skills play a role in reading development. Children who were poor readers in the second grade had deficits in both phonological skills and other receptive and expressive oral language skills in kindergarten. However, their oral language skills contributed independently to reading comprehension ability in second grade (as in the NICHD-ECCRN, 2005 study). In addition, 70% of the children labeled poor readers had deficits in oral language and these deficits were particularly pronounced in the area of grammatical skills (i.e., syntax). These connections between oral language skills and reading comprehension were still apparent in fourth grade (Catts et al., 2002).

This long arm of oral language influence on reading achievement is reinforced by other studies that followed children into the later grades. Storch and Whitehurst (2002) reported the connection between components of oral language skill and reading development in a cohort of children followed from Head Start through the fourth grade. In their study, phonological awareness skills contribute strongly to the acquisition of very early literacy skills of preschool and kindergarten children. However, oral language skills, including receptive and expressive

and narrative production, influence phonological awareness skills thus providing indirect contributions to the skills that support emergent literacy. The relationship between oral language and reading achievement shifts in first and second grades with phonological skills taking a front seat as children master the skills necessary to decode text. The authors contend that at these grades the relationship is still significant but has an indirect effect while decoding of written text takes a direct role in reading achievement (pg. 943). In third and fourth grades, the influence of oral language on reading achievement, particularly reading comprehension, changes yet again. Oral language skills, and importantly concurrent oral language skills, contribute unique variance to reading comprehension ability of third and fourth grade children in the study.

7. Oral discourse production and reading comprehension skills

The role of oral language skills in the development of reading and particularly reading comprehension has been scientifically validated by studies presented in the previous section. However, those studies failed to give a clear indication of which oral language skills impact reading development and at what stage these influences manifest. What these studies do offer is a view of the broad language skills that underlie the process of learning to read and understand text.

Nowhere is the breadth of language skills made more evident than when extended discourse, such as that produced in narratives and exposition, is produced by individuals. Storch and Whitehurst (2002) took narrative production data of the children in their study at age three; however, they did not find them predictive of reading skills in first and second grade. The NICHD (2005) study; however, reminds us that oral language skills decrease in their predictive power precisely in the first and second grade, thus, the Storch and Whitehurst data does not provide an opportunity to explore whether oral narrative production impacts reading

comprehension ability in third grade and beyond when word reading has become more firmly established. Likewise, the NICHD study studied a cohort of children through third grade but did not include an oral narrative data. Therefore, there was again no opportunity to uncover connections between narrative discourse and later reading achievement.

Fortunately, Feagans and Short (1984) provided an early glimpse into the association between oral narratives and reading achievement in their study. One aspect of the study investigated differences in narrative production via retell of children with reading impairment and their typically developing peers. The children were followed over a three-year period, thus, between-group and within-group differences were analyzed by the researchers. The measures analyzed were micro-linguistic features of the narratives including total number of words, total number of utterances, the proportion of complex utterances, and the proportion of utterances containing non-referential pronouns. Narrative comprehension and content measures were also collected. On the micro-linguistic features analyzed, results favored the typically developing, comparison group on complex utterances and non-referential pronouns measures. Children in the reading disabled group produced fewer complex utterances and more non-referential pronouns than the comparison group over the 3-year period of study. The narrative comprehension and content measures used in the study did not distinguish the two groups.

Because of the cross-sectional design, Feagans and Short were also able to compare the performance of the groups by age. For both the children with and without reading disability, older children's performance on the dependent micro-linguistic measures improved over time. The proportion of complex sentences did not change over time in either group but performance may have been constrained by the retell procedure. Non-referential pronoun use continued to distinguish the groups by reading ability status only.

The authors also looked at the relationship among reading achievement, intelligence quotient (IQ), and discourse ability of the participants through correlational analyses. These analyses revealed a moderate association between discourse ability and reading achievement, both word reading and reading comprehension (no association found for IQ). This relationship, however, was only present for the children with reading disability. The authors hypothesized that a “threshold effect” occurred, wherein children with typical reading development no longer depend on their oral language skills in the same way as their peers with reading disability.

Feagans and Short’s study advanced the long hypothesized premise that children with identified reading disability presented with oral narrative production deficits not explained by their oral narrative comprehension ability or other mediating factors (i.e., IQ performance). They concluded that the ability to produce narrative had practical relevance for children with reading comprehension difficulties. Whether the deficits in narrative production were causally connected to reading comprehension deficits or whether poor reading comprehension and experience with texts causes deficits in narrative production remained unclear. Their study also provides support for the comprehensive language approach to reading development. The results validated that analysis of linguistic features of discourse production, in this case narrative, could serve as a viable and useful method of gathering information on broad-based language skills that are related to reading ability. Specifically, their study offered interesting insight into the connections between discourse and reading comprehension in children with differing reading ability. Fortunately, several other researchers in the intervening years have undertaken research to investigate whether oral discourse level skill offers unique information about the reading development of children.

8. Longitudinal studies

There is some recent evidence that oral discourse plays a role at even early stages of reading acquisition (Griffin et al., 2004; Reese et al., 2010; Roth et al., 2002; Roth et al., 1996; Tabors et al., 2001). The relationship between narrative discourse and reading development has most often been studied (Roth et al., 2002; Tabors et al., 2001) but genre effects on reading development has also been explored in at least one study (Griffin et al., 2004). Tabors et al. (2001) conducted a longitudinal study that followed a cohort of racially and ethnically diverse children from preschool through high school. The data was collected as a part of the Home-School Study of Language and Literacy Development, a project designed to investigate social requisites to literacy attainment in children. Their research found connections between productions of narrative retell in kindergarten and reading achievement in the fourth and seventh grade. Narrative production skills were positively correlated with performance on a school-wide standardized reading comprehension test. Though these were promising results, the authors warned that the results of the children's early language and later literacy scores were likely influenced by a number of intervening factors such as reading instruction, family language experiences, individual differences in independent reading behavior, and test-taking skills.

The Tabors et al. (2001) research did not address concurrent language ability of the children or the links between reading comprehension and narrative discourse before the fourth grade. In addition, all researchers do not find a clear association between oral language and reading. For example, Roth et al. (2002) designed a study to explore which components of oral language were most predictive of early reading skills at younger grades. They followed a group of diverse kindergarteners through second grade and collected data on language measures representing phonological (e.g., phonemic awareness tasks) and non-phonological (e.g.,

vocabulary, morphology, syntax, and narrative discourse) aspects of language, as well as, reading measures, including print awareness, word reading, and reading comprehension. The narrative discourse task consisted of a familiar story generation and story grammar analysis of the propositions produced by participants served as the dependent measure. Narrative discourse skills at kindergarten did not emerge as a predictor of reading comprehension ability in second grade. The authors posit that children in second grade may still be immersed in the process of learning to read, via decoding, and that narrative discourse ability may be more important as children become more fluent, skilled readers. In support of this hypothesis, Snyder and Downing (1991) found that in children aged 8 to 14 with typical reading development, narrative discourse uniquely contributed to reading comprehension performance. Other studies cited in this review have also found that there is a positive relationship between oral narrative discourse when children are older (Tabors et al., 2001) and when they are experiencing difficulty learning to read (Feagans & Short, 1984).

A more recent study by Griffin et al. (2004) explored the influence of both narrative and expository discourse skills in early childhood and their relationship to later reading and writing skills. Discourse production data were taken when the children were five years old. Reading and writing data were collected when the children were eight years old. All children in the study were typically developing, from middle and working class backgrounds, and White. The narrative task was defined as narration during play and was analyzed using the Index of Productive Syntax (IPSyn; Scarborough, 1990), a micro-linguistic morphosyntax measure, and ‘high point’ analysis (Labov, 1972), a macro-linguistic discourse measure. The expository task was defined as description of a picture and was analyzed using measures of descriptive clause used, information units offered, discourse structure produced, and deictic words used. The

results of correlational analyses found that oral narrative discourse features such as evaluative statements and character mental states were moderately related to reading achievement. A moderate correlation was also found for information units produced in the expository task and reading achievement at 8 years of age. The IPSyn micro-linguistic measure of narrative or expository was not correlated with later reading achievement. Written narrative production at age 8 was also influenced by early childhood performance on both discourse tasks. The results bolster the argument that oral discourse skills play a role in the development of reading comprehension skills. The results also illuminate that different features of broad-based language skills are associated with later reading comprehension performance (e.g., evaluative and information units but not morphosyntactic).

A recent study by Reese et al. (2010) attempted to shed more light on this relationship by examining oral narrative discourse skills and reading achievement. Their study followed a group of New Zealand children from year 1 through year 3 of schooling (corresponding to ages 6, 7, and 8). Data on narrative production and word reading fluency were collected from the children. Word reading fluency measures were used as a proxy for reading comprehension ability (pg. 632). In a two-step study, the researchers first conducted correlational analyses of narrative production and reading fluency (word versus nonword) at age 6. They found a correlation between narrative ability and oral word reading fluency but above that found for nonword reading fluency. In the second study, the researchers explored whether the relationship would emerge between narrative production and reading fluency as the children aged. Word decoding and vocabulary skills were also entered as variables. At age 7, narrative production skills at age 6 predicted reading performance above and beyond reading fluency and vocabulary. The authors

also reported that this pattern of association continues with age with narratives emerging as a significant contributor to reading comprehension (Suggate et al., 2011).

In summary, the studies presented provide support for a comprehensive language approach to reading in which oral language skills, such as those represented by oral discourse are important to the development of reading comprehension. Cumulatively, the findings point to the unique insight that narrative discourse provides into the reading comprehension skills of children. Gillam et al. (1999) have posited that both narrative and expository discourse have connections to academic and reading outcomes in older children and there is growing evidence that this conclusion has merit and represent, as Kravencho (2009) observed, that oral language and reading are two sides of the same coin.

9. Oral narrative discourse production and reading comprehension in African American children

Narrative discourse skills have also been found to be related to the reading comprehension skills of AA school-age children. Typically developing AA children with “good” narrative skills as measured by amount of cohesion, episodic analysis (or propositional), and high point analysis also present with better scores on standardized measures of reading comprehension (Hester, 2010; Klecan-Aker & Caraway, 1997; Norris & Bruning, 1988, Smith, Lee, & McDade, 2001). Klecan-Aker and Caraway (1997) found that narrative analysis detected developmental changes between fourth and sixth grade AA children from middle class backgrounds. Norris and Bruning (1998) investigated the macrostructure language present in the narratives of kindergarten and first grade children classified as good and poor readers. Although, not a homogenous sample, 86 percent of the participants in their study were AA. Children

classified as good readers produced more story propositions and cohesive ties in their story retells, regardless of grade, than children classified as poor readers.

Several researchers have explored the relationship between oral language skills and literacy skills in AA children (McClure et al., 1983; Norris and Bruning, 1988; Hester 2010; Klecan-Aker & Caraway, 1997). The results of these studies have been mixed, in part, due to variations in elicitation and analysis procedures. A thorough search of the literature revealed three studies investigating oral narrative production of school-age AA children and reading achievement. Norris and Bruning (1988) investigated the narrative discourse skills of kindergarten and first grade children termed “good” and “poor” readers based on their performance on a state standardized reading test. Eighty six percent of the children in their sample were AA (129 out of 186 participants). They found that the group of “poor” readers performed less well in their production of narratives than “good” readers. Narratives were measured for cohesion using frequency and correct use of cohesive ties. Discourse quality was also assessed using propositional analysis of the stories. The children in the poor reader group used cohesion less effectively than their peers in the good reader group. The authors also reported that the children in the low reading group produced shorter stories overall.

Klecan-Aker and Caraway (1997) studied fourth and sixth grade AA children to ascertain the relationship between their reading achievement and the narrative they produced. Their results indicated that measures of narrative production were significantly correlated with reading achievement on the micro-linguistic measures of clauses per T-unit (i.e., clausal density) and a macro-linguistic measure of story grammar level. As in the Norris and Bruning study, the children with lower reading achievement produced shorter stories. The lower reading group also produced less subordination in their utterances. There was a correlation between the clausal

density measure used in the study and story grammar level. The authors hypothesize that level of subordination may be an indicator of overall story quality.

In a more recent investigation, Hester (2010) compared the oral narrative performance four groups of AA children; AAE-speaking typical readers (TR), AAE-speaking reading disabled readers (RD), SAE-speaking typical readers, and SAE-speaking reading disabled readers. High point analysis, a macro-linguistic measure of discourse quality, distinguished the narratives of typical readers from those with reading disability regardless of dialect status. Dialect was not a significant factor in displaying knowledge of narrative structure in reading disabled or typical readers. This finding was consistent with a study by Lass (1980) finding no significant relationship between dialect use and reading achievement. Hester's study provides some preliminary evidence that performance on narrative discourse can provide information related to the presence or absence of reading disability in AA children.

10. Oral expository discourse and African American children

A few studies have also explored the spoken expository language skills of children with language-based learning disabilities and specific language impairment in pre-adolescence (Scott & Windsor, 2000) and adolescence (Nippold, Mansfield, Billows, & Tomblin, 2008; Ward-Lonergan, Liles, & Anderson, 1999). These studies either lacked racial and ethnic diversity or racial and ethnic groups were not present in numbers significant enough to allow comparison along those parameters. This represents a significant void in the literature on the discourse skills of AA school-age children given that language sampling has repeatedly been identified as a culturally sensitive means of assessing the language skills of children from culturally and linguistically diverse backgrounds (Bliss & McCabe, 2006; Gillam et al., 1999).

In summary, research on the narrative and expository language of AA children with typical language, language impairment, and reading disabilities is quite limited (Klecan-Acker & Caraway, 1997; Stockman, 2010). This is problematic because normative information collected on children from mainstream backgrounds is not always generalizable to children from AA backgrounds. Gathering of evidence regarding discourse level skills needed for academic success and their relationship reading comprehension performance skills needs to be adequately addressed in this population of children. Language structure and quality demonstrated through spontaneous conversation and narratives appear related to reading comprehension ability in AA children (Craig et al., 2003; Hester, 2010; Klecan-Aker & Caraway, 1997). Results regarding the specific features of language impacting reading comprehension; however, have been inconsistent (Hester, 2010).

As stated previously, no studies currently exist that examine both narrative and expository genres in the spoken discourse of AA children. Further while studies have begun to examine the relationship between spoken narratives and reading comprehension in AA children, there are no studies investigating the role of spoken expository discourse in reading comprehension. The present investigation seeks to address some of these gaps in the literature by describing the productivity, syntactic, and discourse features of these two genres of discourse and their relationship to reading comprehension ability in third and fourth grade AA children. This information has important educational implications related to assessment identification, and remediation of language and literacy problems of children in need of supplemental reading instruction (as in Response to Intervention, RtI) and special education services.

III. METHODS

A. Participants

Participants were recruited from the third and fourth grades of a public elementary school in a small, suburban community near a major Midwest metropolitan area. Total school enrollment was 298 students in pre-kindergarten through fourth grade. The school-wide student demographics for race and ethnicity were 97% African American, 2% White, 2% Hispanic, and approximately 1% other. Students eligible for free and reduced lunch comprised over 95% of the total student population. The average class size for the third and fourth grades was 20 students during the current school year.

Academic performance as measured by state learning standards revealed a school with competitive achievement statistics. The most recent results available for the Illinois Standards Achievement Test (ISAT) indicated that approximately 75% of third graders and 70% of fourth graders met or exceeded state standards in reading achievement (Smith, 2011). Math achievement on the ISAT for the same period revealed that approximately 95% of third graders and 90% of fourth graders met or exceeded state standards (Smith, 2011). The participating school was a prior recipient of an Illinois State Board of Education Academic Improvement Award. Academic Improvement Awards recognize schools that have made significant gains in academic performance based on standardized test performance. The participating school was also a prior recipient of an Illinois State Board of Education Spotlight School Award. Spotlight Awards are conferred upon high poverty schools that show exemplary academic performance. The educational environment of the study participants represented a high performing low income school according to state criteria (Illinois Interactive Report Card, 2012).

B. Recruitment

Approval for the consent and data collection procedures for this study was obtained from the University of Illinois Institutional Review Board. During the initial phases of recruitment, consent forms were sent home to all 83 students enrolled in the third and fourth grades at the time of the study. The form requested parental consent for their child to participate in the research study to include the following: 1) access to school archival on their child in the form of demographic data (e.g., gender, date of birth, primary language, free/reduced lunch status), hearing and vision status, standardized reading test scores (i.e., Group Reading Assessment and Diagnostic Evaluation (GRADE; Williams, Cassidy, & Samuels, 2001), Illinois Standards Achievement Test (ISAT), and AIMSweb curriculum-based reading fluency measures), and review of special education records for those students with a current Individualized Education Plan (IEP); 2) collection of one narrative and one expository language sample; and 3) administration of a standardized vocabulary measure. In addition, the consent form asked parents to report their child's birthdate, their child's race-ethnicity designation, the language or languages spoken in the home, and the primary caregiver's highest level of education attained. The parents' provision of this demographic information was voluntary and requested to verify information contained in school records. Omission did not preclude participation in the study. Every student who returned a signed consent form received a small set of school supplies or an age-appropriate book regardless of whether consent was given to participate in the study.

Parental consent was obtained for 70 third and fourth grade students. The participants met several inclusionary criteria. All participants were AA and monolingual speakers of English according to school records and parent report. Records review also revealed that participants had no history of hearing impairment or uncorrected visual impairment. In addition,

participants had no reported history of developmental or acquired neurological impairments, such as cognitive disability, autism spectrum disorders, traumatic brain injury, or progressive neurological disease. Five of these students then transferred to other schools prior to the beginning of study. Seven additional students were excluded because their race and ethnicity designation was not AA or the language of the home was not English. This reduced the potential participant pool to 58 students. Data were collected on all 58 students who met the initial eligibility criteria (i.e., AA, no history of neurological or sensory impairment, and native English-speaking) as the primary investigator was blind to students' reading scores during the data collection process.

