Improving Narrative and Expository Language: A Comparison of Narrative Intervention to Shared Storybook Reading

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Brigham Young University

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Improving Narrative and Expository Language: A Comparison of
Narrative Intervention to Shared Storybook Reading

Karee Douglas

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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ABSTRACT

Improving Narrative and Expository Language: A Comparison of Narrative Intervention to Shared Storybook Reading

Karee Douglas
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Master of Science

The purpose of this study was to explore the impact of oral narrative intervention delivered in a multi-tiered system of support format on proximal narrative retell outcomes, and more distal personal story generation and expository language outcomes of preschool and kindergarten students. Participants included 241 preschool and kindergarten students. Students were divided into 3 different groups (treatment, alternate treatment, and no-treatment control). The treatment group received *Story Champs* Tier 1 oral narrative language intervention from their classroom teacher twice a week for 15-20 minutes over 14 weeks. A sub-sample of students from the *Story Champs* group who did not meet a narrative retell criterion after 1 month of large group instruction were assigned to receive additional, *Story Champs* Tier 2 small group intervention. Tier 2 narrative intervention consisted of two 20-minute small group narrative intervention sessions each week for 14 weeks. The students assigned to the alternate treatment group participated in Tier 1 shared storybook reading intervention with their classroom teacher twice a week for 15-20 minutes over 14 weeks. Students in the no-treatment control group participated in classroom activities that were in place at the outset of the school year. Narrative retell and personal story language samples were elicited and scored using the CUBED Narrative Language Measures (NLM) subtest, and an expository language sample was elicited and scored using a researcher-generated protocol. Students in the *Story Champs* group had significantly higher posttest narrative retell scores with large effect sizes compared to the shared storybook and no-treatment control groups. Students in the *Story Champs* and shared storybook reading groups performed to a similar degree in their ability to generate a personal story at posttest. Expository retell posttest results were not significantly different between all of the different conditions. This study contributes to previous research suggesting that brief multi-tiered oral narrative language intervention can improve the receptive and expressive academic language of young children, as measured using narrative retelling. This study provides evidence that multi-tiered systems of support (MTSS) for language can be successfully delivered by teachers and speech-language pathologists working in the schools. It is also evident that both oral narrative language intervention and shared storybook interventions can improve personal story generations. However, the narrative-based interventions applied in this study did not appear to significantly impact expository language.

Keywords: narrative intervention, personal story generation, expository language, multi-tiered systems of support
ACKNOWLEDGMENTS

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I am grateful for my parents and siblings who have supported me throughout this process. A very special thanks goes to my husband and children who have encouraged me through all the ups and downs of writing this thesis. Their support has made it possible for me to complete this project.
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DESCRIPTION OF THESIS STRUCTURE

This thesis, *Improving Narrative and Expository Language: A Comparison of Narrative Intervention to Shared Storybook Reading*, is written in a hybrid format. The hybrid format brings together traditional thesis requirements with journal publication formats. Portions of this thesis may be submitted for publication elsewhere, with the thesis author being listed as one of multiple contributing coauthors.

Appendix A is the approval from the Institutional Review Board (IRB). Appendix B provides the large group narrative intervention fidelity checklist. Appendix C is the pretest CUBED Narrative Language Measures. Appendix D is the small group narrative intervention fidelity checklist. Appendix E is the Narrative Language Measures (NLM) flow chart used to score the personal story generations. Appendix F is the story used for the expository pretest. Finally, Appendix G is the annotated bibliography.
**Introduction**

Oral language is foundational to academic success. Several studies have specifically identified oral vocabulary and narrative ability as key factors in reading comprehension (Benson, 2009; Catts, Fey, Tomblin, & Zhang, 2002; Dickinson & McCabe, 2001; Greenhalgh & Strong, 2001; Griffin, Hemphill, Camp, & Wolf, 2004). The relationship between oral language and reading comprehension is not only correlational but also causal. In its review of 204 empirical studies, the National Reading Panel (2000) explored the effectiveness of different approaches to teaching children to read. The Panel identified that reading comprehension is the “essence of reading” and is “essential not only to academic learning in all subject areas but to lifelong learning as well” (p. 13). The Panel found that one important aspect of developing reading comprehension skills is vocabulary development. Vocabulary is essential to reading comprehension because a reader who encounters an unfamiliar word must determine the meaning of the word before comprehension takes place. Therefore, a large vocabulary allows for better comprehension. Furthermore, reading comprehension abilities have been shown to be directly influenced by oral narrative intervention (Barton-Hulsey, Sevcik, & Romski, 2017; Catts, Nielsen, Bridges, & Liu, 2016). For example, Clarke, Snowling, Truelove, and Hulme (2010) examined the effects of three different interventions (text comprehension, oral language, and combined) on reading comprehension in fourth graders. They found that oral language intervention that focused on vocabulary and narratives brought about the largest gains in reading comprehension and was the only intervention in which the students retained the gains 11 months after the study concluded. Students in the oral language intervention group also generalized their knowledge to untaught words, resulting in an increase in overall vocabulary scores.
In acknowledgment of the role that oral language plays in reading success, current academic standards such as the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) give increased attention to oral academic language in the early elementary grades, including kindergarten. This emphasized focus on the comprehension and use of complex, academic language is not only in literary (i.e., narrative), but also in informational (i.e., expository) texts. Academic language incorporates higher level language abilities that facilitate success in academic contexts. Additionally, academic language functions in a highly decontextualized environment, where most of the information needed for comprehension is contained within the language itself (Westby, 1985).

Current kindergarten CCSS give equal attention to narrative and expository language, where in the past, narration was the primary focus. Narrative retell standards for kindergarten students include, “with prompting and support,” kindergarten students will “retell familiar stories, including key details… identify characters, settings, and major events in a story” (CCSS.ELA-LITERACY.RL.K2, para.1; CCSS.ELA-LITERACY.RL.K3, para. 1). Standards related to personal stories include “describe familiar people, places, things, and events and, with prompting and support, provide additional detail” (CCSS.ELA-LITERACY.SL.K.4, para. 1), and “speak audibly and express thoughts, feelings, and ideas clearly” (CCSS.ELA-LITERACY.SL.K.6, para. 1). Expository language standards expect that kindergarten students will, “with prompting and support, identify the main topic and retell key details of a text” and “with prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text” (CCSS.ELA-LITERACY.RI.K2, para.1; CCSS.ELA-LITERACY.RI.K3, para. 1). Expository language skills become increasingly important as
students advance through school each year, necessitating an increased emphasis on expository language. For example, the fourth grade National Assessment of Educational Progress (NAEP; National Center for Education Statistics, 2015) reading comprehension test uses approximately 50% narrative and 50% expository passages. However, in twelfth grade, students are assessed using 70% expository passages (Petersen & Petersen, 2016).

**Limited Progress in Reading Comprehension**

In general, classroom teaching methods have not improved oral language sufficiently to meet the increased focus of CCSS (National Reading Panel, 2000). The fact that oral language has not been sufficiently emphasized in the early grades is reflected in student reading comprehension performance across the U.S. NAEP reported that reading scores for fourth and eighth grade students from 1992 to 2015 have changed very little. For example, in 1992 NAEP recorded that 71% of fourth graders across the U.S. did not meet a proficient level on reading assessments and by 2015, that number only decreased to 64% of fourth grade students. This marginal gain is also seen in eighth grade students. In 1992, 71% of eighth graders were below grade level in reading and by 2015 66% were still behind. These data were also analyzed by ethnic group, and illustrated that for the past 20 years, culturally and linguistically diverse students in particular have performed poorly. Currently, NAEP reports that 82% of African American students and 79% of Hispanics do not read at grade level on CCSS-aligned assessments. The high percentage of students still below CCSS demonstrates that past and current teaching methods have not increased U.S. students’ ability to meet standards set forth by the common core (National Center for Education Statistics, 2015).