For purposes of this study, students were classified in the low reading comprehension group (LR) if they obtained a score of 80 or below on the Comprehension Composite of the GRADE. Students were classified in the average reading comprehension group (AR) if they obtained a score between 90 and 115 on the Comprehension Composite of the GRADE. These criteria are consistent with research investigating connections between language and reading comprehension ability in school-age children (see Nation et al., 2004; Nation, Cocksey, Taylor, & Bishop, 2010). Fifteen students were excluded from data analysis for this study because they obtained scores between 81 and 89 on the GRADE comprehension composite. The school-wide third and fourth grade scores on the GRADE comprehension subtest and composite scores associated with this study are presented in Appendix B.

The final sample for the investigation included 24 third grade and 19 fourth grade AA students (N = 43). The LR group was comprised of 21 students. Along with the criteria of scoring 80 or below on the Comprehension Composite of the GRADE, there were also five students receiving Response to Intervention (RtI) supplemental services to remediate reading

difficulties and two students receiving special education services for specific learning disability and speech-language impairment. The AR group consisted of 22 students. Students in the AR group obtained scores of 90 or above on the Comprehension Composite of the GRADE. No students in the AR group were receiving RtI or special education services. The third grade participants ranged in age from 8 years, 2 months to 9 years, eight months. Fourth grade participants ranged in age from 9 years, 3 months to 10 years, 10 months. Demographic characteristics for the participants are presented in Table 1.

TABLE 1
PARTICIPANT DEMOGRAPHICS BY GROUP AND GRADE, NUMBER (PERCENTAGE)

Participant Characteristics	3rd LR	4th LR	LR Group Totals	3rd AR	4th AR	AR Group Totals
<i>N</i>	11 (25.6%)	10 (23.3%)	21 (48.8%)	13 (30.2%)	9 (20.9%)	22 (51.2%)
Age						
Mean	8.86	9.23	9.04	8.71	9.27	8.94
SD	.34	.58	.49	.38	.57	.53
Gender	5 (45.5%)	4 (40%)	9 (42.9%)	6 (46.2%)	4 (44.4%)	10 (45.5%)
Male	6 (54.5%)	6 (60%)	12 (57.1%)	7 (53.8%)	5 (55.6%)	12 (54.5%)
Female						
Free/Reduced Lunch	11 (100%)	10 (100%)	21 (100%)	13 (100%)	9 (100%)	22 (100%)
Educational Classification						
General Education	5 (45.5%)	9 (90%)	14 (66.7%)	13 (100%)	9 (100%)	22 (100%)
Response to Intervention	5 (45.5%)	0 (0%)	5 (23.8%)	0 (0%)	0 (0%)	0 (0%)
Special Education	1 (9%)	1 (10%)	2 (9.5%)	0 (0%)	0 (0%)	0 (0%)

C. **Materials**

1. **Reading comprehension measure**

Once parent consent and participant assent had been gained, participant scores from the GRADE were used to obtain a reading comprehension level for group designation. The GRADE is a norm-referenced standardized reading test with documented reliability and validity. Prior to the initiation of the current study all third and fourth grade students were administered the GRADE in large group settings (e.g., classrooms) as a part of school data gathering on reading achievement. All third grade students had been administered Level 3 and all fourth grade students had been administered Level 4 of the GRADE. The GRADE contains subtests that measure word decoding, reading comprehension, reading vocabulary, and listening comprehension. Although scores for the entire battery were available, only the subtests corresponding to the Comprehension Composite Score, i.e., Sentence Comprehension and Passage Comprehension were used to determine group membership. The Sentence Comprehension subtest is designed to measure a student's ability to understand a written sentence as a total unit by simultaneously demonstrating knowledge of vocabulary, grammar, and sentence complexity. The Passage Comprehension subtest is designed to measure a student's ability to understand written material of extended length on a variety of genres (poetry, fictional story, informational, etc.). Standard scores were used to determine group membership.

Fugate & Waterman (2003), in their review, found that the GRADE had reliability coefficients for the total test score at the .90 level or better across all grade levels. The GRADE was also rated as having well-developed content and moderate to strong criterion-related concurrent validity when compared to other group and individually administered reading tests. Fugate and Waterman also noted that the GRADE was a psychometrically sound instrument.

The GRADE also has an established record in research literature as a tool to measure reading levels and reading growth in school-age children (Cantrell & Carter, 2009; Denton, et al., 2011; Fritschmann, Deshler, & Schumaker, 2007; Gofredda & DiPerna, 2010; Hitchcock, Kurki, Wilkins, Dimino, & Gersten, 2009; Mancilla-Martinez, Kieffer, Biancarosa, Christdoulou, & Snow, 2011; Riedel, 2007; Spycher, 2009). In addition, validation and intervention studies in the area of reading have the used the GRADE (Vaughn, Cirino, et al., 2010; Vaughn, Wanzek, et al., 2010; Riedel, 2007). These studies have contained significant percentages of AA elementary and secondary students in their participant samples (40 – 92%).

During data analysis, participants were divided into two groups according to their performance on the Comprehension Composite of the Group Reading Assessment and Diagnostic Evaluation (GRADE; Williams, Kassidy, & Samuels, 2001). As indicated previously, third grade students had taken the third grade version (Level 3) of the GRADE, while fourth grade students had taken the fourth grade version (Level 4) of the same test. These versions did not contain identical content. The premise of the research was not to analyze reading comprehension levels from a developmental perspective. Rather, the study's main aim was to ascertain how students who score within average limits compare to students who score below average limits on reading comprehension measures perform on narrative and expository language measures.

2. Vocabulary comprehension

The Peabody Picture Vocabulary Test – Fourth Edition (PPVT-IV; Dunn & Dunn, 2007) was administered to describe participants' receptive vocabulary levels. The PPVT-IV is commonly used in language and literacy research to estimate overall language ability. Internal consistency of the PPVT-IV is .94 to .95 by age and grade. The average test-retest reliability by

age is .93. The PPVT-IV is moderately correlated with the CELF-4 Core Language scale at the .72 level. The PPVT-IV is also moderately correlated with the GRADE Total Test score for levels (grades) 3 and 4 (Dunn & Dunn, 2007).

The descriptive measures collected from the participants are reported in Table II.

TABLE II

MEANS AND STANDARD DEVIATIONS FOR DESCRIPTIVE MEASURES		
Measures	Grade	
	3	4
GRADE Comprehension Composite (CC)*	83.00 (14.89)	83.16 (14.08)
PPVT-IV Standard Score (Grade norms)*	84.00 (13.28)	83.58 (14.31)

*reported in standard scores

The third and fourth grade students were compared on the reading comprehension measures collected to ensure that there were not within or between group differences in their scores. An analysis of variance was conducted with grade of the participant entered as the independent variable. The GRADE Comprehension Composite score was entered as the dependent variable. The results of the ANOVA revealed no statistically significant difference between in their GRADE Comprehension Composite standard scores of the third and fourth grade students in the study sample ($F(1, 41) = .001, p = .972$).

The group means and standard deviations on the GRADE and PPVT-4 for the low reading comprehension (LR) and average reading comprehension groups are presented in Tables

III and IV. School-wide scores on the GRADE Comprehension Composite for all third and fourth grade students are included in Appendix A.

TABLE III
MEANS AND STANDARD DEVIATIONS FOR GRADE COMPREHENSION
COMPOSITE BY GRADE AND GROUP

Group	Grade		Total
	3 M (SD) N = 11	4 M (SD) N = 10	
LR	68.18 (6.57) N = 11	71.20 (6.37) N = 10	69.62 (6.50) N = 21
AR	95.54 (4.16) N = 13	96.44 (4.80) N = 9	95.91 (4.34) N = 22

*available in stanines, **available in stanines and standard scores

TABLE IV
MEANS AND STANDARD DEVIATIONS FOR PPVT-4 BY GRADE AND GROUP
(GRADE NORMS)

Group	Grade		Total
	3 M (SD) N = 11	4 M (SD) N = 10	
LR	76.55 (6.80) N = 11	75.80 (10.16) N = 10	76.19 (8.35) N = 21
AR	90.31 (14.33) N = 13	92.22 (13.59) N = 9	91.09 (13.74) N = 22

*reported in standard scores

3. Language samples

Two oral language samples, one expository and one narrative, were collected from each participant. The procedure for collecting the explanation of a favorite game or sport (FGS) is adapted from protocols developed by Miller & Iglesias (2010) and Nippold et al. (2005). The participant was asked to name his or her favorite game or sport and to explain why it was his or her favorite. The participant was then asked to explain how to play and win the game or sport. Narratives were elicited using a well-established fictional story generation procedures as in Berman and Slobin (1994). Wordless picture books have been successful in eliciting narratives from school-age children from a variety of social, cultural, and linguistic backgrounds (Berman, 1988; Botting, 2002; Fiestas & Peña, 2004; Isbell, Sobol, Lindauer, & Lowerance, 2004; Muñoz, Peña, Gillam, & Gulley-Faehnle, 2003; Olley, 1989; Pearce, 2003; Pena et al., 2006; Wetherell et al., 2007).

D. Data Collection Procedures

Language samples were collected from all students who returned a positive consent and met the initial inclusionary criteria for participation in the study (i.e., AA, no history of neurological or sensory impairment, and native English-speaking). Each student met individually with the primary investigator in a quiet classroom at the school. The single session lasted between 30 to 45 minutes. At the time of data collection, the primary investigator was blind to participants' reading comprehension scores on the GRADE.

First, the participant engaged in a short conversation with the investigator about a favorite movie, school field trip, or family activity. This portion of the procedure served to build rapport with the participant. After completion of the conversation each participant produced one expository and one narrative spoken language sample. The expository task followed the

conversation, as the elicitation procedures (interview-like with verbal prompts) flowed more naturally from a conversational task (as in Nippold, Hesketh, Duthie, & Mansfield, 2005; Nippold, Mansfield, & Billow, 2007). The narrative language sample, a more contrived task, was collected immediately after the expository sample and just prior to the standardized vocabulary measure. The elicitation procedures for narrative and expository language samples are contained in Appendix C and D. The conversation, expository, and narrative language samples were audiotaped for later transcription and coding. The session concluded with administration of the standardized vocabulary measure, the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007). The order of presentation was the same for each participant. The small number of participants precluded the counterbalancing of procedure orders as statistical analyses would have lacked sufficient power.

Fidelity of data collection procedures was ensured by having a written script of the narrative and expository elicitation protocol available to the primary investigator for reference at all times. In addition, the primary investigator listened to the audiotapes of the first four days of data collection to confirm that all procedures in the elicitation protocol were adhered to and that there was general consistency in the number of prompts provided to each participant.

E. Research Assistant Training

A graduate student in communication sciences and disorders was recruited to assist with transcription of language samples. The research assistant met the following criteria: 1) native speaker of English; 2) prior experience working with school-age child speakers of AAE; 3) completion of two, 2-hour training sessions and one self-study assignment prior to participating in transcription duties; and 4) availability to assist with the research project during the fall and

spring semesters. The research assistant participated in two training sessions regarding data transcription procedures. The first training session consisted of a project overview, a discussion of duties, a tutorial on the SALT software program, and scheduling. The investigator engaged the research assistant in guided practice of language sample transcription and coding of the narrative and expository samples. The research assistant received a project training manual and the SALT manual for study and reference. An independent practice language sample transcription and coding assignment from pilot data were also assigned. This assignment was to be completed with results submitted to the investigator for review prior to the second training session. In the second session, the purpose of the research project and the data transcription procedures were reviewed. Any problems revealed by review of the independent practice session were resolved with additional one-on-one training session with the PI.

F. Data Transcription

All spoken language samples were recorded using an Olympus VN-6200PC digital voice recorder. Spoken expository language samples were orthographically transcribed verbatim, including maze words (e.g., um, er, uh, repeated words) by the graduate assistant. Transcribed samples were separated into terminal units (T-units). The purpose of the T-unit is to segment continuous language. A T-unit consists of one main clause plus any subordinate clauses or non-clausal structures attached to or embedded in the main clause. Only complete and intelligible T-units were be used for analysis of productivity and syntactic measures. Abandoned utterances and utterances containing unintelligible portions were excluded. The discourse quality scoring included both complete and incomplete utterances during analysis. Unintelligible segments; however, were excluded from discourse quality analysis.

After the initial transcription was completed by the graduate assistant, all transcribed samples were subjected to verification by the principal investigator. Verification procedures consisted of the principal investigator replaying all digital audiofiles and checking each transcript for accuracy. Any inaccuracies (e.g., maze words, unintelligible sections, T-unit segmentation) were corrected by the principal investigator. Four weeks later the principal investigator again replayed the audiofiles and rechecked all language samples for accuracy in content and T-unit segmentation. Once verification procedures were completed, the transcripts were transferred into the SALT database (Miller & Iglesias, 2010), for data analysis.

G. Data Coding and Analysis

Each narrative and expository language sample was analyzed for selected productivity, syntactic, and discourse features of language. The following dependent measures are discussed separately. A summary of productivity and syntactic measures used for both tasks are also presented in Table V.

**TABLE V
DEPENDENT VARIABLES**

Level	Dependent Variable
Microstructure	
Productivity	Total Number of T-units (TNT)
Syntactic Complexity	Mean Length of T-unit inwords (MLTUw) Clausal Density (CD)
Macrostructure	Discourse Quality Composite Score

Language Productivity. The present study used total number of T-units (TNT) to measure this particular language feature. This particular measure for productivity was used to quantify how much an individual talks during a language sample. The TNT consists of the number of utterances produced in that same sample and is calculated automatically in SALT. This measure is used widely in the research literature and can lend information regarding developmental and ability differences in children (Berman & Verhoeven, 2002; Nippold, 2009; Scott & Windsor, 2000).

Syntactic Complexity. Several measures have been used consistently in the literature to help researchers gain information about the level of syntactic complexity present in language samples. Research on the syntactic features present in the language samples of AA children has focused largely on identifying syntactic at the word level (i.e., morphosyntax) associated with African American English (AAE) dialect. All participants in the current study produced some features of AAE dialect in their oral discourse samples; however, dialect features were not a focus of this investigation. Non-contrastive features of dialect are those language features that are shared by a standard language and a dialect of that language (Jackson & Pearson, 2010). Syntactic measures that represented non-contrastive feature of language ability at the sentence level (i.e., MLTU and CD) were chosen for the current study. These measures are believed to provide better indicators of language ability than standardized language tests in AA children (Craig & Washington, 1994; Oetting & Newkirk, 2008; Smith, Lee, & McDade, 2001).

Research conducted by Smith et al. (2001) identified sentence level syntactic measures, such as mean length of T-unit and mean number of clauses per T-unit (also called 'clausal density'), as a culturally fair measures of language ability in assessing AA children who were also speakers of AAE. These findings have been supported by other researchers (Craig &

Washington, 1994; Oetting & Newkirk, 2008). The mean length of T-unit in words (MLTU_w) is calculated directly from SALT. This measure has been routinely employed by several researchers in investigations of syntactic complexity in both narrative and expository discourse (Berman & Nir-Sagiv, 2004 & 2007; Berman & Verhoeven, 2002; Nippold, 2009; Nippold et al., 2005; Scott & Windsor, 2000). MLTU in words has also proved a reliable developmental indicator in investigations of AA child language (Craig, Washington, & Thompson, 2005; Horton-Ikard, 2009). The clausal density measure was obtained by hand-coding of main and dependent clauses by the principal investigator. The number of clauses contained in each T-unit was entered by hand into the SALT database using the subordination index function. Clausal density (CD) was calculated by dividing the total number of main, adverbial, relative, and verb complement subordinate clauses by the total number of T-units, as in Berman & Nir-Sagiv (2007) and Scott & Windsor (2000). This CD figure was calculated directly by the SALT program after hand-coding was completed for each language sample separately. Detailed definitions of T-units, main clauses, dependent clauses, fragments, and a clausal coding key are contained in Appendix B.

Discourse performance for both tasks was measured according to separate discourse quality scoring system adapted from the research literature. For the narrative task, the discourse analysis of the story generation was an adaptation of well-established scoring rubric frameworks used in narrative research with the *Frog Where Are You* (FWAY) story (Bamberg & Marchman, 1990; Norbury & Bishop, 2003; Reilly, Bates, & Marchman, 1998). The FWAY story follows a familiar story structure: an introduction of the character and setting (the boy, dog, and frog); initiating event or problem (the frog escapes from the jar and the boy wants the frog back); attempts to solve the problem (episodes of the boy searching for the frog in various places); and

finally a resolution and successful attainment of the goal (the boy finds his frog, now with his own family, and takes a baby frog home instead). Aspects of story related to character development and pronoun reference were also included in the scoring system as these dimensions have been found to successfully detect ability and developmental differences in children (Miranda, McCabe, & Bliss, 1998; Westerveld, 2008). Twelve categories, which corresponded to the major story plot components, were used to rate the quality of the participants' narratives. These categories were derived from research on episodic analyses conducted by Bamberg and Marchman (1990) and Reilly, Bates, & Marchman (1998). Their research identified eight major episodes: setting, instantiation (initiating event), five search sequences, and resolution. The discourse analysis included these episodes; however, the setting, search sequences, and resolution were further divided to completely capture the most salient story components. The setting dimension was incorporated into the story introduction that included a subcategory for character introduction. The search sequences were expanded to include the two initial searches for the frog that occurred in the room and at the boy's window. The resolution included an additional category designed to capture whether the participants were able to infer that the boy takes home a baby frog instead of his original pet frog at the end of the story. Each category received a scaled score of 2, 1, or 0 based on the number of critical elements provided for each. The critical elements for each category were derived from Norbury and Bishop (2003). The number of critical elements was not equivalent for each category (range 2 to 6); therefore the proportion of critical elements contained within each category served as the metric for scoring. Participants received a score of 2 if they included all or most of the critical elements necessary to relate the story component for the category (75 – 100%). A score of 1 was obtained if 50 to 74 percent of the critical elements were present for the category. A score of 0

was earned if the participant provided less than 50 percent of the critical elements needed to relate the story component. A total of 24 points was possible. A detailed description of scoring is presented in Appendix E.

Research on oral expository discourse in young children is limited; particularly those dimensions of discourse related to macrostructure. The discourse analysis of FGS explanation was adapted from procedure developed by Evans and Rubin (1983) and Miller and Iglesias (2010) for use with school-age children. The scoring rubric was modified to account for differences in elicitation procedures used in the current project and the developmental level of participants. Four categories of expository macrostructure were chosen for scoring the FGS task based on major components identified by Evans and Rubin (1983) and Miller and Iglesias (2010): 1) Set-up of Play, 2) Course of Play, 3) Strategy, and 4) Coherence. The scoring rubric was also reflective of the specific elicitation procedures employed in the study. Each category received a scaled score of 1 or 0. A score of 1 was received by participants if they provided information in their sample related to the category. A score of 0 was given if the information related to the category was completely absent, erroneous, or if the response was so vague that the information offered could be applied to any generic sport. A total of 4 points were possible (see Appendix F) for detailed scoring instructions.

H. Inter-rater Reliability

Two independent examiners served as the second raters for the study. One rater conducted reliability for T-unit segmentation and clauses per T-unit (clausal density). The second conducted reliability for the discourse scoring. Each rater participated in a single training session with the principal investigator. In the training session the codes were explained verbally and illustrated by way of a code book. Each rater and principal investigator then practiced

coding on sample transcripts and discussed coding until 80% agreement was reached. The raters then coded 15% of the narrative and expository discourse samples independently.

Disagreements in T-unit segmentation were listened to by both the first rater and the principal investigator until 100% agreement was reached. The first independent examiner also coded 15% of the language samples for the number of clauses per T-unit. The second rater, experienced in discourse analysis, provided reliability data for discourse rating. A second independent examiner coded 15% of the transcribed language samples for discourse rating by an independent examiner trained in the procedure. Both independent examiners were blinded to the participants' group membership.

Inter-rater reliability was established by conducting a point-by-point agreement for each of the following dependent variables: T-unit segmentation, number of clauses per T-unit, and discourse rating score. Percent agreement was calculated using the following formula: number of agreements divided by the number of disagreement plus agreements multiplied by 100 for each measure separately. Percent agreement for was 97% for T-unit segmentation; however, since the T-unit provided the basis upon which the clausal density measure was analyzed, discussion took place between the independent examiner and the principal investigator until agreement reached 100 percent. Percent agreement was 82% for number of clauses per T-unit, 87% for narrative discourse quality score, and 83% for expository discourse quality score.

I. Research Design

This study used a comparative group design to explore group differences in productivity, syntactic, and discourse quality features of language production. Descriptive and inferential statistical procedures were used to analyze data. For each discourse genre, descriptive

quantitative methods consisted of means and standard deviations reporting of the dependent measures. Inferential statistics consisted of multiple analyses of variance (MANOVA) with follow-up analysis of variance (ANOVA). Reading Comprehension group, grade, and gender were the independent variables. Total number of T-units, MLTU, clausal density, and discourse quality composite score served as the dependent measures. The narrative and expository tasks were analyzed separately in this study. MANOVA analyses were conducted on all variables. Significant main effects subjected to follow-up ANOVAs. Measures of effect size were reported using partial eta squared calculations. Effect sizes are reported using partial eta squared (η^2) to indicate the magnitude of the association between the effect and the dependent variable (Field, 2009). Partial eta squared (η^2) have values between 0 and 1.0. Values less than .1 represent a small effect size, values from .1 to .3 represent a medium effect size, and values larger than .3 represent a large effect size (Ferguson, 2009). Any interaction effects were subjected to post hoc analyses.

IV. RESULTS

The aim of this study was to answer two main questions. First, compared to AA children with average reading comprehension ability, do third and fourth grade children with low reading comprehension ability perform differently on productivity, syntactic, and discourse features that they produce on an oral narrative task? Second, compared to children with average reading comprehension ability, do third and fourth grade children with low reading comprehension ability perform differently on productivity, syntactic, and discourse features that they produce on an oral expository task?

A. Oral Narrative Performance

Four dependent variables consistent with the research literature were analyzed. Total number of T-units (NTNT) served as the dependent measure of productivity. The mean length of T-unit in words (NMLTU) and clausal density (NCD) served as the measures of syntax. A narrative discourse rating score served as the measure of global discourse quality (NDQ). The dependent variables were subjected to a MANOVA with group membership (LR vs. AR), grade (third vs. fourth), and gender (male vs. female) entered as the independent variables. The multivariate analysis revealed a significant main effect for group ($\lambda = .502$, $F(4, 32) = 7.93$, $p < .001$) and an interaction effect for Group by Gender ($\lambda = .603$, $F(4, 32) = 5.27$, $p < .01$).

Follow-up ANOVAs were conducted on each dependent measure. A statistically significant group difference was detected for mean length of T-unit (NMLTU) measure ($F(1, 35) = 28.34$, $p = .000$) with children in the AR group producing longer T-units than children in the LR group. Statistically significant group differences were also found on the clausal density (NCD; $F(1, 35) = 9.17$, $p = .005$) and discourse quality (NDQ; $F(1, 35) = 7.01$, $p = .012$).

measures. In both cases, the children in the AR group outperformed children in the LR group.

The mean scores, standard deviations, and results of analyses are presented in Table VI. Figures 1, 2, and 3 graphically display the group differences on the NMLTU, NCD, and NDQ measures.

TABLE VI
MEANS, STANDARD DEVIATIONS, AND F RATIOS OF NARRATIVE MEASURES

Measure	LR	AR	F	Effect (partial η^2)
NTNT	49.14 (14.00)	49.14 (13.55)	.030	.001
NMLTU	7.21 (.82)	8.75 (1.36)	28.34***	.45
NCD	1.11 (.10)	1.25 (.20)	9.17**	.21
NDQ	13.48 (4.46)	17.32 (4.54)	7.43**	.18

** $p < .01$. *** $p < .005$.

Note: NTNT = narrative total number of T-units; NMLTU – narrative mean length of T-unit; NCD = narrative clausal density; NDQ = narrative discourse quality

Figure 1. Average score of the NMLTU measure by reading comprehension group

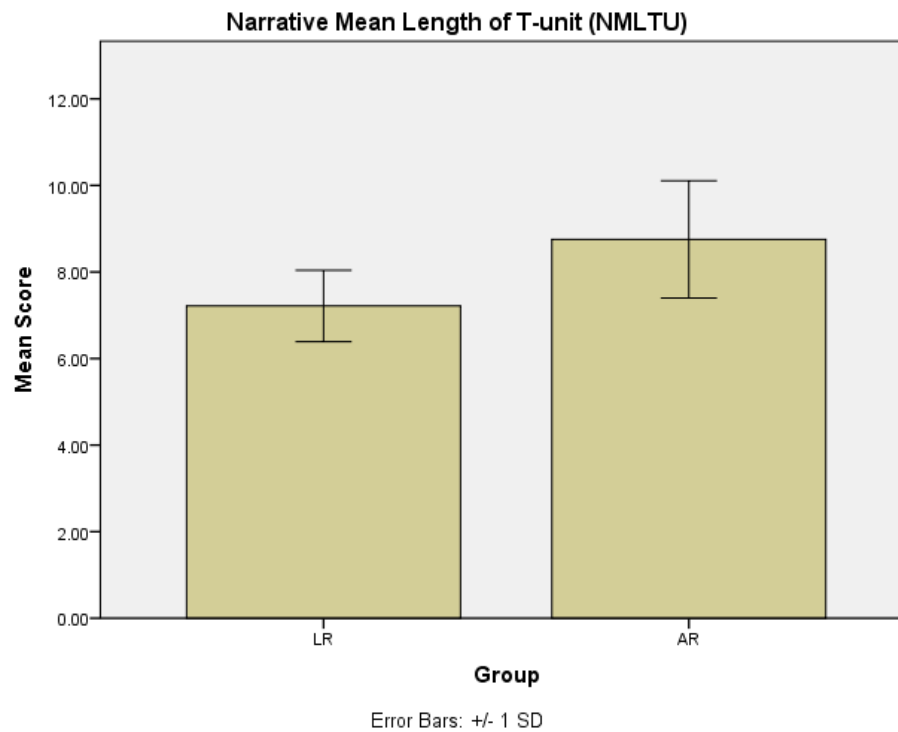


Figure 2. Average score of the NCD measure by reading comprehension group

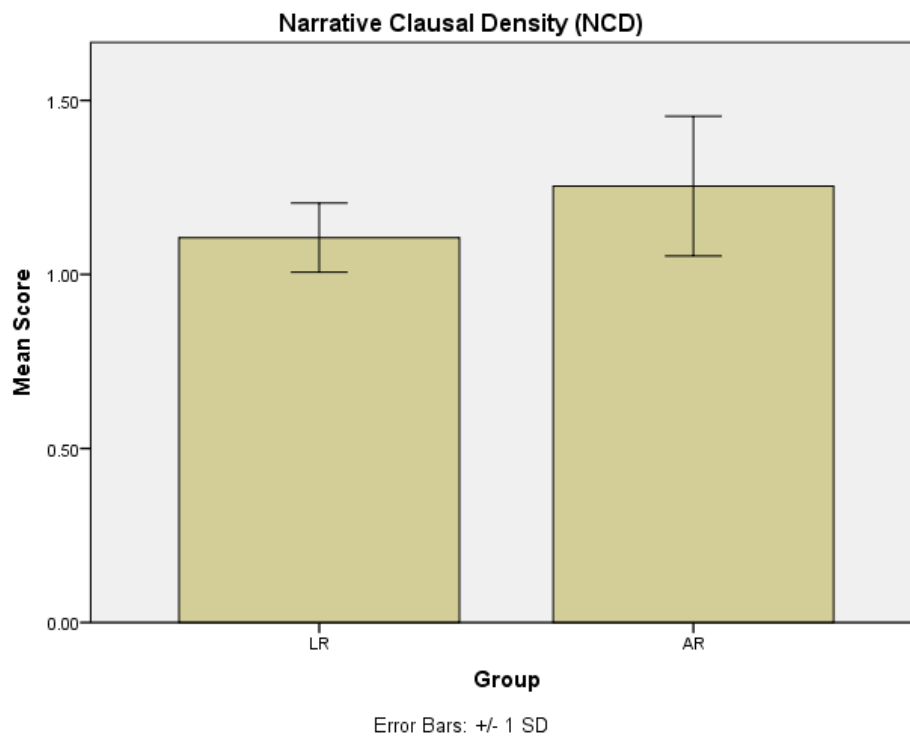
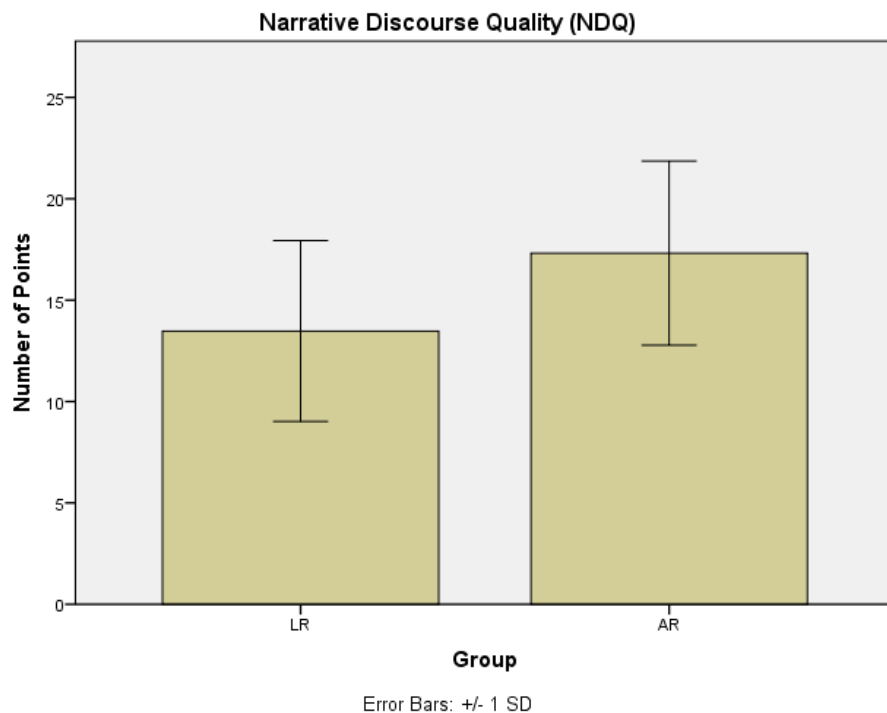
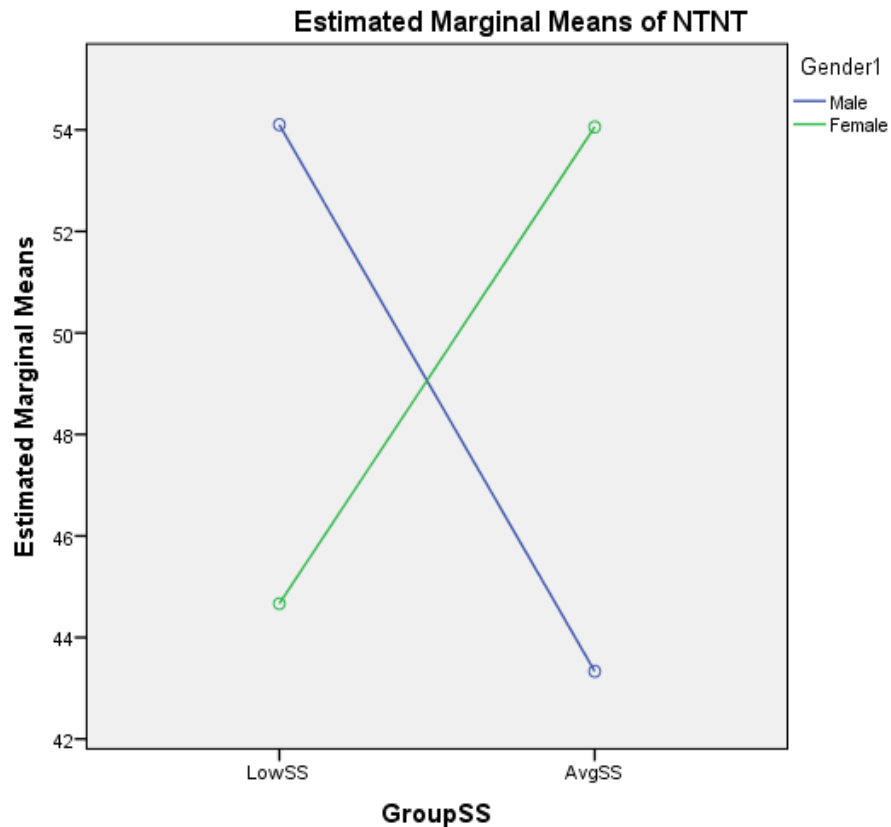


Figure 3. Average score of the NDQ measure by reading comprehension group



An interaction effect for Group by Gender was revealed by the multivariate analysis ($\lambda = .603$, $F(4, 32) = 5.27$, $p < .01$). Follow-up ANOVAs detected significant interactions only for the productivity measure, NTNT ($F(1,35)=6.45$, $p = .016$). . The interaction is graphically displayed in Figure 4. The between subjects tests demonstrated a statistically significant difference on the productivity measure (total number of T-units produced) in the participants' narratives ($F(1, 35) = 6.45$, $p = .016$. However, Scheffé post hoc analyses indicated no significant effect ($F(3, 39) = 2.062$, $p = .121$). The number of T-units produced by the LR male ($M = 55.11$), LR females ($M = 44.67$), AR males ($M = 43.90$), and AR females ($M = 53.50$) on the FWAY narrative did not differ significantly.

Figure 4. Estimated marginal means of NTNT



B. Oral Expository Performance

The second aim of this research study was to determine whether the children in the sample with low reading comprehension differed from the children with average reading comprehension on the selected dependent variables on the expository task. As with the narrative task, four dependent variables consistent with the research literature were analyzed. Total number of T-units (ETNT) served as the dependent measure of productivity. The mean length of T-unit in words (EMLTU) and clausal density (ECD) served as the measures of syntax. An expository discourse rating score served as the measure of discourse quality (EDQ). The dependent variables were subjected to a MANOVA with group membership (LR vs. AR), grade

(third vs. fourth), and gender (male vs. female) entered as the independent variables. The multivariate analysis revealed no significant main effect for group and gender. The mean scores, standard deviations, and results of analyses are presented in Table VII.

TABLE VII
GROUP MEANS, STANDARD DEVIATIONS, AND F RATIOS OF THE EXPOSITORY MEASURES

Measure	LR	AR	<i>F</i> *	Effect (partial η^2)
	<i>M</i> (SD)	<i>M</i> (SD)		
ETNT	45.52 (24.76)	36.82 (14.67)	2.70	.07
EMLTU	7.47 (1.09)	8.72 (1.91)	10.57	.23
ECD	1.30 (.14)	1.41 (.22)	5.59	.14
EDQ	2.19 (1.03)	2.86 (1.21)	3.38	.09

*all *F* values were non-significant

Note: ETNT = expository total number of T-units; EMLTU – expository mean length of T-unit; ECD = expository clausal density; EDQ = expository discourse quality

A significant main effect for grade ($\lambda = .728$, $F(4, 32) = 2.991$, $p < .05$) and interaction effect for Grade by Gender emerged from the data ($\lambda = .544$, $F(4, 32) = 6.71$, $p < .005$). Grade effects that emerged from the multivariate analyses on the EMLTU and ECD measure were shared with the Grade by Gender interaction effects, therefore further analyses of Grade effects were not conducted.