For most children who are not reading at grade level, this is a reading comprehension problem. Research identifies that for the majority of students, poor reading comprehension is not
linked to poor decoding skills. Decoding refers to the ability to identify words quickly, accurately and silently using letter-sound correspondence (Gough & Tunmer, 1986). Only 5% to 18% of students have difficulty decoding while reading (Costa, Edwards, & Hooper, 2016; Shaywitz & Shaywitz, 2005). O’Connor (2018) acknowledged that students need to recognize printed words for reading comprehension to take place, but she further clarified that there is a rate of diminishing return when it comes to words read correctly per minute and reading comprehension. She found that improved reading fluency impacted reading comprehension in second grade students only between 35 and 75 words correct per minute (wcpm). In fourth graders, reading comprehension was not improved beyond a reading fluency score of 90 wcpm. Moreover, Nakamoto, Lindsey, and Manis (2007) performed a longitudinal study with Spanish-speaking English language learners (ELLs) from first through sixth grade. Growth was seen in both decoding and reading comprehension between the end of first grade and the end of second grade. However, by third grade a discrepancy was found between reading comprehension and decoding scores. Decoding skills continued in line with the average scores of the normative English-speaking group throughout the data collection period, however, starting in third grade when complex academic written language was introduced, reading comprehension skills began to decline for the Hispanic group. These studies identify that culturally and linguistically diverse students do not have more difficulty learning to decode than other students, therefore the disproportionate poor performance on reading comprehension assessments is not due to poor decoding skills, rather oral language factors (Biemiller, 2003; Lindsey, Manis, & Bailey, 2003; Nakamoto et al., 2007; Proctor, August, Carlo, & Snow, 2005). Therefore, to improve reading comprehension, deficits in oral language need to be addressed, and this focus on academic oral language, including narrative retelling, personal story generation, and expository language,
should take place in preschool and kindergarten (Bishop & Edmundson, 1987; Catts et al., 2002; Dickinson & McCabe, 2001; Fazio, Naremore, & Connell, 1996; Feagans & Appelbaum, 1986; Griffin et al., 2004; Petersen & Spencer, 2016). Furthermore, because the majority of students are reading below grade level, this language related deficit is a school-wide concern.

**Multi-Tiered Systems of Support**

Multi-tiered systems of support (MTSS) are designed to help all students across the school regardless of special education status. The three-tiered framework of MTSS provides teachers with a system to identify students who are falling behind academically and give them the support they need to be successful. First, all the students in a school are assessed using a universal screener, their initial performance on the screener determines their placement in the MTSS model. Tier 1 whole-class instruction is usually provided in the general education classroom. All students engage in the same curriculum and there is very little individualization at this level. Mellard, Mcknight, and Jordan (2010) found that 80% of elementary students make sufficient progress at the Tier 1 level. Students who do not make sufficient progress after a period of time receiving Tier 1 instruction receive additional support through Tier 2 intervention. Tier 2 intervention is a more intensive level of intervention that is typically administered in a small group setting. Students continue to receive Tier 1 instruction as well as Tier 2. The progress students make at the Tier 2 level is regularly monitored to assess if their current level of intervention is providing the support they need. Students who fail to make sufficient progress at Tier 2 are assigned to Tier 3. This is the highest level of support and moves students into receiving special education services. Tier 3 intervention is even more individualized for each student with greater intensity of services, and frequent progress monitoring. A meta-analysis conducted by Burns, Appleton, and Stehouwer (2005) of 21 studies indicated that fewer than 2%
of students were assigned to special education when MTSS was in place. One important factor in the success of MTSS is the frequent monitoring of progress. Rather than relying on a single assessment taken before the intervention is implemented, MTSS focuses on the child’s response to intervention throughout the intervention cycle. This aids in identifying students who are struggling before they fall so far behind that they qualify for additional services. Additionally, MTSS reaches out to culturally diverse students who do not have a learning disability but need additional language support (Spencer, Petersen, & Adams, 2015; Spencer, Weddle, Petersen, & Adams, 2017; Weddle, Spencer, Kajian, & Petersen, 2016).

**Shared Storybook Reading**

The attention to language in the MTSS context has been primarily focused on vocabulary. Shared storybook reading has been a heavily researched approach to teaching oral language, with a particular emphasis on vocabulary (Ewers & Brownson, 1999; Lonigan, Shanahan, & Cunningham, 2008; Walsh & Blewitt, 2006). Ewers and Brownson (1999) studied the effect of shared storybook reading with 66 kindergarteners. Participants were randomly assigned to an active or passive storybook reading group. Each group listened to one storybook at a time. The active group answered *what* or *where* questions immediately after each sentence containing a target word. The passive group listened to a recast containing a familiar synonym for each target word. Results showed that participants in the active group learned more new words than the passive group, which suggests that active participation in the storybook reading facilitates greater understanding of vocabulary.

Walsh and Blewitt (2006) studied storybook reading with three-year-olds and the effect that asking questions had on the participant’s word acquisition. Three condition groups were organized, vocabulary eliciting questions, noneliciting questions and no questions (control).
Results indicated that the two groups who engaged in answering questions about the text showed greater gains in vocabulary knowledge than the control group. This confirmed that vocabulary knowledge increased through active participation in shared storybook reading.

Similar findings of the effectiveness of embedded vocabulary and reading comprehension were reported by Goldstein et al., (2016). The Goldstein et al. study included two small-group listening centers in which preschoolers followed along in storybooks while listening to prerecorded audio of the book. The prerecorded audio for the experimental group included an embedded lesson which covered challenging vocabulary words and story questions. The comparison group listened to the same stories with the same vocabulary words but did not receive an embedded lesson. Results showed that when students received explicit vocabulary instruction through the embedded lesson, their vocabulary knowledge increased. However, Goldstein et al. recognized that reading comprehension results did not differ between the experimental and control group.

Additionally, the National Early Literacy Panel (NELP) conducted a meta-analysis of the impact shared storybook reading had on early literacy skills of preschool and kindergarten students (Lonigan et al., 2008). Predictors of reading and writing growth such as alphabet knowledge, cognitive ability, oral language, phonemic awareness, print knowledge, readiness, and writing were analyzed. Shared storybook intervention had the largest impact on oral language outcomes. However, when vocabulary outcomes were removed, the effect size for shared storybook intervention on complex oral language was small ($d = .35$). This indicates that shared storybook intervention has the greatest impact on vocabulary skills and a small impact on complex oral language skills found in academic language.
The heightened focus on vocabulary with the lack of more expanded, explicit academic language instruction may be part of the reason students are not successfully meeting CCSS for reading comprehension. In order for all students to meet CCSS and develop adequate narrative retell skills, personal story generation skills, and expository language to improve reading comprehension, something more than just a focus on vocabulary is needed.