Analyses were conducted to uncover the source of the Grade by Gender interaction (see Figures 5, 6, and 7). Follow-up ANOVAs revealed statistically significant differences on the

TNT measure ($F(1, 35) = 20.29, p = .000$). Statistically significant differences also emerged on the MLTU ($F(1, 35) = 5.67, p = .05$) and CD ($F(1, 35) = 10.34, p = .05$) measures.

Figure 5. Estimated Marginal Means of ETNT

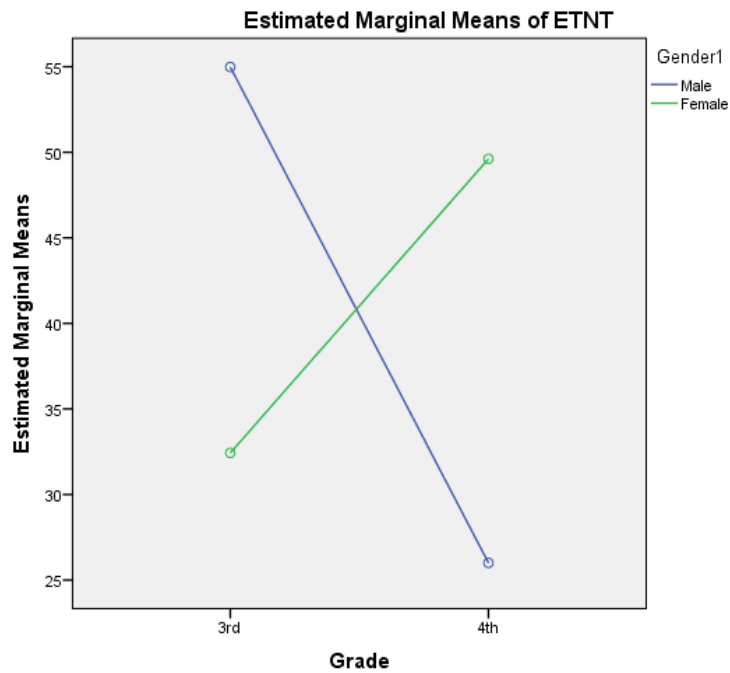


Figure 6. Estimated marginal means of EMLTU

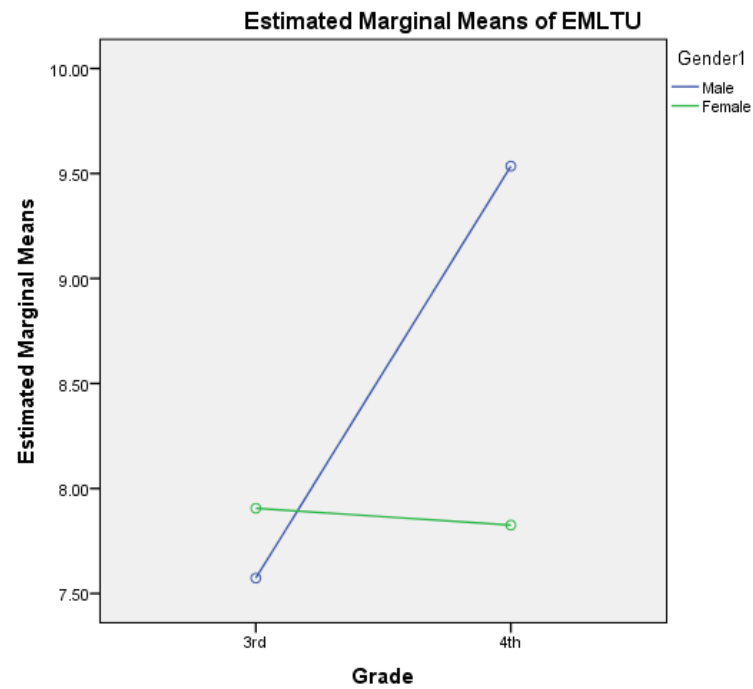
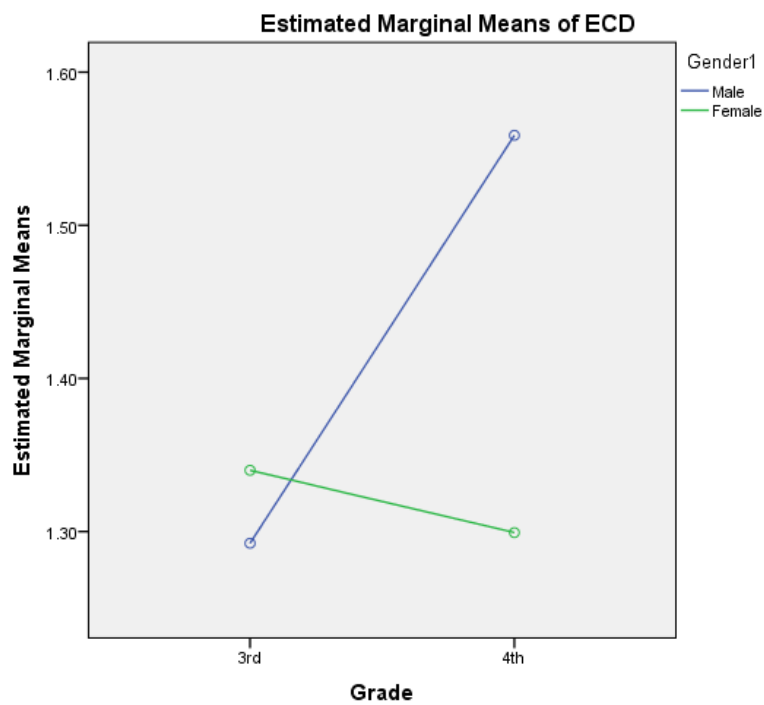


Figure 7. Estimated marginal means of ECD



Scheffé post hoc testing was conducted to compare males and females in the third and fourth grades on the total number of T-units, mean length of T-unit, and clausal density measure on the expository task. No significant effect was found for the mean length of T-unit measures ($F(3, 39) = 2.911, p = .052$). Results, however, revealed significant main effects for the total number of T-units ($F(3, 39) = 5.627, p = .003$) and clausal density ($F(3, 39) = 4.97, p = .005$). Specific results indicated that there was a statistically significant difference in the total number of T-units produced by the third grade males ($M = 53.55$) compared to the fourth grade males ($M = 26.00$). Further, the fourth grade males, produced more clauses per T-unit ($M = 1.55$) than the third grade males ($M = 1.29$) and fourth grade females ($M = 1.29$).

V. DISCUSSION

The need for this study is based on several interrelated dimensions. Most importantly, African American (AA) school-age children continue to lag behind their same age peers on state and national tests of reading achievement and obtain lower levels of academic success and graduation rates than the general population of American students. AA students also continue to be disproportionately over-identified in the special education categories of intellectual disability and emotionally and behaviorally disordered, while simultaneously being under-identified in the special education categories of learning disability and speech-language impairment, all diagnoses that can be impacted by delayed language development, inadequate instructional practices, and lack of success in school disorder (Donovan & Cross, 2002; Harry, 2007; Hosp & Reschly, 2004; Laing & Kamhi, 2003; Skiba et al., 2006). Given the critical role of language development in academic achievement, it is important to explore relationships among oral and written language domains in this population.

Although connections between phonologically based oral language skills and word reading have been well documented in the literature (Goswami & Bryant, 1990; Snowling, 2000; Storch & Whitehurst, 2002), oral language correlates of reading comprehension in older children are less well understood (Gardner-Neblett, Pungello, & Iruka, 2011; Griffin, et al., 2004; Price, Roberts, & Jackson, 2006; Roth, et al., 2002; Storch & Whitehurst, 2002). This study is firmly rooted in the comprehensive language approach to reading. The comprehensive language approach to reading acknowledges that: 1) oral language provides the foundation for early reading development, 2) oral language continues to impact reading development throughout schooling, 3) oral language influences on reading development change over time, and 4) oral language skills necessary for reading are likely functionally interdependent (Dickinson et al.,

2003). This study also draws from established lines of research on the language and literacy skills of AA school-age children. The first vein of research focuses on studies of narrative and expository discourse skills of children with and without reading comprehension difficulties. The second vein of research focuses on studies documenting the relationship between oral discourse skills and reading comprehension in AA children.

Results of the current study of confirmed previous findings on the relationship between narrative discourse and reading comprehension and extended them to new tasks, age groups, and ability levels. Narrative was selected as an important dimension of language growth because a growing research base describes the development of narratives in AA children. A modest number of studies showing a relationship between narrative production (e.g., personal, fictional retell, and fictional generation) and reading comprehension in AA children are also present in the literature (Hester, 2010; Klecan-Aker & Caraway, 1997; Norris & Bruning, 1988).

Expository discourse was also examined because of hypothesized links among oral language, reading, and text structures present in academic content areas (Fang, 2002, 2008; Griffin, et al., 2004; Schlepegrell, 2004). In fact, this study was also the first to explore the oral expository discourse skills of a sample of AA children. Expository discourse proved a viable means of eliciting extended discourse. Four dependent measures, representing both micro- and macro-linguistic features, were used to determine whether the children in the low reading comprehension group differed from children in the average reading comprehension group on narrative discourse abilities. Examples of the narrative and expository discourse produced by participants in the LR and AR groups are included in Appendix G and H, respectively.

A. **Narrative Discourse Abilities of Average versus Low Reading Comprehension Groups**

1. **Productivity**

Productivity as measured by total number of T-units had only been explored in one previous study on the narrative skills of AA children with differing reading comprehension ability (Klecan-Aker & Caraway, 1997). Fourth and sixth grade AA children generated a fictional narrative using a single picture stimulus after a model had been provided by an examiner. The fourth and sixth graders produced stories of similar length. The current study extends this finding to the use of a story generation task from a wordless picture book to younger groups of children with varying reading comprehension abilities. The children from the LR group produced narratives that were, on average, comparable in length to the children from the AR group. This suggests that the narrative task in the current study was successful in eliciting extended narratives from the participants but did not detect any group differences based on the amount of talk produced (i.e., productivity). However, previous research on children with identified reading disabilities or language disabilities has identified productivity as a distinguishing feature between the narratives of children with LLD and children with typical reading and language development (Scott & Windsor, 2000).

2. **Syntactic differences between the groups**

Although the two reading comprehension groups generated stories of similar length, the syntactic complexity of their utterances differed significantly. Children in the LR produced shorter utterance and fewer clauses per utterance than children in the AR comprehension group. This finding suggests that shorter utterances may not allow the expression of the same types of elaboration and content as those present in longer utterances. This finding

was consistent with those of Rivers (2001) who found that third grade AA children with higher reading scores produced longer T-units in their oral fictional storytelling. In a study of New Zealand children, Westerveld (2008) also found children classified with mixed reading disability performed more poorly on a similar measure (mean length of C-unit in morphemes) than their non-disabled peers. While the children with low reading comprehension scores in the current study were largely not identified as having a reading disability, their percentile ranks were similar to those of the reading disabled group in the Westerveld study.

Unfortunately, there are few other studies that have investigated micro-linguistic features in narratives of children with differing reading comprehension profiles. Other language sampling research in typically developing AA children found that AA children regardless of dialect background produced rates of MLTU and CD that were comparable to those of their Standard American English (SAE) speaking peers (Oetting & Newkirk, 2008; Smith et al., 2001). African American English (AAE) speaking children experiencing deficits in MLTU and CD might be at risk for language problems that impact reading comprehension. This provides support for the use of measures of syntactic complexity to distinguish children with language problems from those with typical profiles in a culturally fair way. It also points to the potentiality of using MLTU and CD to uncover subtle deficits in language ability.

B. Discourse Quality Differences Between The Two Groups

Most studies on children's narratives either study microstructure (such as productivity and syntax) or macrostructure (discourse quality) features, but not both. Further, rarely do these studies include children with reading comprehension difficulties. The few studies that do explore connections between narratives and reading comprehension rely heavily on analysis of global discourse features while ignoring microstructure features that provide equally important information about language competence. The current study represents an attempt to fill these gaps in the literature.

The discourse quality measure differentiated the two groups, with children from the LR group receiving composite scores that were, on average, lower than those of children from the average comprehension group. The present study's findings on discourse quality are similar to other studies using macro-linguistic discourse measures, such as story grammar and high point analysis. Klecan-Aker and Caraway (1997) and Hester (2010) also found that AA children with low reading comprehension ability or reading disability performed less well than their typical peers on discourse quality. In addition, Klecan-Aker and Caraway's study established that a relationship exists between scores of discourse quality (story level) and clausal density. Though correlational analysis was not undertaken in the current investigation, children in the AR group performed well on measures of discourse quality and clausal density as well.

It must be noted, however, that neither method should be considered sufficient in and of itself. While both the syntactic and discourse quality measures differentiated the groups based on reading comprehension ability, this does not tell the whole story. Overall, children in the AR group obtained 72% of the points available on the narrative discourse quality rubric compared to 56% earned by the children in the LR group. Five children in the LR group also earned scores

between 70% and 83% on narrative quality. These five children performed similarly to other members of the LR group on the syntactic measures but their ability to produce a well-structured narrative exceeded that of other members of the LR group. In fact, one of these five children received the lowest score on the reading comprehension measure administered.

Conversely, three children in the average reading comprehension group presented with the opposite profile. They performed quite well on the syntactic measures but obtained low discourse quality scores on their narratives (50% or below of points available). These differences in performance did not rise to the level of statistical significance using the analyses chosen for the current study, but these contrasting findings in the cases of individual children point to the importance of using a varied approach in the analysis of oral discourse in children. The narrative discourse of abilities of children, in this case those with low versus average reading comprehension, can and do vary. A holistic approach to assessment of skills that support reading comprehension is advocated and supported by the current data.

In summary, the current study validates a relationship between oral narrative discourse and reading comprehension performance. Children with low reading comprehension performance were able to produce narratives at lengths comparable to their peers with average reading comprehension performance. The groups, however, were differentiated by the syntactic and discourse quality performance with children with average reading comprehension outperforming their counterparts with low reading comprehension. In fact, narrative ability proved to be a strong indicator of reading comprehension performance. Some researchers have hypothesized that skilled readers use their knowledge of stories they have heard and told to make sense of what they read (Sanford & Garrod, 1998; Westby, 2005). This ability is often referred to as the ability to make use of mental models or schemata during reading comprehension

activities (Westby, 2005). Anderson (1994) offers that readers' understanding of story schemata can aid reading comprehension by providing a scaffold for integrating text information, enabling inference, and aiding in reconstruction of text. While knowledge of story structure was beyond the scope of this study, it would be a mistake to look at oral narrative discourse as a purely productive task. For children to construct an oral narrative they must fluidly integrate, formulate, and organize language skills at the word, sentence, and text level (Hughes, McGillivray, & Schmidek, 1997). Elementary-aged children with well-developed reading comprehension abilities may be better resourced with oral narrative "building blocks" that facilitate their performance on such tasks.

Children with better reading comprehension skills may also tell better oral narratives because they have the ability to read and comprehend more stories than their peers who struggle with reading comprehension. It is well known that as children age, reading comprehension and oral language skills are highly reciprocal (Oakhill & Cain, 2007). Children with poor reading comprehension skills may engage with text less frequently, thereby limiting features of oral language development (Westerveld, 2008). The source of this reading comprehension-oral narrative relationship is still unclear, however, evidence is mounting that the relationship is consistent. This is certainly good news. That narrative holds up well as an assessment tool that is well connected to reading comprehension performance provides general and special educators with a ready source of information that can directly inform instruction and remediation of struggling readers.

A unique aspect of this study was the inclusion of an expository discourse task in the assessment of the language skills of AA children. Oral expository discourse skills have been found to be challenging for school-age children. Studies have shown that oral expository

discourse elicits different types of complex language than those produced in conversation and narration by children with typical and atypical development (Berman & Nir-Sagiv, 2004; Nippold, et al., 2005; Nippold, et al., 2009; Scott & Windsor, 2000). Studies have shown that older children produce better expository discourse than younger children (Berman & Nir-Sagiv, 2004; Nippold, et al., 2005). In addition, relative to typically developing peers, children with language and language-based learning disabilities produce shorter discourse samples overall, shorter utterances per T-unit, and fewer clauses types (Nippold, et al., 2009; Scott & Windsor, 2000).

It was anticipated that the expository discourse task, like the narrative task, would differentiate the children with LR from those with AR. Unexpectedly, the results of the analyses did not reveal group main effects. The children in the LR and AR performed similarly on all four dependent measures. Although no group differences emerged from the data, several trends in performance were evident on the syntactic and discourse quality measures. On the expository mean length of T-unit (EMLTU) and clausal density (ECD) syntactic measures, children in the AR group on average produced slightly longer utterances and somewhat more clauses per utterance than the children in the LR group. Children in the AR group produced an EMLTU of 8.72 versus 7.47 for children in the LR group. This pattern of group performance is similar to that found in the narrative task; however, the AR group experienced more variability in performance on the expository task, as demonstrated by a larger standard deviation, than on the narrative task. Similarly, children in the AR group produced an ECD of 1.41 versus 1.30 for children in the LR group. Both groups produced more clausal density in their expository samples than in their narrative samples in terms of raw means, although this difference was not statistically tested. The AR group modestly outperformed the LR group on the ECD measure.

While, statistical significance was not tested it is still worthwhile to note the superiority of expository in eliciting more complex syntax from all participants regardless of reading comprehension level. Finally, the expository discourse quality measure (EDQ) also showed mean difference trending toward significance between AR and LR groups. The AR group, again, performed better on the EDQ measure, gaining an average near 3 out of 4 points versus 2 out of 4 points for the LR group. The expository quality rubric was likely not sensitive enough to the discourse categories and point values necessary to adequately represent competent performance on this task. These factors are discussed in some detail in the study limitations section

Results of the multivariate analysis, however, revealed Grade as a factor in oral expository performance. Further, a Grade by Gender interaction arose as well, with post hoc testing validating significant differences for fourth grade males in the sample on the syntactic measures. The results from this study suggest that the expository task in this study may be sensitive to developmental differences related to syntactic ability, but primarily in boys. While fourth grade children overall produced longer T-units and more clauses per T-units in their expository samples than the third grade children, this very small group fourth grade boys (N = 8) outpaced all of the other children on these measures. Of course, larger samples would be necessary to confirm this result. However, as previous studies of expository discourse have not tested for gender effects, these findings merit further exploration.

A Grade by Gender interaction effect also emerged on the total number of T-units measure under the expository condition. Post hoc analysis revealed that the third grade boys as a group produced longer samples in their expository explanations than all other groups. It should be noted that the TNT measure is not sensitive to differences in content. The third grade boys

did produce more talk than the other groups but, again, a small subset of the third grade boys inflated their TNT scores by launching into personal narratives that required redirection by the principal investigator to the expository procedures.

C. Study Limitations and Future Directions

The results of the current study provide additional support for the relationship between oral narrative discourse production and reading comprehension. As with previous research, measures of narrative discourse related to syntax and discourse quality were found to be more firmly established in children with more advanced reading comprehension abilities. Findings from this study also provided a first glance into the expository discourse skills of AA school-age children. Oral expository discourse in the form of explanations was able to be elicited from all participants. Reading comprehension performance, however, was not linked to performance on the expository task. While these results are enticing, several limitations should be taken into account.

Generalizability of the findings is limited by a few important factors. All children who participated in the study were classified as low-income based on eligibility for the free lunch program. The outcomes of this study, therefore, may not be generalizable to AA children from other socio-economic backgrounds. All children in the study were also speakers of African American English (AAE) dialect. AAE dialect was not quantified because care was taken to choose dependent measures that would not be influenced by nonmainstream dialect features of language. However, there were no measures that compared the dialect density (i.e., the overall percentage of dialect use) present in the language of children in low and reading comprehension groups. Most importantly, it must be stressed that not all AA children use AAE dialect; therefore, caution must be exercised when comparing these results to any individual AA child.

Information on overall language and cognitive ability was not available for children participating in the study. In addition, the LR group was comprised of children with low reading comprehension scores and included children receiving special education and RtI services. Ideally, groups would have been delineated along an ability continuum that included a sub-group for students with special education needs. The percentage of students in the third and fourth grade receiving special education services was 2.3%, a surprisingly low figure. Identification of children for special education services in the cooperating district had been impacted by a protracted identification and qualification process. The reading comprehension scores of four other participants in the LR group were as low as or lower than the participants with special education needs. An additional caveat was that the sample cannot be assured to be purely composed of children with only low reading comprehension performance. A measure of word reading accuracy was not part of the eligibility screening. The school did provide fall reading fluency scores (i.e., Aimsweb) and at the time of the study only five children in the low reading comprehension group were receiving supplemental reading instruction targeting word reading and comprehension. Curriculum-based fluency measures, such as Aimsweb, only measures words read correctly per minute in three one-minute probes. A more comprehensive assessment of both dimensions of reading ability, word reading and comprehension, would have allowed more clearly defined groups. Future studies should include measures of both word reading ability and non-verbal cognitive ability to rule these out as confounding variables.

Finally, the elicitation procedures for the oral expository explanation may have impacted the participants' performance on the task. The task was always introduced after the conversational sample had been collected so influence of order cannot be ruled out. In addition, the narrative elicitation included a wordless picture book as a visual referent throughout

administration of the task. The expository procedure had no such parallel structure. The participants had to depend on the principal investigator's verbal prompts and their own internal schema for the task to generate their explanations. Although all students were able to produce extended discourse under the expository condition, several students launched into personal narratives of a time that they played a particular sport or game and had to be redirected to the task at hand. It is impossible to ascertain from these very preliminary findings whether this pattern of performance was a product of elicitation procedures or development. Expository discourse is still a new construct for children in the elementary grades (Westerveld & Moran, 2011).

With respect to the expository task, several methodological issues are yet unsettled. Although this study used a well-established protocol for eliciting expository text structure (FGS task), it is yet unclear whether the task represents the type of expository needed to access content area knowledge (e.g., science, social studies). The FGS task removed issues related to working memory component present in studies that show an expository movie or and ask for retellings (Scott & Windsor, 2000; Ward-Lonergan et al., 1999) but conversely, may not capture the kind of expository reading comprehension needed in third and fourth grade. More research is certainly needed in this area to flesh out these issues.

Finally, with respect to the equivocal findings for expository discourse quality in the LR and AR groups, it must be noted that the rubric for the expository task was much less extensive tool than that developed for the narrative. Two major factors impacted the development of the expository scoring rubric. First, the elicitation procedures for the expository task allowed the child to explain a game or sport of their own choosing. The game or sport could be team or individual, simple or complex, and could include few or many steps depending on the topic

chosen. This prevented a stringent content or rule-based approach to analysis. Children who chose complex games might have been unfairly advantaged if excessive weight had been given to number of steps, course of play, or description of players or equipment. Second, the expository task was a largely unstructured task. In contrast, Miller & Iglesias (2010) used a planning graphic organizer for their work with adolescents that tightly adhered to the categories in their discourse scoring rubric, a graphic organizer that was not employed in the current study. Pilot research conducted by the primary investigator with younger students revealed that use of the graphic organizer presented several barriers. Younger students in the pilot research (third and fourth grade) were unfamiliar with the use of a graphic organizer to generate spoken discourse and required verbal prompts. Language samples generated also contained both fragmented utterances and object complement clauses as the students attempted to incorporate the graphic organizer written prompts into their responses. The tool developed for the current study represents an initial attempt to gain broad based information on the expository discourse quality of children in upper elementary grades. A more fine-grained scoring instrument may well have uncovered differences not observable with the discourse quality rubric used in the current study.

D. Educational Implications

Results from this research study hold important implications for supporting the reading development of AA children in educational settings. The findings provide additional evidence that children with grade appropriate reading comprehension skills have better linguistic skills, demonstrated through oral narratives, than children with low reading comprehension performance (Hester, 2010; Klecan-Aker & Caraway, 1997). The findings also show that

children with low reading comprehension may have subtle language deficits that impact their ability to interact with written text (Catts et al., 1999; Nation et al, 2004).

1. General education

The comprehensive language approach to reading (Dickinson et al., 2003) stresses that broad-based language skills are essential to the reading success of school-age children. The results shed light on the potential of using oral narrative production to uncover linguistic strengths that support reading comprehension in this population of children. Oral narratives could also be used to discover linguistic weaknesses in children with reading comprehension problems. This information could be used by general educators to help determine appropriate instructional intervention and assessment. For example, in addition to having children answer questions about narrative texts that they have read, their ability to orally construct narratives can help to explain specific areas of reading comprehension deficits. The ability of children to identify character motivations, higher order goals, problems encountered by characters, and their solutions can all be effectively uncovered through production of narratives. The extended discourse allowed through the elicitation of an oral narrative gives educators the opportunity to trace comprehension processes without the constraints of teacher-directed questions. Assessment of reading comprehension can only be revealed by what Pearson and Hamm (2006) termed as the “residue of the comprehension process” that the reader leaves for the teacher. Expanding the array of information that educators gather to gain information about the reading comprehension abilities of their students can only lead to better assessment and intervention practices.

Traditional assessments of oral discourse may be considered too time consuming for use by general educators, but the discourse quality rubric designed for this study was highly useful in

uncovering deficits in story structure. The use of rubrics is familiar to general education teachers and the use of digital recording devices can provide teachers an opportunity to listen to oral language samples and score discourse quality in a fashion similar to the rubrics used for written samples produced by students. Collecting and scoring oral discourse samples could also provide a point of comparison for written language and underscore areas of difficulty common to both modalities.

Research studies also suggest that reading interventions that include the development of oral language skills can improve reading achievement in children at-risk for reading problems (Bowyer-Crane et al., 2008; Clarke, Snowling, Truelove, & Hulme, 2010; Snowling & Hulme, 2011; Zevenbergen, Whitehurst, & Zevenbergen, 2003). These studies validate that specific training in broad-based language skills such as explicit instruction in vocabulary, grammar, inferencing, and narrative construction instruction improves oral language and reading comprehension skills that is sustained over time. Additional research is still needed to determine which instructional strategies may contribute to improvement in reading outcomes for AA children. However, initial results from the current literature are encouraging.

2. Special education

Particularly pertinent to the current investigation is the information gained about the relative strengths and weaknesses in oral discourse skills of AA students with average versus low reading comprehension. The assessment of AA students for special education services has been problematic for many years. Dynamic assessment, of which oral discourse sampling is a component, has been shown to be an effective method of distinguishing language and learning problems that may stem from cultural/ linguistic experience rather than from deficits in need of specific, intensive remediation (Bliss & McCabe, 2006; Gillam et al., 1999; Hester, 2010). This

study presents evidence that discourse level syntactic and discourse quality skills are relative areas of strength for AA children with average reading comprehension ability. The children with low comprehension in this study struggled with expressing syntactic complexity. MLTU and CD represented skill in packaging thoughts and ideas into comprehensible spoken utterances. These skills are essential for the development of reading and writing skills. The results contained within this study provide some initial evidence that assessment of extended discourse can help uncover mild language weaknesses.

Much research has been devoted to establishing a phonologically based approach to reading assessment and in developing quick curriculum-based measures focused on reading fluency. Referrals for special education services are often driven by delays in academic achievement related to reading (Hosp & Reschly, 2004). While reading fluency measures are effective in identifying reading delays in younger children, they are not always as successful in identifying reading problems in older children. In this study, only 12% of the participants (N = 5) had been identified as being at-risk of reading problems based on curriculum-based measures administered in the fall just prior to data collection. Multiple sources of data related to reading can help separate need for referral for supplemental reading interventions (e.g., RtI) versus intensive special education services.

This study also highlights the importance of a carefully composed multi-disciplinary team that includes members with expertise in all areas that impact a child's ability to read. Oral language skills have been repeatedly cited as foundational to reading comprehension ability (Catts, et al.; 2006; Dickinson, et al., 2010, Duke, et al., 2004; Storch & Whitehurst, 2002). Data gathering during the special education referral and assessment process should include information on oral language skills beyond standardized measures. This study offers evidence

that language sampling is a viable means of gaining information useful in reading assessment. Close collaboration among the special education team members such as the school psychologist, speech-language pathologist, special and general educators is critical to ensure optimal outcomes for students.

Finally, this study has implications for the general and special education teacher preparation. The results give support to the importance that language plays in the academic lives of children of which teachers are an integral part. The many studies cited within this text repeatedly point to the ways in which various aspects of language contribute to reading acquisition and development. Fillmore and Snow (2002) outline many ways that teachers use language to improve reading, spelling, writing, academic content knowledge, and socialization. Their strong position is that knowledge about language development and language diversity, through pre-service and in-service coursework, provides teachers with a wonderful source of information with which to import academic content to their students. The importance of teachers gaining deep knowledge about academic language, linguistic diversity, and the language needs of learners with special education needs has been advocated by many (Ehren, Murza, & Malani, 2012; Fang, 2008; Moats, 1994; Reagan, 1997; Schlepegrell, 2008). Both general and special education teacher education programs are uniquely poised to equip teachers with linguistic knowledge that can positively impact pedagogical practice.

APPENDICES

Appendix A

Third and Fourth Grade School-wide Means and Standard Deviations on GRADE subtests

Measures	Grade		
	3	4	Total
GRADE Sentence Comprehension (SC)*	3.33 (1.41)	2.89 (1.39)	3.13 (1.41)
GRADE Passage Comprehension (PC)*	3.12 (1.38)	3.43 (1.27)	3.26 (1.34)
GRADE Comprehension Composite (CC)**	3.19 (1.39)	3.17 (1.32)	3.18 (1.38)
GRADE Comprehension Composite (CC)**	84.81 (11.60)	83.00 (11.53)	84.56 (11.76)

*available in stanines, **available in stanines and standard scores

Appendix B

Definitions of T-units, clauses, and fragments

T-Unit. A T-unit consists of one main clause and any dependent (subordinate) clauses that are attached to it (Hughes, McGillivray, & Schmidek, 1997; Nippold, 2010). Each clause, whether main or dependent, contains a subject and a verb phrase. Dependent clauses may also contain subordinating conjunctions or relative pronouns that adhere the dependent clause to the main clause (Diessel, 2004). Coordinating conjunctions, (e.g., “and,” “but,” “so”) are often used in spoken language to initiate an utterance. When these conjunctions are used to introduce a new subject and verb phrase, that utterance is segmented into a new T-unit (Nippold, 2009).

Main Clause. An independent clause contains a subject and a main verb and can stand alone to express a complete statement (Nippold, 2010). Examples of main clauses are: “The frog hopped out of the jar” and “But the little boy couldn’t find his frog anywhere.”

Dependent (Subordinate) Clauses. A dependent clause contains a subject and a main verb but meaning cannot be derived unless it is attached to a main clause. Unlike the main clause, the dependent clause cannot stand alone. Adverbial, relative, and verb complement clauses are the three major types of dependent clauses (Nippold 2010):

1. An adverbial clause functions like an adverb and provides information about the main clause related to time, place, manner, purpose, comparison, condition, reason, and contrast (Hughes, McGillivray, & Schmidek, 1997; Nippold, 2010). For example, “When they woke up, the frog was gone” or “Uno is my favorite game because I always win.”

2. A relative clause gives additional information about the noun or pronoun that precedes it (Hughes, McGillivray, & Schmidek, 1997). A relative clause is usually introduced by a relative pronoun (e.g., *that*, *which*, *who*), however, *that* is sometimes optional in American English. “There was a boy who found a frog outside” and “The beehive that was hanging from the tree fell down” are examples of utterances containing relative clauses.

3. A verb complement clause is a structure that serves to finish off or add additional meaning to the main verb (Quirk, Greenbaum, Leech, & Svartvik, 1985). It can be in the subject or object position of a sentence. Main verbs that can take on a verb complement clause are often referred to as mental state verbs. Verb complement clauses often begin with *that* or *wh*-words (e.g., *where*, *what*, *why*). Examples are: “I didn’t know what to do next” or “They thought that the frog was in there.”

Fragment. A fragment is an incomplete utterance that does not contain a main verb and/or a subject (Nippold, 2009). Fragments are not responses to examiner questions or prompts. “Win a trophy”, “Walk around”, or “Then theirs” are examples of fragments.

Appendix B (continued)

Clausal Coding Key

Clause Code	Code Name	Example
MC	Main Clause	And he had [MC] a frog in the jar.
AC1	Adverbial Clause, Early Developing <i>because, when, so (that), (in order) to</i>	So he went [MC] outside (in order) <u>to</u> get [AC1] the dog.
AC1L	Adverbial Clause, Early Developing, Left-branching	When they woke [AC1L] up, the frog was [MC] gone.
AC2	Adverbial Clause, Late Developing <i>while, although, even though, before, after, until, as soon as, once, if, even if, unless, in case, wherever</i>	And the game goes [MC] on, until the last person is [AC2] out.
AC2L	Adverbial Clause, Late Developing, Left-branching	And <u>while</u> they were [A2L] sleep, the frog hopped [MC] out of the jar.
RC	Relative Clause, obligatory <i>that, who, which, where</i>	There was [MC] a boy <u>who</u> found [RC] a frog outside.
RCCE	Relative Clause, Center-embedded, obligatory <i>that, who, which, where</i>	And the frog, <u>that</u> he wanted [RCCE], came [MC] out.
rRC	Reduced Relative Clause, non-obligatory <i>that, who, which, where</i>	And the deer had pushed [MC] the boy and the dog off the hill they was [rRC] on.
rRCCE	Reduced Relative Clause, Center-embedded, non-obligatory <i>that, who, which, where</i>	
VC	Verb Complement, that Verb Complement, wh- (when, where, whether, which, how, if; dialect – can, is, was, do)	And they thought [MC] that the frog was [VC] in there. That is [MC] <u>when</u> they got [VC] their frog back. And then the dog was trying [MC] to see [VCNF] <u>if</u> the frog was [VCW] in there. <u>Dialect form</u> They asked [MC] <u>can</u> they get [VCW] one of their babies. (interrogative inversion)
VCNF	Verb Complement, nonfinite, infinitival or gerund see Verb Complement Help Sheet for main verbs that “take on” complement clauses	Then he was trying [MC] to find [VCNF] his family He wanted [MC] to go [VCNF] find [VCNF] his frog. The bees started [MC] coming [VCNF] out of the beehive chasing [VCNF] the dog.
VCDD	Verb Complement, direct dialogue	And he said [MC], “Where is [VCDD] my frog?” He said [MC], “Oh, that is [VCDD] unusual.”
CC	Complex Coordination	The boy climbed [MC] on the rock and yelled [CC] for the frog

Adapted from Scott & Lane (2008)

Appendix C

Expository Discourse Elicitation. The procedure for collecting the explanation of a favorite game or sport (FGS) is adapted from protocols developed by Miller & Iglesias (2010) and Nippold, Hesketh, Duthie, & Mansfield (2005). The participant was asked to name his or her favorite game or sport and to tell why it was his or her favorite. The participant was then asked to explain how to play and win the game or sport. The following script was followed:

I'm interested in finding out how children of your age explain how to do something. I'm going to ask you to tell me how to play your favorite sport or game. You can choose any game or sport that you like best. For example, you could pick a sport, such as basketball or tennis. You could pick a board game, such as Monopoly, checkers, or chess. Or you could pick a card game, such as Go Fish, Uno, or War. You may not choose a video game but you can tell me about any other game or sport that you really like.