**Narrative Language Intervention with a Focus on MTSS (Tiers 1 and 2)**

Oral narrative language and oral expository language are replete with academic language features that all students need to produce and understand in order to be successful in school (Petersen, 2011; Petersen et al., 2014). Narrative-based language intervention in an MTSS context has been researched recently, primarily with culturally and linguistically diverse preschool and early elementary-age students. Gillam, Olszewski, Fargo, and Gillam (2014) investigated a Tier 1 narrative-based language intervention approach with 43 students in two first-grade classrooms. Students were initially given a narrative pretest in which they were asked to produce a fictional story after looking at a single picture that did not contain an obvious initiating event. The narratives were scored using a progress monitoring tool, the Monitoring Indicators of Scholarly Language (MISL). Students were then divided into subgroups of low-risk and high-risk based on their MISL score. The control classroom continued receiving reading, vocabulary, and listening comprehension lessons that were in place prior to the study. The experimental group participated in a narrative intervention consisting of three phases. In Phase I, Teaching Story Grammar Elements, students listened to and retold simple fictional stories consisting of an initiating event, attempt, and consequence. In Phase II, Elaboration: Making Stories Sparkle, students engaged in lessons to facilitate use of more complex narrative language. Complex narratives incorporate dialogue, coordinated and subordinated conjunctions, adverbs,
adjectives and metacognitive verbs as well as complicating actions in the story. In Phase III, Independent Storytelling, lessons focused on developing the ability to create and tell complex and elaborate fictional stories on their own. As well as teaching vocabulary using embedded instruction. Gillam et al., (2014) found that after participating in the narrative intervention the experimental group produced more complex fictional narratives, while the students in the control classroom did not make significant gains in the complexity of their narratives. The proximal outcome of fictional narrative posttest effect sizes were three times larger for the students in the experimental group. Additionally, after the intervention, high-risk students in the experimental classroom produced stories equal in complexity as their low-risk peers. One explanation for the positive gains may be the focus on teaching the students to identify causal links between initiating events, internal responses, plans, attempts and consequences.

Recent research also suggests that MTSS facilitates an environment where young culturally and linguistically diverse students can be adequately supported as they work to improve their oral language skills (Gillam, Gillam, & Reece, 2012). This focus on oral language skills for all students, not just those who qualify for special education, could have a significant impact on future reading comprehension performance. Spencer et al. (2017) implemented a multi-tiered narrative language intervention (Story Champs; Spencer & Petersen, 2012a) in a Head Start preschool with diverse students. The study sought to investigate the impact an MTSS personal-themed narrative retell intervention would have on preschoolers’ narrative retell skills. Results indicated statistically significant gains in the proximal outcome of narrative retelling. Students in the MTSS treatment groups produced longer, more complex sentences as their storytelling abilities improved.
Several other studies have demonstrated that narrative language intervention embedded in MTSS can improve proximal narrative language outcomes in at-risk preschool students (Spencer, Petersen, & Adams, 2015; Spencer, Petersen, Slocum, & Allen, 2015; Weddle et al., 2016). Given the success of MTSS embedded in narrative intervention to improve narrative language for all students, this study seeks to expand on this research by examining the extent that MTSS oral narrative intervention helps young students meet CCSS expectations for academic language, including proximal narrative retells and more distal personal story generations and expository discourse. Prior studies on MTSS for language have included relatively small sample sizes and have been primarily driven by highly trained researchers or research assistants. More information is needed about the efficacy and effectiveness of MTSS for language when delivered by teachers and speech-language pathologists under replicable conditions in the school setting. Furthermore, very few narrative language intervention studies have included comparative, alternate treatment conditions that reflect a traditional approach to language instruction in the school. Also, more distal outcomes that do not perfectly reflect the focus of instruction need to be examined. These distal outcomes, when considered in relation to retell-based narrative language instruction, include expository language, and to a lesser extent, personal story generation. Petersen and Petersen (2016) illustrate a distinct connection between narrative language and expository language. They argue that, “narrative intervention, when properly shaped, can logically lead to growth in expository language” (p. 109). This is explained by recognizing that expository texts often incorporate elements of narration, and visa-versa. This integration of narration and exposition in texts leads us to believe that a narrative based intervention will also improve expository language skills, as long as the model narrative sufficiently reflects important elements of exposition. Researchers have also found personal story generation to improve with oral
narrative language intervention, even when that intervention primarily focused on narrative retelling (e.g., Spencer, Petersen, Slocum et al., 2015; Weddle et al., 2016). It is important to examine whether such generalization to personal stories is relatively greater using a multi-tiered oral narrative language intervention when compared to an alternate language treatment approach, such as shared storybook intervention.

Therefore, the purpose of this study is to examine improvements to oral narrative retells, personal story generations, and expository language in preschool and kindergarten students after participating in narrative language intervention embedded in MTSS. Specifically, the research question is as follows:

To what extent does multi-tiered narrative intervention improve the proximal narrative retells and distal personal story generations and expository language skills of preschoolers and kindergarteners compared to a traditional single-tier alternate treatment group using shared storybook reading and a more traditional single-tier no-treatment control group?

**Method**

**Participants**

Preschool and kindergarten students from 11 different classrooms across three different school districts in the same region were recruited to participate in this study. As the current study involved human participants, approval was obtained from the Institutional Review Board in the collection and analysis of all of the data used. A total of 108 preschool students and a total of 133 kindergarten students (N = 241) participated in this study. One district had 87 participants while the other two districts had 77 participants in each district. Demographic information for each student that was available from the school districts was obtained. It was reported that 99% of the participants spoke English and 1% of participants spoke Russian or Tagalog. Student
characteristics such as ethnicity, socioeconomic status and presence of a disability are displayed in Table 1.

Table 1

*Demographic Information of the Preschool and Kindergarten Participants*

<table>
<thead>
<tr>
<th></th>
<th>Story Champs</th>
<th>Shared Storybook</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of Students</strong></td>
<td>83 (34%)</td>
<td>72 (30%)</td>
<td>86 (36%)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43 (52%)</td>
<td>25 (35%)</td>
<td>32 (37%)</td>
</tr>
<tr>
<td><strong>Free/Reduced Lunch</strong></td>
<td>Free or Reduced</td>
<td>64 (77%)</td>
<td>33 (46%)</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>73 (88%)</td>
<td>38 (53%)</td>
<td>67 (78%)</td>
</tr>
<tr>
<td>Latino</td>
<td>3 (4%)</td>
<td>1 (1%)</td>
<td>5 (6%)</td>
</tr>
<tr>
<td>African American</td>
<td>3 (4%)</td>
<td>3 (4%)</td>
<td>10 (12%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>0 (0%)</td>
<td>1 (1%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Multi-Ethnic</td>
<td>4 (5%)</td>
<td>3 (4%)</td>
<td>3 (4%)</td>
</tr>
<tr>
<td><strong>SPED</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolled (not specified)</td>
<td>10 (12%)</td>
<td>1 (1%)</td>
<td>9 (11%)</td>
</tr>
<tr>
<td>Not Enrolled</td>
<td>73 (88%)</td>
<td>43 (60%)</td>
<td>76 (88%)</td>
</tr>
<tr>
<td>Language Impairment</td>
<td>0 (0%)</td>
<td>2 (3%)</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

*Note.* Story Champs = treatment group. Shared Storybook = alternate treatment group. SPED = current Individualized Education Program (IEP) for special education services. Free/Reduced Lunch was used as an indicator of socio-economic status.