1) So now I would like to know what your favorite game or sport is and why?

2) I'm not too familiar with the game of [...], so I would like for you to tell me all about it. For example, tell me how many people may play the game, what kinds of equipment or materials are needed. Also tell me what the goals are and the rules that the players need to follow. In other words, tell me everything that someone who had never played the game of [...] would need to know to be able to play.

3) Now I would like you to tell me everything a player would need to know to **WIN** the game of [...]. What are some of the important strategies that every good player should know?

Appendix C (continued)

When the participant stopped talking after the scripted prompt question, the investigator asked him or her to continue by “telling some more” or “adding some more details.” If no further details were contributed, the next prompt was introduced. Other than introduction of the scripted questions, the investigator acted only as an interested listener, making neutral comments, such as “yes”, “mm-hmm”, or “that is interesting.” As in the narrative condition, completion of the explanation was determined by a concluding statement made by the participant (e.g., “And that’s all.”) or by adult verification (e.g., “Is that everything?”).

Appendix D

Narrative Discourse Elicitation. The participants were asked to look through the entire wordless picture book, *Frog, Where Are You?* by Mercer Mayer (1969), one page at a time and to think of a story that goes with the pictures. Afterward the participants were instructed to go back to the beginning of the book and tell the investigator their story while looking at the pictures. The following explicit instructions were given: “Here is a book without words. It tells a story about a boy, a dog, and a frog. First, I want you to look at all of the pictures. Look at each picture carefully because afterwards you will tell the story.” Once the participant completed looking through the book, the investigator said, “Now go back to the beginning of the book. This time tell me the story out loud while you look at the each of the pictures.” The examiner did not view the book as the child narrates. Examiner prompts were used to encourage the participant to continue or complete the story (e.g., “Tell me more.” “And then,” “What happened next?”). Completion of the story was determined by a concluding statement made by the participant (e.g., “The End.” “And that’s all.”) or by adult verification (e.g., “Is that everything?”).

Appendix E

Narrative Discourse Quality Rubric - Frog where are you?

CATEGORY	2	1	0
1. Introduction			
1. Setting of story with place /time details ☐ Place – boy’s room or What – boy playing with dog and frog; ☐ Time – bedtime, nighttime	+2 setting	+1 setting	+ 0 setting
2. Characters ☐ Boy, ☐ dog, and ☐ frog introduced	+3 characters	+2 or 1 character(s)	+0 characters
Initiating Event			
3. Statement of the Problem ☐ While the boy and dog are sleeping ☐ The frog escapes from jar or sneaks out of the boy’s room	+2	+1	+0
Story Components/Search Sequences			
4. Searches in Room ☐ Boy looks in boot ☐ Dog looks in jar	+2	+1	+0
5. Looks out window with dog ☐ Boy looks/ calls for frog ☐ Dog falls out window ☐ Jar stuck on dog’s head ☐ Boy goes outside to get dog	+3, 4	+2	+1, 0
6. Woods & bees encounter ☐ Boys looks/calls for frog ☐ Dog barks at bees/beehive ☐ Beehive falls ☐ Bees chase dog	+3, 4	+2	+1, 0
7. Groundhog encounter ☐ Boy looks/calls in hole ☐ Boy gets bitten by groundhog (gopher, etc.)/animal stinks	+2	+1	+0
8. Owl encounter ☐ Boy climbs tree/in tree ☐ Owl scares boy/flies out ☐ Boy looks/calls in hole ☐ Boy falls	+3, 4	+2	+1, 0
9. Deer encounter ☐ Boy climbs rock ☐ Deer runs with boy ☐ Boy leans against/holds “branches”/antlers ☐ Dog runs/chases after ☐ Deer picks up boy/boy gets on ☐ Deer throws boy or boy and dog fall off cliff	+ 5, 6	+3, 4	+2, 1, 0
10. Falls in pond/log encounter ☐ Boy and dog fall in pond ☐ Boy tells dog to be quiet ☐ Boy hears something ☐ Boy (&/or dog) looks over log	+3, 4	+2	+1, 0
Resolution			
11. Boy finds his frog (with frog family), *may also say the frog *Finding frogs generally, frog family, a frog earns 1			
12. Takes home a baby/little frog *Taking the original (his) frog earns 1			
Total	_____ x 2 =	_____ x 1 =	_____ x 0 =
Scoring: Each category receives a scaled score of 2, 1, or 0. 2 = Present with significant detail (see # of propositions required) 1 = Present with some details (see # of propositions required) 0 = Minimal details, absent feature, or error (see # of propositions required) A composite is scored by adding the total of the category scores. Highest score=24.			
Multiple errors within one category reduce the score for the category by 1 point only: • Unable to distinguish characters due to excessive use of pronouns • Other pronoun reference errors or non-specific word use (e.g., He got on that <u>thing</u>) • Off-topic responses *If beginning of search sequence (boy looking or calling) is unclear, code in earliest sequence. For example, in sequence 4, 5, and 6, if search is unclear, code in sequence 4)			

Adapted from Bamberg & Marchman (1990); Norbury & Bishop (2003); Reilly, Bates, & Marchman (1998)

Appendix F

Expository Discourse Rubric - Favorite Game or Sport

CATEGORY	1	0
1. Set-up Information - Does the child provide information on:		
Materials/Equipment needed OR How play begins including who goes first OR How many can play or player position names		
2. Course of Play Information - Does the child provide descriptions of:		
What happens during a player's or team's turn OR Major rules and, when applicable, consequences for violations **May include how the game or sport ends		
3. Strategy Information - Does the child provide some examples of:		
Ways to win the contest that are not required by the rules but are what good, "smart" players do		
4. Coherence - Does the child use:		
Some specific terms related to play OR Enough pronoun reference in 1, 2, & 3 for listener to follow information offered		
Total	= _____	= _____
Scoring: Each category receives a score of 1 or 0. 1 = Present 0 = Absent feature, or significant error (e.g., information related to a game other than the target identified by the child; off-topic responses; significant factual errors, relating a personal experience) A composite score is obtained by adding the total of the category scores. Highest score= 4.		

Adapted from Evans & Rubin (1983); Miller & Iglesias (2010)

Appendix G

Narrative Examples

LR Group, Third grade, #109

The dog and the frog is sad. He woke up each morning. And when he was sleep, he was thinking that can he go outside. When he woke up, he was thinking what is he going to do with the frog. So he got dressed and asked his mom can he go outside. She said yes. So he looked out his window. And he said he want to go outside. He looked out the window and called his frog. The frog jumped out of the window. The dog jumped out of the window and chased the frog into the big pond. And Jake got out of the window with the dog and caught the dog because it chased the frog. Now he looking for the frog. I think he's going to get mad or sad at me. He looked in the tree. And he thought the frog was in the tree. But it wasn't. So it was a bird. So he went by the beehive.

And he looked (in) down the hole in the dirt on the ground. So it was a ((what's that, can I say rat)) rat under the ground. And (they the beehive) the beehive fell down. And (it) the bees (tur*) heading for the dog or the boy. He looked in the tree. And it was a bird in there. And it going to pop. See {pointing}. It is the bird. He jumped out of the tree. And the dog ran into the water because (the water) he was chasing the frog into the water. The bird flew over his head. The dog was running towards the frog. He was chasing the frog. He was on a deer. And he got down and ran, him and the dog, because it was chasing both of them. And they fell off the cliff. They fell in the water. They fell down into the water. He said, "Dog, we are ok". He said shh to the dog to see if the frog was in there. And they wasn't in there. They was behind it. They went over the tree? They seen they came back for the frog. They got back on the cliff to see was the frog coming back with him. That's the end.

Appendix G (continued)

AR Group, Third grade, #102

One day it was this little boy named (Jos a*) Josh and his dog named Binky. And he had a frog in the jar. And Josh was sleep while the frog was getting out of the jar. And Josh and Binky was at the edge of the bed. And they didn't see the frog in the jar again. So Josh looked in the shoe and turned it upside down to see if the frog was in there. And Binky had stuck his head through the jar that the frog was in. Binky and Josh was looking out the window. And Binky had fell out the window. and then that's when Josh went outside to get Binky. And Josh was mad. Binky and Josh had went out by the woods. And it was a lot of bees around there. And they was calling the frog. Josh called his name through the hole. And Binky just looked at the beehive. He didn't know what it was. So as Josh was looking through the hole, it was this little animal coming out. And he had got popped in the nose. = C laughs. And Binky was still looking at the beehive. Didn't know what it was. And then the little bub was coming out the hole. And Binky was still at the tree with the beehives. Still didn't know what it was. Binky (he was in) he got up in a tree. He thought he was (in this little) in this little hole <> because they have a little hole in the tree. He thought it was in there. It wasn't. The owl was in there. And the owl scared him so bad he fell off the tree. And both of his feet flew in the air. And as Binky was at the tree, the bees chased him around. He was scared. But he still didn't know what it was. So the owl (had he was he was almost he almost) he almost flew down and got Josh. But Josh hid behind a big rock. And as the owl was flying away, he had got on the top. And Binky was scared to get up there because the bees was still chasing him. So as they was at the rock, they didn't know it was the deer house. So Josh had got on a deer. And Binky was almost there. But they left. And the deer didn't know they was there. And then as he was about to go down the hill, they flew off.

Appendix G (continued)

And they had flew down into the pond. And the moose, he like %oooh. And then they fell in the water. And then both of them was laughing. And then that's when Josh told Binky to shh because they was about to get inside the log. And then next thing you know, the frog, that they had, and the other frog was behind the log. And they sat on there. And then they saw some baby frogs. And then Josh was saying goodbye to the other family. The End.

Appendix H

Expository Examples

LR Group, Fourth grade, #313

My favorite game is a board game like the game Life because it's almost like your real life. But it's just on a board. Life is a game that you play. It could be two or more players. It depends on how many cars you have. And you could have kids. You could have a wife. You could be a boy or a girl. You could go to college. You could be a doctor. You could be a preacher. You could go to church. The only cars that you have to pick is (like) pink or blue. A girl is the pink. And a boy is the blue. And then you have to (like) pull a card. And if it say go back one step then you a have to go back one step. And (it'll be colorful little bridges and (like) a number spinner that you have to spin. {C starts to laugh} And the rules are that you can't move (without spinning) without spinning the wheel or pulling a card. And you could get married {C and E laugh}. You could do anything. Like, hmm, I'm trying to think. Your kids could grow up. And you'll go to the store. You could go to the mini golf course. You could go to baseball games. And sometimes if it says like get married, you have to get married. You have to follow the directions that's on the little bridges. And sometimes you have to go through the woods to get to where you're going.

Examiner prompt: What do you have to do to win at the game of Life?

You have to try and get to the end of the other bridge on the other side. You can go to different states. And sometime you have to go to different states to get to the end. And you have to beat the person that you're playing with. So if you get a card that say go back eight or more steps, then you have to go back. Then you won't be able to win. Yeah, that's it.

Appendix H (continued)

AR Group, Fourth grade, #418

Examiner prompt: Ok, alright so tell me what your favorite game or sport is and why it's your favorite.

Uno is my favorite game because I always win in it. How you play the game is if somebody puts the color down and a different number you have to get the same card and the same color and put it down. But it don't have to be the same number. But you might have this little card that got a circle that got different colors. And when you put that down, you could pick whatever number you want. And when you put that one down and nobody have it, they have to get another card. And only three or under three can only play. And how you get to the end is the last person that have the most cards loses. And the first one that don't have all the cards wins.

Examiner prompt: So what kind of little strategies or plays do they have to put in place to win at the game of Uno?

Sometimes and sometimes not. Sometimes the game will change. Like the last person, they have the most cards will win. Or if you keep getting cards_and_cards_and_cards and you get more than ten, you will lose. And you will get put out the game. And the special thing you have to do is you gotta pay attention to the color. Because sometimes they trick you by putting the circle thing down. And you go. And you put a color down. And then you get put out the game. And that person wins.

Examiner prompt: So is that everything that you have to do to play and win at the game of Uno.

Mhm.

CITED LITERATURE

- Anderson, R. (1994). Role of the reader's schemata in comprehension, learning, and memory. In R.B. Ruddell, M. Rapp, & H. Singer (Ed.), *Theoretical models and processes of reading* (4th ed, pp. 469-482). Newark, DE: International Reading Association.
- Bamberg, M., & Marchman, V. 1990: What holds a narrative together? The linguistic encoding of episodic boundaries. *Papers in Pragmatics* 4, 58–121.
- Berman, R.A., (1988). On the ability to relate events in narrative. *Discourse Processes*, 11(4), 469-497.
- Berman, R.A., & Nir-Sagiv, B. (2004). Linguistic indicators of inter-genre differentiation in later language development. *Journal of Child Language*, 31, 339-380.
- Berman, R.A., & Nir-Sagiv, B. (2007). Comparing narrative and expository text construction across adolescence: A developmental paradox. *Discourse Processes*, 43(2), 79-120.
- Berman, R.A., & Slobin, D. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Berman, R. A., & Verhoeven, L. (2002). Cross-linguistic perspectives on the development of text-production abilities: Speech and writing. *Written Language and Literacy*, 5(1), 1-43.
- Bishop, D. V. M., & Edmundson, A. (1987). Language impaired 4-year-olds: Distinguishing transient from persistent impairment. *Journal of Speech and Hearing Disorders*, 52, 156–173.
- Bliss, L. S., Covington, Z., & McCabe, A. (1999). Assessing the narratives of African American children. *Contemporary Issues in Communication Science and Disorders*, 26, 160–167.
- Bliss, L.S., & McCabe, A. (2006). Comparison of discourse genres: Clinical implications. *Contemporary Issues in Communication Sciences and Disorders*, 33, 126-137.
- Bloome, D., Champion, T., Katz, L., Morton, M. B., & Muldrow, R. (2001). Spoken and written narrative development: African American preschoolers as storytellers and storymakers. In J. L. Harris, A. G. Kamhi, & K. E. Pollock (Eds.), *Literacy in African American communities* (pp. 45–76). Mahwah, NJ: Erlbaum.
- Blum-Kulka, S., Hamo, M., & Habib, T. (2010). Explanations in naturally occurring peer talk: Conversational emergence and function, thematic scope, and contribution to the development of discursive skills. *First Language*, 30(3-4), 440-460.
- Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy*, 18(1), 1-21.

CITED LITERATURE (continued)

- Bowey, J. (1994). Phonological sensitivity in novice readers and non-readers. *Journal of Experimental Psychology*, 58, 134-159.
- Bowey, J. A., & Patel, R. K. (1988). Metalinguistic ability and early reading achievement. *Applied Psycholinguistics*, 9, 367-383.
- Bowyer-Crane, C., Snowling, M. J., Duff, F. J., Fieldsend, E., Carroll, J. M., Miles, J., Götz, K. and Hulme, C. (2008), Improving early language and literacy skills: differential effects of an oral language versus a phonology with reading intervention. *Journal of Child Psychology and Psychiatry*, 49: 422-432.
- Brown, B.A., & Spang, E. (2008). Double talk: Synthesizing everyday and science language in the classroom. *Science Education*, 92, 708-732.
- Burchinal, M. R., Roberts, J. E., Zeisel, S. A., & Rowley, S. (2008). Social risk and protective factors for African American children's academic achievement and adjustment during the transition to middle school. *Developmental Psychology*, 44(1), 286-292.
- Callanan, M., Shrager, J., & Moore, J (1995). Parent-child collaborative explanations: Methods of identification and analysis. *The Journal of the Learning Sciences*, 4, 105-129.
- Cantrell, S.C., & Carter, J.C. (2009). Relationships among learner characteristics and adolescents' perceptions of reading strategy use. *Reading Psychology*, 30, 195-224.
- Catts, H. W., Adlof, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the simple view of reading. *Journal of Speech, Language, and Hearing Research*, 49, 278-293.
- Catts, H., Fey, M.E., Zhang, X., & Tomblin, J.B. (1999). Language basis of reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading*, 3, 331-361.
- Catts, H., Fey, M.E., Zhang, X., & Tomblin, J.B. (2001). Estimating the risk of future reading difficulties in kindergarten children: A research-based model and its clinical implementation. *Language, Speech, and Hearing Services in Schools*, 32, 38-50.
- Catts, H., Fey, M.E., Tomblin, J.B., & Zhang, X. (2002). A longitudinal investigation of reading outcomes in children with language impairments. *Journal of Speech, Language, and Hearing Research*, 45, 1142-1157.
- Catts, H. W., & Kamhi, A. G. (Eds.). (2005). *Language and reading disabilities* (2nd ed.). Boston: Allyn & Bacon.