Classrooms were randomly assigned to one of three conditions: a treatment group that received Tier 1 and Tier 2 *Story Champs* narrative intervention, an alternate treatment group that received Tier 1 shared storybook intervention, and a no-treatment control group. There were five preschool classrooms. Two preschool classrooms were randomly assigned to the *Story Champs* intervention group (41 students), one preschool classroom was randomly assigned to the shared storybook intervention group (25 students) and two classrooms were randomly assigned to the no-treatment control group (42 students). There were six kindergarten classrooms. Two kindergarten classrooms were assigned to each condition, with 42 kindergarten students in the
Story Champs group, 47 kindergarten students in the shared storybook group, and 44 students in the no-treatment control group.

Procedures

All students in each condition received a battery of pretest assessments in December and posttest assessments in May. Students in the Story Champs and shared storybook groups then received large group instruction for 14 weeks. The students in the no-treatment control group received instruction as usual. A small sample of students in the Story Champs group were assigned to receive Tier 2 Story Champs intervention, and those students were administered additional assessments the middle of February, and were also monitored frequently for progress.

Story Champs group: Large group, Tier-1 narrative intervention. The speech-language pathologists (SLPs) assigned to each of the schools led the MTSS team in their building. All the students in the Story Champs group received Tier 1 oral language intervention from their classroom teacher twice a week for 15-20 minutes over 14 weeks. Each whole-class session followed the same Story Champs large group procedures that focused on personal-themed narrative retelling as described in Spencer, Petersen, Slocum et al. (2015). With pictures displayed so the whole class could see, the teacher modeled a story while pointing to corresponding pictures and attaching brightly colored story grammar icons to the pictures. The teacher had the children name each of the parts of the story (e.g., character, problem, feeling, action, ending) and then retold the story while children produced gestures representing each part of the story. Next, the teacher called for individual turns, in which children answered questions about parts of the story (e.g., “Who was this story about?” and “What did he do to fix his problem?”). Once a child answered the question, the teacher repeated the student’s answer, making modifications if necessary, and then the whole class repeated the answer using group
responding. Finally, children were paired up to tell the story in its entirety to a peer (i.e., peer tutoring). Partners helped monitor, and when one partner finished telling the story, the roles switched.

During the first week of instruction, the SLP modeled the large group (whole-class) *Story Champs* instruction while the classroom teacher observed. After the first week, the classroom teacher conducted the large group session and the SLP observed. The SLP used a fidelity checklist to give feedback to the classroom teacher. This large group instruction conducted by the classroom teacher was considered Tier 1 instruction in the MTSS system, and was continued for 14 weeks, yielding a total of 28 sessions. The SLP observed and provided feedback regarding the teacher’s fidelity of implementation an additional three times during the study.

**Story Champs group: Small group, Tier-2 narrative intervention.** Students were assigned to receive Tier 2 *Story Champs* instruction when the following two conditions were met: a) A student in the *Story Champs* group was not able to produce a complete episode and received a total score of nine or lower on the pretest *CUBED Narrative Language Measures* (NLM) narrative retell winter benchmark in December, and b) Students assigned to the *Story Champs* group who did not meet the narrative retell criterion at pretest (condition a) were administered two additional proximal narrative retell assessments one month after the large group instruction began (mid-February). These additional assessments were administered to determine whether the Tier 1 large group instruction was sufficiently intense to improve the lower performing students’ language. If a student did not meet the same pretest criterion in condition (a) on at least one of the progress monitoring measures, he or she was assigned to receive, Tier 2 small group intervention in addition to the Tier 1 intervention for the remainder of the school year. Small groups were comprised of one SLP and three or four children. Fourteen
(17%) of the students in the Story Champs group were assigned to receive small group Tier 2 intervention. The SLP assigned to the students’ school implemented the Story Champs small group procedures that continued to focus on personal-themed narrative retelling two times per week for approximately 20 minutes per session. The general classroom teacher continued to conduct Tier 1 narrative intervention in his/her classroom two times per week. Thus, students receiving the small group Tier 2 narrative intervention participated in a total of two 15-20-minute large group narrative intervention sessions and two 20-minute small group narrative intervention sessions each week for 14 weeks, equaling approximately 110 minutes of explicit narrative language instruction each week. The students receiving Tier 2 narrative intervention were administered one NLM narrative retell progress monitoring assessment on the same day of the week each week for the remainder of the school year.

The Tier 2 intervention adhered to the small group procedures of Story Champs. The steps for implementation move from the interventionist modeling the story (step 1), the group retelling the story (step 2), individuals retelling the story (steps 3-4), and finally to individuals generating personal stories (steps 5-6). These steps are described in detail in the Story Champs manual (Spencer & Petersen, 2012a) and in Spencer and Slocum (2010). Visual materials were systematically withdrawn so children told the story initially with pictures and icons for support, and by the end of the session, the story was told without pictures or icons. Materials included 12 personal themed stories with accompanying pictures (five for each story). Additional visual materials included brightly colored story grammar icons, representing the major parts of the story. Story games such as bingo were used to increase children’s active engagement.

**Shared storybook reading group.** The students in the shared storybook group participated in Tier 1 shared storybook reading intervention with their classroom teacher twice a
week for 15-20 minutes over 14 weeks. Each whole-class shared storybook reading session had a particular emphasis on vocabulary instruction. Following Spencer, Goldstein, and Kaminski, (2012) procedures, the teacher identified target vocabulary words. Words were chosen based on their usefulness to the children. The teacher considered academic goals, other classroom activities, the context of the story or teachability of the words when selecting target words. The teacher strived to make shared storybook reading as interactive as possible, so students were encouraged to repeat the definition and think of ways they could connect the word to their everyday experiences. The target words were further reinforced by using the words in meaningful contexts, incorporating the words into additional activities or assigning a gesture to represent each word. After the story was finished, the teacher and students reviewed the target words. A fidelity checklist was completed during the intervention.

**No-treatment control group.** Students in the no-treatment control group participated in classroom activities that were in place at the outset of the school year (business as usual).

Each district’s program provides children with high quality, play based experiences, rich in language and literacy. Programs are developmentally appropriate and prepare students for the rigors of kindergarten upon program completion…and follow the Standards of Quality and Curriculum Guidelines set by the Michigan State Board of Education and licensing requirements of the Department of Human Services. (Macomb Intermediate School District, 2018, para. 2)

Likewise, kindergarten reading standards for the state of Michigan indicate that students will learn to “ask and answer questions about key details in a text, retell familiar stories and key details, and identify characters, settings and major events in a story” (Michigan Department of
The school districts followed ten essential instructional practices in early literacy.

1. Deliberate, research-informed efforts to foster literacy motivation and engagement within and across lessons.

2. Read alouds of age-appropriate books and other materials, print or digital.

3. Small group and individual instruction, using a variety of grouping strategies, most often with flexible groups formed and instruction targeted to children’s observed and assessed needs in specific aspects of literacy development.

4. Activities that build phonological awareness.

5. Explicit instruction in letter-sound relationships.


7. Intentional and ambitious efforts to build vocabulary and content knowledge.

8. Abundant reading material and reading opportunities in the classroom.

9. Ongoing observation and assessment of children’s language and literacy development that informs their education.

10. Collaboration with families in promoting literacy. (General Education Leadership Network, n.d.)

Measures

All students participating in the study were administered a universal screening of oral language using the NLM retell subtest (narrative retell), personal story generation subtest, and an experimental expository measure. Universal narrative and expository benchmark assessments took place in winter (December, pretest) and spring (May, posttest). SLPs and selected
paraprofessionals assigned to the schools administered the narrative retell and expository benchmark assessments.

**Proximal outcome: Narrative retell.** The NLM is a standardized, criterion-referenced general outcome measure used to assess children’s narrative retells and personal story generations. The narrative retell subtest measures the comprehension and production of story grammar and limited aspects of complex language within personal-themed narratives. The NLM has three fall, three winter, and three spring benchmark parallel forms, and 16 progress monitoring parallel forms for preschool to third grade (Deno, 2003). The three winter benchmark parallel forms of the preschool or kindergarten NLM were administered for pretest and three spring benchmark NLM parallel forms were administered for posttest. To administer the test, research assistants followed the script, read a model story, asked the child to retell it, and listened to the child’s story while providing only neutral prompts. Children’s stories were recorded using digital audio recorders. The NLM includes a scoring rubric designed to score student retells from each parallel story in real time. Using the NLM real time scoring procedures, story grammar elements produced by a child were assigned points ranging from 0 to 2 depending upon the clarity and complexity of the elements. Combinations of story grammar elements that contribute to a minimally complete episode (e.g., initiating event (problem), plan/attempt, and consequence) were assigned additional points, and those points were independently calculated, reflecting an index of episode complexity. Language complexity features such as the use of temporal coordinating conjunctions (*then*), causal subordinating conjunctions (*because*) and temporal subordinating conjunctions (*after, when*) were scored for their frequency. Total NLM scores were calculated by summing the story grammar, language complexity, and episodic points. The time required for individual administration of three stories was approximately 3-5 minutes and
scoring took another 4-5 minutes for each participant. Preliminary psychometric analyses indicate that the NLM has excellent reliability and validity (Spencer & Petersen, 2012b).

**Distal outcome: Personal story generation.** To elicit personal stories, the examiner asked the students if they had ever had a similar experience to the story modeled in the narrative retell. Students were encouraged to share their experiences and the personal stories were audio recorded. Personal stories were scored using the Story Grammar and Language Complexity sections of the NLM Flow Chart. Scoring included analysis for story grammar and language complexity. Each story grammar element or aspect of language complexity was awarded 0-4 points depending on the complexity and clarity.

**Distal outcome: Expository language.** Expository language, although not the explicit focus of the language intervention provided in this study, was measured as a distal outcome using an experimental expository measure. The expository measure is a criterion-referenced assessment of informational text comprehension and production. The expository measure uses a similar format of the NLM, where an examiner asks a child to listen to some information, and then retell that information. Scoring was done in real-time while the child was retelling main ideas and supporting details of the text. Two parallel forms of the expository measure were designed for use in this study; one used at pretest in the winter, and one used in posttest in the spring. The information in each expository measure was designed to be particularly obscure information that students would likely not have been exposed to previously.

**Interventionists and fidelity of intervention.** The current study included SLPs and classroom teachers as interventionists. Each interventionist in the *Story Champs* group was trained using the *Story Champs* procedures outlined in the manual. Each interventionist in the shared storybook group was trained following Goldstein et al. (2016) procedures. The SLPs
attended a 4-hour training on the implementation of multi-tiered systems of language support using Story Champs and shared storybook interventions. Then the SLPs trained the classroom teachers on the large group procedures. Both the SLPs and classroom teachers familiarized themselves with the Story Champs manual and the shared storybook procedures, and practiced with nonparticipant students. Throughout the intervention phase, the classroom teacher was observed by the SLP five times. While observing the Tier 1 instruction, the SLP completed a large group Story Champs fidelity checklist and a shared storybook fidelity checklist derived from Goldstein et al. (2016). After each observation session the SLP used the results of the fidelity checklist to provide feedback to the teacher. The SLP monitored his/her own fidelity of implementation of the Story Champs Tier 2 instruction using the small group fidelity checklist. The average fidelity of intervention implementation was 97.8% with a range of 91% to 100%.

Test administration fidelity and scoring reliability. All the SLPs and classroom teachers participated in a 3-hour NLM training. The training included instruction on administration and scoring of the NLM pretests and posttests. During the intervention, all scoring happened in real time. Twenty percent of the NLM retells and expository retells from both pretest and posttest were randomly selected to be scored again by an independent scorer. Independent scorers consisted of a research team of undergraduate and graduate students in speech-language pathology. Scorers listened to and scored the retells in real time. The following formula was used to calculate percent agreement: Number of agreements divided by agreements plus disagreements, multiplied by 100. The mean agreement was 96.4% (range 64%-100%) for the NLM retell and expository retell.

The same research team was trained to score personal stories. Each scorer read the CUBED manual, specifically focusing on information about the NLM subtest, and was trained to
use the NLM flow chart. Each research assistant demonstrated accurate scoring skills with a scoring agreement of 90% or higher on the CUBED assessment before he/she qualified to work on the current study. Thirty percent of both the pretest and posttest personal narratives were randomly selected to be scored by an independent scorer. The independent research assistant listened to the audio recordings and scored the assessment using the NLM flow chart. The following formula was used to calculate percent agreement: Number of agreements divided by agreements plus disagreements, multiplied by 100. The mean agreement of the personal stories was 93% (range 74%-100%).

A fidelity of test administration examination was administered from the pretest and posttest data. Thirty percent of all the retell narratives, personal story generations, and expository retells were randomly selected for the fidelity exam. An independent research assistant listened to each audio recording and completed a multi-step administration checklist for each test. The percent of steps completed correctly was calculated for each sample. The overall mean fidelity of test administration for the NLM retells and personal stories was 96.5% (range 88%-100%) and the expository measure was 94.8% (range 76%-100%).

Results

Assumptions that underlie the use of ANCOVA were examined. Visual and statistical inspection of the distribution of the dependent measures (narrative retell, personal story, expository retell) indicated that the data were approximately normally distributed, with kurtosis and skewness < +/- 1.25 and that there were no outlying data. An ANCOVA is not particularly sensitive to moderate deviations from normality, therefore, the data were not transformed.

Preliminary analyses examining the homogeneity-of-slopes indicated that there was no significant difference for oral narrative retell ($F(2, 235) = 1.61, p = .20$), for personal generation
(F(2, 132) = 1.40, p = .25), or for expository retell (F(2, 235) = 0.70, p = .50). These results indicate that the covariates (pretests) and dependent variables did not differ significantly by group. Finally, we examined the assumption of homogeneity of variance across the dependent variables. The results of the Levene’s test of equality of error variances were nonsignificant for all outcomes.

Estimates of the effect size of the differences between the treatment and control groups were computed for each dependent measure using partial eta squared. Effect sizes of .14 or larger was considered to be large, a value of .06 was considered to be medium, and a value of .01 was considered to be small (Kirk, 1982).

**Proximal Outcome: Narrative Retell**

A one-way analysis of covariance (ANCOVA) was conducted. The dependent variable was the posttest narrative retell and the covariate was the pretest narrative retell. A preliminary analysis evaluating the homogeneity-of-slopes assumption indicated that the relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable (MTSS with narrative intervention), F(2, 235) = 1.61, MSE = 29.12, p = .20, partial eta squared = .01. The ANCOVA was significant, F(2, 237) = 25.82, MSE = 29.27, p < .001 (Figure 1). The strength of relationship between narrative intervention and the dependent variable was moderately strong, as assessed by partial eta squared = .18, with the narrative intervention accounting for 18% of the variance of the dependent variable, holding constant the narrative retell pretest performance. Follow-up tests were conducted to evaluate pairwise differences among the adjusted means (Tables 2 and 3). Based on the least significant difference (LSD) procedure, the adjusted means for the Story Champs group narrative retells differed significantly from the no-treatment control group narrative retells, p < .001, and the shared
storybook group narrative retells, \( p < .001 \), however there was no significant difference between
the narrative retells of the no-treatment control group and the shared storybook group, \( p = .94 \).