CITED LITERATURE (continued)

- Champion, T.B. (1998). "Tell me somethin' good": A description of narrative structures among African-American children. *Linguistics and Education*, 9(3), 251-286.
- Champion, T., Hyter, Y., McCabe, A., & Bland-Stewart, L. (2003). A matter of vocabulary: Performances of low-income African-American Headstart children on the Peabody Picture Vocabulary Test-III. *Communication Disorders Quarterly*, 24, 121-127.
- Champion, T. B., Rosa-Lugo, L. I., Rivers, K. O., McCabe, A. (2010). A preliminary investigation of second- and fourth- grade African American students' performance on the Gray Oral Reading Test-Fourth Edition. *Topics in Language Disorders*, 30(2), 145-153.
- Champion, T., Seymour, H., & Camarata, S. (1995). Narrative discourse among African American children. *Journal of Narrative and Life History*, 5, 333-352.
- Chaney, C. (1998). Preschool language and metalinguistic skills are links to reading success. *Applied Psycholinguistics*, 19, 433-446.
- Clarke, P., Snowling, M., Truelove, E., & Hulme, C. (2010). Ameliorating children's reading comprehension difficulties: A randomized controlled trial. *Psychological Science*, 21, 1106-1116.
- Colletta, J., & Pellenq, C. (2010). The development of multimodal explanations in French children. In M.A. Nippold & C.M. Scott (Eds.), *Expository discourse in children, adolescents, and adults: Development and disorders* (pp. 63-9711). New York: Psychology Press.
- Coutinho, M. J., Oswald, D. P., & Best, A. M. (2002). The influence of sociodemographics and gender on the disproportionate identification of minority students as having learning disabilities. *Remedial and Special Education*, 23, 49-59.
- Craig, H.K., Connor, C.M., & Washington, J.A. (2003). Early positive predictors of later reading comprehension in African American students: A preliminary investigation. *Language, Speech, and Hearing Services in Schools*, 34(1), 31-43.
- Craig, H. K., & Washington, J. A. (1994). The complex syntax skills of poor, urban, African American preschoolers at school entry. *Language, Speech, and Hearing Services in Schools*, 25, 181-190.
- Craig, H. K., & Washington, J. A. (2002). Oral language expectations for African American preschoolers and kindergartners. *American Journal of Speech-Language Pathology*, 11, 59-70.

CITED LITERATURE (continued)

- Craig, H.K., & Washington, J.A. (2004). Grade related changes in the production of African-American English. *Journal of Speech, Language, and Hearing Research*, 47, 450-463.
- Craig, H.K., Zhang, L., Hensel, S.L., & Quinn, E.J. (2009). African American English-speaking students: An examination of the relationship between dialect shifting and reading outcomes. *Journal of Speech, Language, and Hearing Research*, 52, 839-855.
- Cummins, J. (2007). Pedagogies for the poor? Realigning reading instruction for low-income students with scientifically based reading research. *Educational Researcher*, 36(9), 564-572.
- Curenton, S. M., & Justice, L. M. (2004). African American and Caucasian preschoolers' use of decontextualized language: Literate language features in oral narratives. *Language, Speech, and Hearing Services in Schools*, 35, 240-253.
- Denton, C., Barth, A., Fletcher, J., Wexler, J., Vaughn, S., Cirino, P., Romain, M., & Francis, D. (2011). The relations among oral and silent reading fluency and comprehension in middle school: Implications for identification and instruction of students with reading difficulties. *Scientific Studies of Reading*, 15(2), 109-135.
- Dickinson, D. K., Golinkoff, R. M., & Hirsh-Pasek, K. (2010). Speaking out for language: Why language is central to reading development. *Educational Researcher*, 39, 305-310.
- Dickinson, D., McCabe, A., Anastasopoulos, L., Peisner-Feinberg, E. & Poe, M. (2003). The comprehensive language approach to early literacy: The interrelationships among vocabulary, phonological sensitivity, and print knowledge among preschool-aged children. *Journal of Educational Psychology*, 95, 2, 465-481.
- Diessel, H. (2004). *The acquisition of complex sentences*. New York, NY: Cambridge University Press.
- Donahue, M. (2002). "Hanging with friends." Making sense of research on peer discourse in children with language and learning disabilities. In K. Butler & E. Silliman (Eds.), *Speaking, reading, and writing in students with language learning disabilities* (pp. 239-258). Mahwah, NJ: Lawrence Erlbaum.
- Donahue, M., & Foster, S. (2004). Integration of language and discourse components with reading comprehension: It's all about relationships. In E. Silliman & L. Wilkinson (Eds.), *Language and literacy learning in schools* (pp. 175-198). New York: Guilford Press.
- Donavon, M. S., & Cross, C. T. (2002). *Minority students in special and gifted education*. Washington, DC: National Academy Press.

CITED LITERATURE (continued)

- Duke, N. K., Pressley, M., & Hilden, K. (2004). Difficulties with reading comprehension. In C. A. Stone, E. R. Silliman, B. J. Ehren, & K. Apel (Eds.), *Handbook of language and literacy development and disorders* (pp. 501–520). New York: Guilford.
- Dunn, L. M., & Dunn, L. M. (2007). *The Peabody Picture Vocabulary Test, Fourth Edition*. Minneapolis, MN: Pearson Assessments.
- Ehren, B. J., Murza, K. A., & Malani, M. D. (2012). Disciplinary literacy from a speech–language pathologist’s perspective. *Topics in Language Disorders*, 32(1), 85–98.
- Evans, M.A., & Rubin, K.H. (1983). Developmental differences in explanations of childhood games. *Child Development*, 54, 1559-1567.
- Fang, Z. (2002). The construction of literate understanding in a literature–based classroom. *Journal of Research in Reading*, 25(1), 109-126.
- Fang, Z. (2008). Going beyond the fab five: Helping students cope with the unique linguistic challenges of expository reading in intermediate grades. *Journal of Adolescent & Adult Literacy*, 51(6), 476-487.
- Fazio, B. B., Naremore, R. C., & Connell, P. J. (1996). Tracking children from poverty at risk for specific language impairment: A 3-year longitudinal study. *Journal of Speech and Hearing Research*, 39, 611–624.
- Feagans, L., & Applebaum, M. I. (1986). Validation of language subtypes in learning disabled children. *Journal of Experimental Psychology*, 78, 358–364.
- Feagans, L. & Short, E.J. (1984). Developmental differences in the comprehension and production of narratives by reading-disabled and normally achieving children. *Child Development*, 55, 1727-1736.
- Ferguson, C. (2009). An effect size primer: A guide for clinicians and researcher. *Professional Psychology: Research and Practice*, 40(5), 532- 538.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- Fiestas, C.E., & Peña, E.D. (2004). Narrative discourse in bilingual children: Language and tasks effects. *Language, Speech, and Hearing Services in Schools*, 35, 155-168.
- Fillmore, L. W., & Snow, C. (2002). What teachers need to know about language. In C. T. Adger, C. E. Snow, & D. Christian (Eds.), *What teachers need to know about language* (pp. 7-53). McHenry, IL: Delta Systems and Center for Applied Linguistics.

CITED LITERATURE (continued)

- Flowers, L. A. (2007). Recommendations for research to improve reading achievement for African American students. *Reading Research Quarterly*, 42, 424-428.
- Fritschmann, N.S., Deshler, D.D., Schumaker, J.B. (2007). The effects of instruction in an inference strategy on the reading comprehension skills of adolescents with disabilities. *Learning Disability Quarterly*, 20(4), 245-262.
- Fugate, M. H., & Waterman, B. B. (2003). Test review of the Group Reading Assessment and Diagnostic Evaluation. In B. S. Plake & J. C. Impara (Eds.), *The fifteenth mental measurements handbook* [Electronic version]. Lincoln: University of Nebraska Press. Retrieved March 2, 2011, from the Buros Institute's *Test Reviews Online* website: <http://www.unl.edu/buros>.
- Gardner-Neblett, N., Pungello, & Iruka, I. (2011). Oral narrative skills: Implications for the reading development of African American children. *Child Development Perspectives*, 0, 1-7. Article published online doi: 10.1111/j.1750-8606.2011.00225.x
- Georgakopoulou, A., & Goutsos, D. (2004). *Discourse analysis: An introduction (2nd ed.)*. Edinburgh: Edinburgh University Press.
- Gillam, R., Peña, E., & Miller, L. (1999). Dynamic assessment of narrative and expository discourse. *Topics in Language Disorders*, 20(1), 33-47.
- Goffreda, C.T., & DiPerna, J.C. (2010). An empirical review of psychometric evidence for the Dynamic Indicators of Basic Early Literacy Skills. *School Psychology Review*, 39(3), 463-483.
- Goswami, U. & Bryant, P.E. (1990). *Phonological skills and learning to read*. London: Erlbaum.
- Gough, P. and Tunmer, W. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6-10.
- Griffin, T.M., Hemphill, L., Camp, L., Wolf, D.P., (2004). Oral discourse in the preschool years and later literacy skills. *First Language*, 24(2), 123-147.
- Gutierrez-Clellen, V. F. (1998). Syntactic skills of Spanish speaking children with low school achievement. *Language, Speech, and Hearing Services in Schools*, 29, 207-215.
- Harry, B. (2007) The disproportionate placement of ethnic minorities in special education. In L. Florian (ed.). *The SAGE Handbook of Special Education* London: Sage Publications.

CITED LITERATURE (continued)

- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore: Brookes.
- Hernandez, D. J. (2011). Double jeopardy: How third-grade reading skills and poverty influence high school graduation. *The Annie E. Casey Foundation*. Retrieved from [http://www.aecf.org/~media/Pubs/Topics/Education/Other/Double Jeopardy HowThirdGradeReadingSkillsandPoverty/DoubleJeopardyReport040511FINAL.pdf](http://www.aecf.org/~media/Pubs/Topics/Education/Other/Double%20Jeopardy/HowThirdGradeReadingSkillsandPoverty/DoubleJeopardyReport040511FINAL.pdf).
- Hester, E.J. (1996). Narratives of young African American children. In A.G. Kamhi, K.E. Pollock, & J.L. Harris (Eds.), *Communication development and disorders in African American children: Research, assessment, and intervention* (pp. 227-245). Baltimore: Paul H. Brooks Publishing Co.
- Hester, E.J. (2010). Narrative correlates of reading comprehension in African American children. *Contemporary Issues in Communication Sciences and Disorders*, 37, 73-85.
- Hester, E., Johnson, S., & Brown, W. (1998, November). *Narratives of American children with reading disabilities: High point distinctions*. Paper presented at the annual convention of the American Speech-Language-Hearing Association, Boston, MA.
- Hicks, D. (1991). Kinds of narrative genre: Genre skills among first graders from two communities. In A. McCabe & C. Peterson (Eds.), *Developing narrative structure* (pp. 97-124). Hillsdale, NJ: Erlbaum.
- Hitchcock, J.H., Kurki, A., Wilkins, C., Dimino, J., and Gersten, R. (2009). Evaluating the collaborative strategic reading intervention: An overview of randomized controlled trial options. *Practical Assessment Research & Evaluation*, 14(2). Available online: <http://pareonline.net/getvn.asp?v=14&n=2>.
- Hooper, S., Roberts, J., Sideris, J., Burchinal, M., & Zeisel, S. (2010). Longitudinal predictors of reading and math trajectories through middle school for African American versus Caucasian students across two samples. *Developmental Psychology*, 46, 1019-1029.
- Horton-Ikard, R., & Miller, J.F. (2004). It's not just the poor kids: The use of AAE forms by African-American school-aged children from middle SES communities. *Journal of Communication Disorders*, 37, 467-487.
- Horton-Ikard, R. (2009). Cohesive adequacy in the narrative samples of school-age children who use African American English. *Language, Speech, and Hearing Services in Schools*, 40, 393-402.
- Hosp, J. L., & Reschly, D. J. (2004). Disproportionate representation of minority students in special education: Academic, demographic and economic predictors. *Exceptional Children*, 70, 185-199.

CITED LITERATURE (continued)

- Hughes, D., McGillivray, L. & Schmidek, M. (1997). Guide to narrative language: Procedures for assessment. Austin, TX: PRO-ED Inc.
- Hunt, K.W. (1970). Syntactic maturity in school children and adults. *Monographs of the Society for Research in Child Development*, Serial No. 134, Volume 35, No. 1.
- Hyon, S., & Sulzby, E. (1994). African American kindergartners' spoken narratives: Topic associating and topic centered styles. *Linguistics and Education*, 6, 121-152.
- Illinois Interactive Report Card (2012). *Illinois Honor Roll*. Retrieved from <http://www.ilhonorroll.niu.edu/index.asp>
- Isbell, R., Sobol, J., Lindauer, L., & Lowerance, A. (2004). The effects of storytelling and story reading on the oral language complexity and story comprehension of young children. *Early Childhood Education Journal*, 32(3), 157-163.
- Jackson, J. E. & Pearson, B. Z. (2010). Variable use of features associated with African American English by typically developing children ages 4 to 12. *Topics in Language Disorders*, 30 (2): 135-144.
- Klecan-Aker, J.S., & Caraway, T.H. (1997). The study of the relationship of storytelling ability and reading comprehension in fourth and sixth grade African-American children. *European Journal of Disorders of Communication*, 32, 109-125.
- Klecan-Aker, J.S., McIngvale, G.K., & Swank, P.R. (1987). Stimulus considerations in narrative analysis of normal third grade children. *Language and Speech*, 30, 13-24.
- Kravchenko, A. V. (2009). The experiential basis of speech and writing as different cognitive domains. *Pragmatics & Cognition*, 17(3), 527-548.
- Kurth, L.A., Kidd, R., Gardner, R., & Smith, E.L. (2002). Student use of narrative and paradigmatic forms of talk in elementary science conversations. *Journal of Research in Science Teaching*, 3(9), 793-898.
- Labov, W. (1972). *Language in the inner city*. Philadelphia: University of Pennsylvania Press.
- Ladson-Billings, G. (2006). From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational Researcher*, 35(10), 3-12.
- Laing, S.P., & Kamhi, A. (2003). Alternative assessment of language and literacy in culturally and linguistically diverse populations. *Language, Speech, and Hearing Services in Schools*, 34(1), 44-55.

CITED LITERATURE (continued)

- Leadholm, B.J., & Miller, J.F. (1992). *Language sample analysis: The Wisconsin guide*. Madison, WI: Wisconsin Department of Public Instruction.
- Mainess, K.J., Champion, T.B., & McCabe, A. (2002). Telling the unknown story: Complex and explicit narration by African-American preadolescents – preliminary examination of gender and socioeconomic issues. *Linguistics and Education*, 13(2), 151-173.
- Mancilla-Martinez, J., Kieffer, M.J., Biancarosa, G., Christdoulou, J.A., & Snow, C.E. (2011). Investigating English reading comprehension in adolescent language minority students: Some insights from the simple view. *Reading and Writing*, 24(3), 339-354.
- Mayer, M. (1969). *Frog, where are you?* New York: Penguin Putnam, Inc.
- McArthur, G. M., Hogben, J. H., Edwards, V. T., Heath, S. M., & Mengler, E. D. (2000). On the “specifics” of specific reading disability and specific language impairment. *Journal of Child Psychology and Psychiatry*, 41, 869–874.
- McCabe, A., & Bliss, L. (2003). *Patterns of narrative discourse: A multicultural, life span approach*. New York: Pearson Education, Inc.
- McCabe, A., & Rollins, P. R. (1994). Assessment of preschool narrative skills: Prerequisites for literacy. *American Journal of Speech-Language Pathology*, 3(1), 45–56.
- McCabe, A., Bliss, L., Barra, G., & Bennett, M. (2008). Comparison of personal versus fictional narratives of children with language impairment. *American Journal of Speech-Language Pathology*, 17, 194-206.
- McClure, E., Mason, J., & Williams, S. (1983). Sociocultural variables in children’s sequencing of stories. *Discourse Processes*, 6, 131–141.
- Merritt, D.D., & Liles, B.Z. (1989). Narrative analysis: Clinical applications of story generation and story retelling. *Journal of Speech and Hearing Disorders*, 54, 438-447.
- Miller, J., & Paul, R. (1995). *The clinical assessment of language comprehension*. Baltimore, MD: Paul H. Brookes.
- Miller, J. F., & Iglesias, A. (2008). Systematic Analysis of Language Transcripts, Research Version [Computer software]. Madison, WI: SALT Software, LLC.
- Milosky, L.M. (1987). Narratives in the classroom. *Seminars in Speech and Language*, 8(4), 329-343.

CITED LITERATURE (continued)

- Miranda, A. E., McCabe, A., & Bliss, L. S. (1998). Jumping around and leaving things out: Dependency analysis applied to the narratives of children with specific language impairment. *Applied Psycholinguistics*, 19, 657–668.
- Mosenthal, P. B. (1985). Defining the expository discourse continuum. *Poetics*, 14, 387–414.
- Muñoz, M.L., Gillam, R.B., Peña, E.D., & Gulley-Faehnle, A. (2003). Measures of language development in fictional narratives of Latino children. *Language, Speech, and Hearing Services in Schools*, 34, 332-342.
- Myers, L., & Botting, N. (2008). Literacy in the mainstream inner-city school: It's relationship to spoken language. *Child Language Teaching and Therapy*, 24(1), 95-114.
- Nation, K., Clarke, P., Marshall, C.M., & Durand, M. (2004). Hidden language impairments in children: Parallels between poor reading comprehension and specific language impairment. *Journal of Speech, Language, and Hearing Research*, 47, 199-211.
- Nation, K., Cocksey, J., Taylor, J., & Bishop, D.V.M. (2010). A longitudinal investigation of early reading and language skills in children with poor reading comprehension. *Journal of Child Psychology & Psychiatry*, 51, 1031–1039.
- Nation, K., & Norbury, C.F. (2005). Why reading comprehension fails: Insights from developmental disorders. *Topics in Language Disorders*, 25(1), 21-32.
- Nation, K., & Snowling, M. (2004). Beyond phonological skills: Broader language skills contribute to the development of reading. *Journal of Research in Reading*, 27(4), 342-356.
- National Center for Education Statistics (2011). The Nation's Report Card: Reading 2011 (NCES 2012-457). Institute of Education Sciences, U.S. Department of Education, Washington, D.C.
- National Center for Education Statistics. (2010). The Nation's Report Card: Trial Urban District Assessment Reading 2009 (NCES 2010-459). Institute of Education Sciences, U.S. Department of Education, Washington, D.C.
- National Institute of Child Health and Human Development – Early Childcare Research Network, NICHD-ECCRN. (2005). Pathways to reading: The role of oral language in the transition to reading. *Developmental Psychology*, 41, 428-442.