**Distal Outcome: Personal Story Generation**

A one-way analysis of covariance (ANCOVA) was conducted. The dependent variable was the posttest personal story generation and the covariate was the pretest personal story generation. A preliminary analysis evaluating the homogeneity-of-slopes assumption indicated that the relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable, \( F(2, 132) = 1.40, MSE = 74.71, p = .25 \), partial eta squared = .02. The ANCOVA was significant, \( F(2, 134) = 5.38, MSE = 75.16, p < .01 \) (Figure 2). The strength of relationship between narrative intervention and the dependent variable was moderately strong, as assessed by partial eta squared = .07, with the narrative intervention accounting for 7% of the variance in personal story generation, holding constant the personal generation pretest performance. Follow-up tests were conducted to evaluate pairwise differences among the adjusted means (Tables 2 and 3). Based on the LSD procedure, the adjusted means for the personal stories produced by students in the *Story Champs* group differed significantly from the personal stories produced by students in the no-treatment control group, \( p < .05 \). The personal stories from students in the *Story Champs* group were not significantly different from those produced by the students in the shared storybook group, \( p = .20 \). The shared storybook stories were significantly different from the control group \( p < .01 \).

**Distal Outcome: Expository Retell**

A one-way analysis of covariance (ANCOVA) was conducted. The dependent variable was the posttest expository retell and the covariate was the pretest expository retell. A preliminary analysis evaluating the homogeneity-of-slopes assumption indicated that the
relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable, $F(2, 235) = 0.70$, $MSE = 8.88$, $p = .50$, partial eta squared $= .01$. The ANCOVA was not significant, $F(2, 237) = 1.60$, $MSE = 8.86$, $p = .20$, partial eta squared $= .01$ (Figure 3, Tables 2 and 3).

![Narrative Retell Graph](image)

**Figure 1.** Narrative retell pretest and posttest (adjusted means) across groups.

**Table 2**

Pretest Means and Standard Deviations Across Conditions

<table>
<thead>
<tr>
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<th>Groups</th>
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</thead>
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<tr>
<td></td>
<td>Story Champs</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>NLM</td>
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<tr>
<td>Personal Story Generation</td>
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</tr>
<tr>
<td>Expository</td>
<td>4.88</td>
</tr>
</tbody>
</table>

*Note. NLM = CUBED Narrative Language Measures. M = mean. SD = standard deviation*
Table 3

Post-Intervention Unadjusted and Adjusted Means and Standard Deviations

<table>
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<th>Unadjusted</th>
<th></th>
<th>Adjusted</th>
<th></th>
</tr>
</thead>
<tbody>
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<td>Control</td>
<td>Story Champs</td>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>NLM</td>
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<td>6.05</td>
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<td>Expository</td>
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<td>3.13</td>
<td>3.07</td>
</tr>
</tbody>
</table>

Note. NLM = CUBED Narrative Language Measures. M = mean. SD = standard deviation. SE = standard error.
Discussion

For the past 20 years a significant percentage of elementary age students have not met standards for reading comprehension. The low scores on these assessments indicate that teaching methods are not successfully supporting all students in their comprehension of complex...
academic language. Research shows that teaching oral language at an early age can lay the foundation needed for academic success (Benson, 2009; Greenhalgh & Strong, 2001; Westby, 1985). The goal of this study was to evaluate the effectiveness of a multi-tiered oral narrative intervention on the oral narrative and expository language of preschool and kindergarten students compared to a shared storybook reading intervention and a no-treatment control condition. The results of this study indicated that there was a significant difference in narrative retells for students who participated in the Story Champs group compared to students in the shared storybook group and in the no-treatment control group. The personal story generation results showed that the students in the Story Champs and shared storybook groups performed to a similar degree after the intervention period, yet the no-treatment control group had significantly lower scores. For expository language, there was no significant difference between any of the groups.

**Proximal Outcome: Narrative Retell**

Current reading comprehension scores reported by NAEP illustrate a relative weakness in oral academic language skills. To address this deficit, CCSS have placed a greater emphasis on teaching early elementary age students narrative and expository skills to prepare them for the increases in academic language used in each successive grade. The finding that the narrative retell outcome was significantly stronger in the multi-tiered Story Champs group compared to the shared storybook and no-treatment control conditions aligns with results from previous small group and large group narrative intervention research (Gillam et al., 2012; Gillam, Olszewski, Fargo, & Gillam, 2014; Spencer, Petersen, Slocum et al., 2015; Spencer et al., 2017). For example, Spencer, Petersen, and Adams (2015) found that narrative language intervention delivered in large group and small group Tier 1 and Tier 2 instruction improved narrative
language skills of preschoolers. Furthermore, Gillam et al. (2014) found that after whole-class Tier 1 narrative instruction first grade students in the treatment classroom produced more complex narratives and increased their vocabulary knowledge. In these prior studies as well as in the current study, students in the narrative-based language intervention groups had significantly stronger narrative abilities when compared to the other conditions. This significant difference may be attributed to the greater focus the narrative intervention placed on the retelling of increasingly more complex stories. For example, in the current study, during Tier 1 instruction, the teacher modeled a story and then students practiced retelling that story as a group and individually with peers. Students were taught to retell all major story grammar elements and to recognize and use causal and temporal subordinating conjunctions between the initiating events, internal response, plans, attempts and consequences. This focus on repeatedly retelling stories with embedded complex academic language also took place in Tier 2 intervention for students identified as needing additional support. Narrative retelling is a functional skill used in everyday social and academic interactions. By explicitly teaching preschool and kindergarten students narrative retell skills their expressive and receptive academic language increases.

This study used a large-scale, quasi-experimental design that compared narrative-based language intervention to not only a no-treatment control group, but also to a shared storybook alternate treatment group. The only study to date that has compared an alternate treatment condition to narrative-based language intervention has been Gillam et al. (2012). However, that study was underpowered, with only eight participants in each condition. Furthermore, Spencer, Petersen, and Adams (2015), as well as the majority of other narrative-based language intervention studies have been underpowered. This study contributes to the research evidence by replicating results from previous research with a much larger sample size to provide adequate
power to better lead to population inference. Additionally, it is important to note that classroom teachers and SLPs working in the schools conducted the interventions and monitored student progress. The SLPs took the lead in directing explicit language instruction in each of their schools. In this less controlled context, oral narrative MTSS still resulted in stronger oral narrative retells, implying that receptive and expressive academic language improved.

Improving narrative retelling implicates growth in the ability to both understand and produce complex, academic language. Consistently, narrative language has been identified as a strong predictor of future reading comprehension ability and general academic success (Catts et al., 2002; Dickinson & McCabe, 2001; Griffin et al., 2004; Spencer & Slocum, 2010; Westby, 1985). In these studies, narrative ability was more accurate in predicting academic problems than vocabulary, grammar, rote memory, and morpheme learning (Bishop & Edmundson, 1987; Fazio et al., 1996; Feagans & Appelbaum, 1986). The relationship between oral language and later academic success has been demonstrated through correlative as well as efficacy, causal-design studies (Petersen, 2011). There is the possibility that the majority of students failing to meet grade-level reading standards has much to do with inadequate language preparation in the early years (Nakamoto et al., 2007). Thus far, existing approaches, such as shared storybook reading, have not been able to change this trend (Lonigan et al., 2008). Results from this study indicate that narrative language intervention may, for the first time, be able to expand oral academic language skills in preschool and kindergarten students so that they are better prepared for the academic language requirements in subsequent grades.

**Distal Outcome: Personal Story Generation**

The students in the no-treatment control group had significantly lower personal story generation scores than children in both the *Story Champs* and shared storybook groups. Yet both
the Story Champs and shared storybook groups performed to a similar degree in their ability to generate their own story. To our knowledge, this is the first study to compare the impact of narrative intervention to shared storybook intervention on personal story generation.

Several studies have found that narrative intervention leads to improvements in personal story generation in preschool and school-age students with and without language impairment even when the narrative intervention has a primary focus on narrative retelling (Petersen et al., 2014; Spencer & Slocum, 2010) and fictional story generation (Gillam et al., 2014). There are several reasons why, in this study, the narrative intervention may have improved personal story generation. First, there was an explicit focus on story grammar elements that appear in both story retells and in personal story generations. Second, the topics of the stories used in the intervention were similar to topics the students used to generate their own personal stories.

Research indicates that oral language skills used for personal story telling is predictive of future academic success (Barton-Hulsey et al., 2017; Catts et al., 2002; Catts et al., 2016; Clarke et al., 2010; Dickinson & McCabe, 2001; Griffin et al., 2004). Specifically, these studies indicate the ability to tell a story is directly linked to reading comprehension outcomes. For example, Clarke et al. (2010) found that when oral language skills improved reading comprehension also improved. Therefore, it is well accepted that narrative language abilities are a strong predictor of later academic achievement (Catts et al., 2002).

Shared storybook intervention also appeared to have a meaningful impact on the student’s personal stories. Shared storybook intervention has a focus on vocabulary acquisition within the context of a written story and several studies have identified that students successfully learn new vocabulary as a result of shared storybook intervention (Ewers & Brownson, 1999; Goldstein et al., 2016; Lonigan et al., 2008; Walsh & Blewitt, 2006). It is possible that different
aspects of the personal stories improved depending on the intervention the student participated in, however, the scoring rubric used to measure personal stories did not parse these out, providing only a composite score. In other words, the students in the narrative retell group may have improved more on story grammar and the students in the shared storybook group may have improved more on vocabulary. Future research should do a more specific analysis to explore this.

**Distal Outcome: Expository Language**

The distal expository posttest results were not significantly different between all of the different conditions (*Story Champs*, shared storybook, no-treatment control). Petersen and Petersen (2016) hypothesized that as long as the narrative intervention included language that reflected expository language then the narrative intervention would increase expository skills. It is possible that the model stories used in the shared storybook reading and the narrative intervention for preschool and kindergarten students were not saturated enough with complex academic language, including Tier 2 and Tier 3 vocabulary to improve expository language skills. Furthermore, the structure for expository language in most cases (e.g., main idea, supporting details) is different than narrative. This difference could be enough that students were not able to transfer their narrative retell skills into expository retell skills without being explicitly taught the differences. The type of story used for the narrative intervention might have also impacted the expository results. For example, using fictional stories or scripts might get better expository results than using personal-themed retells and generations. Also, the expository probes used to elicit language samples were very brief and experimental. These expository posttests may not have been sensitive enough to accurately report change. It is also important to note that the posttest expository passage appeared to be more difficult than the pretest passage. Expository posttest scores decreased from pretest scores across all three conditions. This posttest
difficulty could have obscured gains because of a floor effect. Finally, it is possible that the young age of the participants influenced their ability to comprehend the expository text.

**Limitations**

Despite the relatively strong experimental design of this study, there are some limitations. First, the shared storybook and no-treatment control groups did not participate in tiered intervention. Although the students in the shared storybook group received the same dose and duration of intervention in a large-group setting as the students in the *Story Champs* group, students who may have had a limited response to the shared storybook intervention were not given Tier 2 support. However, the purpose of this study was to determine whether an MTSS for language approach yielded stronger results than traditional approaches.

A second issue involves the use of the quasi-experimental design. Groups were assigned at the classroom level and students were previously assigned to classrooms by school officials. There is a chance that each group may not have been equally comparable at baseline across measures other than those used as covariates in the ANCOVA. Additionally, although the teachers who were administering the interventions were trained on the procedures, there may have been factors outside the scope of the intervention that caused different teachers to get different results.

Third, the student population used for this study was primarily typically developing English-speaking, Caucasian students. Ideally, this study would be replicated with a population that incorporates more students with language impairment as well as culturally and linguistically diverse students including English language learners. The narrative intervention delivered in a MTSS is designed to support students of all language needs. By incorporating a larger, more
diverse population, including students with language impairment, researchers will be able to examine how well MTSS for language meets the needs of all students.

Fourth, the measures for narrative retell were very closely aligned with the *Story Champs* narrative intervention, but assessment measures were not equally aligned with the shared storybook intervention. This could have influenced other outcomes not measured in this study. Shared storybook intervention would be more closely aligned with vocabulary outcomes but vocabulary was not directly measured in the narrative retell outcome in this study. Although narrative is a strong predictor of future academic success, vocabulary is also predictive, and future research should include vocabulary as an outcome measure.

Finally, Tier 1 and Tier 2 *Story Champs* outcomes were not separated to determine the growth of the Tier 2 intervention students. A post-hoc analysis was conducted to examine whether students who received Tier 2 *Story Champs* intervention (n = 14) had equivalent or significantly higher scores across narrative retell, and expository outcome measures. Only five students in the Tier 2 *Story Champs* group produced a personal story at posttest. This limited number of personal stories did not allow for post-hoc results to be calculated on personal story generation.

**Tier 2 narrative retell post-hoc analysis.** An analysis of variance (ANOVA) was initially conducted to examine whether there was a significant difference in pretest narrative retell scores between the Tier 2 students in the *Story Champs* group and the students in the two control conditions. The results of this ANOVA indicated that there was a significant difference between groups, $F(2, 169) = 4.85$, $MSE = 34.36$, $p < .01$, partial eta squared = .05. Pairwise comparisons indicated that the students receiving Tier 2 services in the *Story Champs* group performed significantly lower ($p < .01$) at pretest on the narrative retell ($M = 6.07$, $SE = 1.57$)
than the students in the shared storybook group ($M = 11.03, SE = 0.69$) and the students in the control group ($M = 11.24, SE = 0.63$).

A posttest analysis of narrative retells using an ANCOVA was significant, $F(2, 168) = 5.24, MSE = 29.18, p < .01$, partial eta squared = .06. Follow-up tests were conducted to evaluate pairwise differences among the means. Based on the LSD procedure, the adjusted means for the Tier 2 Story Champs group narrative retells ($M = 14.67, SE = 1.48$) differed significantly from the no-treatment control group narrative retells ($M = 9.63, SE = 0.58$), $p < .01$, and the shared storybook group narrative retells ($M = 9.69, SE = 0.64$), $p < .01$, with no significant difference between the narrative retells of the no-treatment control group and the shared storybook group, $p = .86$. This post-hoc analysis indicated that at-risk students who received MTSS Tier 2 language instruction had oral narrative retell posttest scores that were higher than the students in the storybook and control groups. These results suggest that MTSS Tier 2 Story Champs intervention was sufficiently intense to help the lowest performing students in the Story Champs group improve their oral narrative language more so than the conglomerate of low, medium, and high achieving students in the other conditions.