CITED LITERATURE (continued)

- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Nippold, M. (2010). *Language sampling with adolescents*. San Diego, CA: Plural Publishing.
- Nippold, M. (2009). School-age children talk about chess: Does knowledge drive syntactic complexity. *Journal of Speech, Language, and Hearing Research*, 52, 856-871.
- Nippold, M.A., & Scott, C.M. (2010). Overview of expository discourse: Development and disorders. In M.A. Nippold & C.M. Scott (Eds.), *Expository discourse in children, adolescents, and adults: Development and disorders* (pp. 1-11). New York: Psychology Press.
- Nippold, M.A., Hesketh, L.J., Duthie, J.K., & Mansfield, T.C. (2005). Conversational versus expository discourse: A study of syntactic development in children, adolescents, and adults. *Journal of Speech, Language, and Hearing Research*, 48, 1048-1064.
- Nippold, M. A., Mansfield, T. C., Billow, J. L., & Tomblin, J. B. (2008). Expository discourse in adolescents with language impairments: Examining syntactic development. *American Journal of Speech-Language Pathology*, 17, 356–366.
- Nippold, M.A., Mansfield, T.C., Billow, J.L., & Tomblin, J.B. (2009). Syntax development in adolescents with a history of language impairment: A follow-up investigation. *American Journal of Speech-Language Pathology*, 18, 241-251.
- Norbury, C.F., & Bishop, D.V.M. (2003). Narrative skills of children with communication impairments. *International Journal of Language and Communication Disorders*, 38(3), 287-313.
- Norris, J., & Bruning, R. (1988). Cohesion in the narratives of good and poor readers. *Journal of Speech and Hearing Disorders*, 53, 416–423.
- Oakhill, J. & Cain, K. (2007). Introduction to comprehension development. In K. Cain and J. Oakhill (Eds.), *Children's comprehension problems in oral and written language: A cognitive perspective* (pp. 157-189). New York: Guilford Press.
- Oetting, J. B., & Newkirk, B. L. (2008). Subject relatives by children with and without SLI across different dialects of English. *Clinical Linguistics and Phonetics*, 22(2), 111–125.

CITED LITERATURE (continued)

- Olley, L. (1989). Oral narrative performance of normal and language impaired school aged children. *Australian Journal of Human Communication Disorders*, 17(1), 43-65.
- O'Neill, D. K., Pearce, M. J., & Pick, J. L. (2004). Preschool children's narratives and performance on the Peabody Individualized Achievement Test-Revised: Evidence of a relation between early narrative and later mathematical ability. *First Language*, 24, 149-183.
- Pearce, W.M. (2003). Does the choice of stimulus affect the complexity of children's oral narratives? *Advances in Speech-Language Pathology*, 5(2), 95-103.
- Pearson, D.P., & Hamm, D.N. (2006). *The assessment of reading comprehension: Key historical influences in the USA*. In M. Sainsbury, C. Harrison and A. Watts (Eds.), *Assessing reading: From theories to classrooms* (pp. 76-101). National Foundation for Educational Research.
- Peña, E., Gillam, R.B., Malek, M., Ruiz-Felter, R., Resendiz, M., Fiestas, C., & Sabel, T. (2006). Dynamic assessment of school-age children's narrative ability: An experimental investigation of classification accuracy. *Journal of Speech, Language, and Hearing Research*, 49, 1037-1057.
- Perfetti, C.A., Landi, N., & Oakhill, J. (2007). The acquisition of reading comprehension skills. In M.J. Snowling & C. Hulme (Eds), *The science of reading: A handbook* (pp. 227-247). Oxford, England: Blackwell.
- Peterson, C., & McCabe, A. (1983). *Developmental psycholinguistics: Three ways of looking at a child's narrative*. New York: Plenum.
- Peterson, S.M. (2009). Narrative and paradigmatic explanations in preschool science discourse. *Discourse Processes*, 46, 369-399.
- Price, J.R., Roberts, J.E., & Jackson, S.C. (2006). Structural development of the fictional narratives of African-American preschoolers. *Language, Speech, and Hearing Services in Schools*, 37, 178-190.
- Quirk, R., Greenbaum, S., Leech, G., Svartvik, J. (1985). *A comprehensive grammar of the English language*. London: Longman.
- RAND Reading Study Group (2002) *Reading for Understanding: Toward an R and D Program in Reading Comprehension*. Santa Monica, CA: RAND, URL (downloaded March 8, 2010): <http://www.rand.org>

CITED LITERATURE (continued)

- Reese, E., Suggate, S., Long, J., & Schaughency, E. (2010). Children's oral narrative and reading skills in the first 3 years of reading instruction. *Reading and Writing: An Interdisciplinary Journal*, 23, 627-644.
- Reilly, J., Bates, E., & Marchman, V. (1998). Narrative discourse in children with early focal brain injury. *Brain and Language*, 65, 335-375.
- Riedel, B.W. (2007). The relationship between DIBELS, reading comprehension, and vocabulary in urban, first-grade students. *Reading Research Quarterly*, 42(4), 546-567.
- Ripich, D.N., & Griffith, P.L. (1988). Narrative abilities of children with normal-language and language disordered school-age children: Story structure, cohesion, and propositions. *Journal of Learning Disabilities*, 21, 165-173.
- Rivers, A.N. (2001). *The influence of elicitation procedures on the structure and content of African American English speaking children's personal narratives and fictional stories and relationships between narratives and reading comprehension and expressive language* (Unpublished doctoral dissertation). Northwestern University: Evanston, IL.
- Roseberry-McKibbin, & O'Hanlon, L. (2005). Non-biased assessment of English language learners: A tutorial. *Communication Disorders Quarterly*, 26, 178-185.
- Roth, F. P., Speece, D. L., & Cooper, D. H. (2002). A longitudinal analysis of the connection between oral language and reading. *Journal of Educational Research*, 95, 259-272.
- Roth, F.P., Speece, D.L., Cooper, D.H., & De La Paz, S. (1996). Unresolved mysteries: How do metalinguistic and narrative skills connect with early reading? *The Journal of Special Education*, 30(3), 257-277.
- Sanford, A.J. & Garrod, S.M. (1998). The role of scenario mapping in text comprehension. *Discourse Processes*, 26(2-3), 159-190.
- Scarborough, H. S. (1990). Index of Productive Syntax. *Applied Psycholinguistics*, 11, 1-22.
- Schleppegrell, M. J. (2004). *The language of schooling: A functional linguistics perspective*. Mahwah, NJ: Lawrence Erlbaum.
- Scott, C.M. (2010). *Assessing expository texts produced by school-age children and adolescents*. In M. A. Nippold & C.M. Scott Eds. *Expository discourse in children, adolescents, and adults* (pp. 191-214) New York: Psychology Press.

CITED LITERATURE (continued)

- Scott, C.M., & Lane, S. (2008, June). Capturing sentence complexity in school-age children with/without language impairment: The search for more sensitive measures. A paper presented at the annual meeting of the Symposium for Research in Child Language Disorders. Madison, WI.
- Scott, C.M., & Windsor, J. (2000). General language performance measures in spoken and written narrative and expository discourse of school-age children with language learning disabilities. *Journal of Speech, Language, and Hearing Research*, 43(2), 324-339.
- Sencibaugh, J.M. (2007). Meta-analysis of reading comprehension interventions for students with learning disabilities: Strategies and implications. *Reading Improvement*, 44(1), 6-22.
- Serry, T., Rose, M., & Liamputtong, P. (2008). Oral language predictors for the at-risk reader: A review. *International Journal of Speech-Language Pathology*, 10(6), 392-403.
- Seymour, H.N. (2004). The challenge of language assessment for African-American English-speaking children: A historical perspective. *Seminars in Speech and Language*, 25(1), 3-12.
- Skiba, R., Poloni-Staudinger, L., Gallini, S., Simmons, A.B., & Feggins-Azziz, R. (2006). Disparate access: The disproportionality of African American students with disabilities across educational environments. *Exceptional Children*, 72(4), 411-424.
- Smith, H. (2011). *Illinois Interactive Report Card*. ethodm March 2, 2011 from <http://iirc.niu.edu>.
- Smith, T.T., Lee, E., & McDade, H.L. (2001). An investigation of T-units in African-American English-speaking and Standard American English-speaking fourth-grade children. *Communication Disorders Quarterly*, 22(3), 148-157.
- Snow, C. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND.
- Snow, C.E., & Biancarosa, G. (2003). Adolescent literacy and the achievement gap: What do we know and where do we go from here?
- Southwood, F., & Russell, A. F. (2004). Comparison of conversation, freeplay, and story generation as methods of language sample elicitation. *Journal of Speech, Language & Hearing Research*, 47(2), 366-376.
- Snowling, M.J. (2000). *Dyslexia* (2nd ed.). Oxford: Blackwell.

CITED LITERATURE (continued)

- Snowling, M. J., & Hayiou-Thomas, M. E. (2006). The dyslexia spectrum: Continuities between reading, speech, and language impairments. *Topics in Language Disorders*, 26(2), 110–126.
- Snowling, M. J. and Hulme, C. (2011), Evidence-based interventions for reading and language difficulties: Creating a virtuous circle. *British Journal of Educational Psychology*, 81: 1–23. doi: 10.1111/j.2044-8279.2010.02014.x
- Snyder, L. S., & Downey, D. M. (1991). The language–reading relationship in normal and reading disabled children. *Journal of Speech and Hearing Research*, 34, 129–140.
- Spycher, P. (2009). Learning academic language through science in two linguistically diverse kindergarten classrooms. *Elementary School Journal*, 109(4), 359-379.
- Stockman, I.J. (1996). The promises and pitfalls of language sample analysis as an assessment tool for linguistic minority children. *Language, Speech, and Hearing Services in Schools*, 27, 355-366.
- Stockman, I.J. (2010). A review of developmental and applied language research on African American children: From a deficit to difference perspective on dialect differences. *Language, Speech, and Hearing Services in School*, 41, 23-38.
- Storch, S.A., & Whitehurst, G.J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology*, 38(6), 934-947.
- Suggate, S.P., Schaughency, E.A., and Reese, E. (2011). Children learning to read later catch up to children reading earlier. Manuscript in preparation.
- Tabors, P. O., Snow, C. E. & Dickinson, D. K. (2001). Homes and schools together: Supporting language and literacy development. In D. K. Dickinson & P. O. Tabors (Eds), *Beginning literacy with language* (pp. 313–334). Baltimore, MD: Paul H. Brookes.
- Taylor, O.L., & Payne, K.T. (1983). Culturally valid testing: A proactive approach. *Topics in Language Disorders*, 3(3), 8-20.
- Teale, W.J., Paciga, K.A., & Hoffman, J.L. (2007). Beginning reading instruction in urban schools: The curriculum gap ensures a continuing achievement gap. *The Reading Teacher*, 61(4), 344-348.
- Tomblin, J.B., Records, N., Buckwalter, P., Zhang, X., Smith, E., & O'Brien, M. (1997). Prevalence of specific language impairment in kindergarten children. *Journal of Speech, Language, and Hearing Research*, 40, 1245-1260.

CITED LITERATURE (continued)

- Torgeson, J.K. (2000). Individual differences in response to early interventions in reading: The lingering problem of treatment resisters. *Learning Disabilities Research & Practice*, 15(1), 55-64.
- Trabasso, T., & Nickels, M. (1992). The development of goal plans of action in the narration of a picture story. *Discourse Processes*, 15, 249-275.
- Trabasso, T., Stein, N., Rodkin, P. Munger, M., & Baughn, C. (1992). Knowledge of goals and plans in the on-line narration of events. *Cognitive Development*, 7, 133-170.
- Treiman, R., Clifton, C., Jr, Meyer, A. S., & Wurm, L. H. (2003). Language comprehension and production. In A. F. Healy & R. W. Proctor (Eds.), *Comprehensive Handbook of Psychology*, Volume 4: Experimental Psychology. (pp. 527-547). New York: Wiley.
- Van Kleeck, A. (2007). School talk: Preparing preschoolers from non-mainstream backgrounds for classroom discourse. Paper presented at the American Speech-Language and Hearing Association. Boston, MA.
- Vaughn, S., Cirino, P.T., Wanzek, J., Wexler, J., Fletcher, J., Denton, C., ... Francis, D. (2010). Response to intervention for middle school students with reading difficulties: Effects of a primary and secondary intervention. *School Psychology Review*, 39(1), 3-21.
- Vaughn, S., Wanzek, J., Wexler, J. Barth, A., Cirino, P.T., Fletcher, J., ... Francis, D. (2010). The relative effects of group size on reading progress of older students with reading difficulties. *Reading and Writing: An Interdisciplinary Journal*, 23(8), 931-956.
- Veneziano, E., & Sinclair, H. (1995). Functional changes in early child language: The appearance of references to the past and of explanations. *Journal of Child Language*, 22, 557-581.
- Verhoeven, L., & van Leeuwe, J. (2008). Predictors of the development of reading comprehension: A longitudinal study. *Applied Cognitive Psychology*, 22, 407-423.
- Ward-Lonergan, J.M. (2010). Expository discourse intervention: Helping school-age children and adolescents with language disorders master the language of the curriculum. In M.A. Nippold & C.M. Scott (Eds.), *Expository discourse in children, adolescents, and adults: Development and disorders* (pp. 241-273). New York: Psychology Press.
- Ward-Lonergan, J.M., Liles, B.Z., Anderson, A.M. (1999). Verbal retelling abilities in adolescents with and without language-learning disabilities for social studies lectures. *Journal of Learning Disabilities*, 32(3), 213-223.
- Westby, C.E. (2005). Assessing and remediating text comprehension problems. In H.W. Catts & A.G. Kamhi (Eds.), *Language and reading disability* (2nd ed.), pp. 157-232. Boston, MA: Pearson Education.

CITED LITERATURE (continued)

- Westerveld, M.F. (2008). A longitudinal investigation of oral narrative skills of children with mixed reading disability. *International Journal of Speech-Language Pathology*, 10, 132-145.
- Westerveld, M.F., & Moran, C.A. (2011). Expository language skills of young school-age children. *Language, Speech, and Hearing Services in Schools*, 42, 182-193.
- Wetherell, D., Botting, N., & Conti-Ramsden, G. (2007). Narrative skills in adolescents with a history of SLI in relation to non-verbal IQ scores. *Child Language Teaching and Therapy*, 23(1), 95–113.
- Williams, K. T., Cassidy, J., & Samuels, S. J. (2001). *Group reading assessment and diagnostic education*. Circle Pines, MN: American Guidance Services.
- Wong, B.Y.L., & Donahue, M. (Eds.). (2002). *Social dimension of learning disabilities: Essays in honor of Tanis Bryan*. Mahwah, N.J.: Lawrence Erlbaum.
- Zevenbergen, A. A., Whitehurst, G. J., & Zevenbergen, J. A. (2003). Effects of a shared-reading intervention on the inclusion of evaluative devices in narratives of children from low-income families. *Applied Developmental Psychology*, 24, 1-15.

VITA

NAME: Nicole M. Koonce

EDUCATION: B.S., Speech-Language Pathology, University of Central Oklahoma, Edmond, Oklahoma, 1998

M.A., Communication Sciences and Disorders, Oklahoma State University, Stillwater, Oklahoma, 2000

Ph.D., Special Education, University of Illinois at Chicago, Chicago, IL, 2012

TEACHING EXPERIENCE: Department of Special Education, University of Illinois at Chicago, Chicago, Illinois, 2005, 2008-2011

Department of Communicative Disorders, Rush University, Chicago, Illinois, 2007

HONORS: University of Illinois at Chicago: STEP=UP Leadership Scholar, Office of Special Education Programs (OSEP), Preparation of Leadership Personnel Grant, 2007-2012

President's Honor Roll, University of Central Oklahoma, Edmond, Oklahoma 1996-1998

PROFESSIONAL MEMBERSHIP: American Speech Language and Hearing Association
Council for Exceptional Children
American Education Research Association

CONFERENCE PRESENTATIONS: Koonce, N.M. (2012, April). Oral discourse and reading comprehension skills of school-age African American children. Poster presented at the meeting of the Council for Exceptional Children, Denver, CO.

Balthazar, C., Koonce, N.M., & Scott, C.M. (2011, June). An exploration of the relationship of three experimental measures of complex sentence knowledge to CELF4 scores. Poster presented at the 32nd Annual Symposium on Research in Child Language Disorders, University of Wisconsin-Madison, Madison, WI.

Balthazar, C., Armstrong, J., Koonce, N.M., & Kempster, G. (2011, February). Clinical research collaboration roundtable: Assessment and treatment of grammatical skills in older children. Paper presented at the Annual Convention of the Illinois Speech Language and Hearing Association, Rosemont, IL.

Scott, C.M., Balthazar, C., & Koonce, N.M. (2010, November). Assessing and treating sentence complexity found in expository texts. Paper presented at the Annual Convention of the American Speech Language and Hearing Association, Philadelphia, PA.

Koonce, N.M., & Wyche, A. (2009, April). Look who's talking and thinking: Discourse-based teaching methods. Poster presented at the meeting of the Council for Exceptional Children, Seattle, WA.

PUBLICATIONS: Scott, C.M., & Koonce, N.M. Syntactic contributions to literacy learning. In C.A. Stone, E. Silliman, & G. Wallach (Eds.), *Handbook of language and literacy: Development and disorders* (2nd ed.). New York: Guilford. Manuscript submitted for publication.

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