**Tier 2 expository language post-hoc analysis.** An analysis of variance (ANOVA) was initially conducted to examine whether there was a significant difference in pretest expository language between the Tier 2 students in the Story Champs group and the students in the two control conditions. The results of this ANOVA indicated that there was a significant difference between groups, $F(2, 169) = 3.29, MSE = 12.10, p < .05$, partial eta squared = .04. Pairwise comparisons indicated that the students receiving Tier 2 services in the Story Champs group performed significantly lower ($p < .05$) at pretest on the expository measure ($M = 2.29, SE = 0.93$) than the students in the control group ($M = 4.53, SE = 0.37$). There was no significant
difference between the students in the Tier 2 *Story Champs* group and the students in the shared storybook group on the pretest expository measure ($M = 3.53$, $SE = 0.41$), $p = .08$.

The ANCOVA for the expository posttest outcome was not significant, $F(2, 168) = 0.43$, $MSE = 7.49$, $p = .65$, partial eta squared = .01. Follow-up tests were conducted to evaluate pairwise differences among the means. Based on the LSD procedure, the adjusted means for the Tier 2 *Story Champs* group narrative retells ($M = 3.91$, $SE = 0.74$) did not differ significantly from the no-treatment control group narrative retells ($M = 3.53$, $SE = 0.30$), $p = .63$, or from the shared storybook group narrative retells ($M = 3.25$, $SE = 0.32$), $p = .41$. There was also no significant difference between the expository posttest scores from the no-treatment control group and the shared storybook group, $p = .53$. Thus, although the at-risk students in the *Story Champs* group had significantly lower expository scores at pretest than the students in the control group, their expository scores were significantly higher at posttest. These results indicate that oral narrative MTSS for language is potentially powerful enough to accelerate the expository language of at-risk students to typical performing peers over a short period of time.
References


APPENDIX A

Institutional Review Board Approval

UNIVERSITY OF WYOMING

Vice President for Research & Economic Development
1000 E. University Avenue, Department 3337 - Room 305/306, Old Main - Laramie, WY 82071
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July 15, 2014

Douglas Petersen
Communication Disorders
Dept 3311
1000 East University Avenue
Laramie, WY 82071

Protocol # 20110715DD00480


Dear Doug,

The proposal referenced above (received July 10, 2014) qualifies for exempt review and is approved as one that would not involve more than minimal risk to participants. Our exempt review and approval will be reported to the IRB at their next convened meeting September 25, 2014.

Any significant change(s) in the research/project protocol(s) from what was approved must be submitted to the IRB on the Protocol Update Form for review and approval prior to initiating any change. Further information and the form referenced above may be accessed at the “Human Subjects” link on the Office of Research and Economic Development website: http://www.uwyo.edu/research/human-subjects/index.html.

You may proceed with the project/research and we wish you luck in the endeavor. Please feel free to call me if you have any questions.

Sincerely,

Ashley Gunter
Associate General Counsel, Compliance
On behalf of the Chairman,
Institutional Review Board
APPENDIX B

Large Group Narrative Intervention Fidelity Checklist

1 – Model Story
- Display 5 illustrations
- Read the story
- Place Story Grammar icons on or near illustrations
- As needed: Name the Story Grammar parts and point to icons
- As needed: Students name the Story Grammar parts

2 – Play Story Gestures
- Reread the story
- As needed: Model the Story Gestures as Story Grammar parts are read
- As needed: Help students play Story Gestures as they listen

3 – Team Retell
- Repeat teaching steps for each question
- Do not allow students to raise their hands; every student should have a response ready
- Call on an individual student to answer the question and to retell the part of the story
- Help the individual student to retell the part if needed
- Model what all the students need to repeat
- All students repeat the sentence together
- “What happened in the first picture?” or “Who was the story about?”
- “Where was he/she in this story?” or “What was he/she doing?”
- “What was his/her problem?”
- “How did he/she feel about his/her problem?”
- “What did he/she do to fix his/her problem?”
- “Where did the story end?”
- “How did he/she feel at the end of the story?”

4 – Partner Retell
- Put students into pairs and pass out Champ Checks
- Students take turns retelling the story with a partner
- Help students as needed; praise

**TARGET**
Enhanced Story Structure - Retell

**MATERIALS**
- Choose any CLASSIC or BLITZ Level B story from story book
- Illustrations
  - If using illustration cards, select cards from corresponding story (for BLITZ stories, use only cards 1, 2, 3, 7 and 8)
  - If using digital presentation, click on the purple Level B button and select the corresponding story
- Story Grammar Icons (icons are included in the digital presentation)
- Champ Checks Dry Erase Boards and dry erase markers
  - Use purple LEVEL B boards (markers not provided)

Consider ADD ON lessons 58-63

**REMEMBER!**
- Use 2-Step Prompting to help students
  1) Ask a question
  2) Model what the student should say
- Make corrections immediately
APPENDIX C

Pretest CUBED Narrative Language Measures

Kindergarten Benchmark: STORY 1 WINTER

Examiner says, “I’m going to tell you a story. Please listen carefully. When I’m done, you are going to tell me the same story. Are you ready?” Examiner reads the story word for word at a moderate pace with normal intonation.

Yesterday, Holly and her friend clambered onto the bus. They quickly went up the steps because the bus was about to leave. Holly’s friend sat in the seat that was by the window. But Holly didn’t want her to sit there because it was her favorite seat. She was mad. Her friend was in her usual window seat. Holly decided to politely talk to her, then she said, “Excuse me. Will you please move? I typically sit there.” Then her friend said, “Okay. No problem. You can sit by the window.” After her friend moved, Holly sat adjacent to the window. When Holly sat down, she was happy because she could see out the window.

Examiner says, “Thanks for listening. Now you tell me that story.” After student appears to be done, examiner says, “Are you finished?” Prompts (up to 3), “It’s OK. Just do your best,” and/or “I can’t help, but you can just tell the parts you remember.”

**STORY GRAMMAR (SG)**

<table>
<thead>
<tr>
<th>Character</th>
<th>0 points</th>
<th>1 point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holly</td>
<td>5 points</td>
<td>0 points</td>
</tr>
<tr>
<td>Friend</td>
<td>2 points</td>
<td>0 points</td>
</tr>
</tbody>
</table>

**LANGUAGE COMPLEXITY (LC)**

<table>
<thead>
<tr>
<th>Words</th>
<th>Times Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 points</td>
<td>3 times</td>
</tr>
</tbody>
</table>

**EPISODE (E)**

<table>
<thead>
<tr>
<th>Phrases</th>
<th>Times Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 points</td>
<td>3 times</td>
</tr>
</tbody>
</table>

**RETELL SCORE**

<table>
<thead>
<tr>
<th>SG SUBTOTAL</th>
<th>LC SUBTOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 points</td>
<td>2 points</td>
</tr>
</tbody>
</table>

**STORY QUESTIONS (SQ)**

<table>
<thead>
<tr>
<th>Question</th>
<th>1 point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who was in the beginning of the story?</td>
<td>2 points</td>
</tr>
<tr>
<td>What was Holly mad about?</td>
<td>1 point</td>
</tr>
<tr>
<td>What did she do to solve the problem?</td>
<td>1 point</td>
</tr>
<tr>
<td>How did the story end?</td>
<td>1 point</td>
</tr>
<tr>
<td>What will Holly do next time someone is in her favorite seat?</td>
<td>1 point</td>
</tr>
</tbody>
</table>

**VOCABULARY QUESTIONS (VQ)**

<table>
<thead>
<tr>
<th>Word</th>
<th>1 point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clambered</td>
<td>1 point</td>
</tr>
<tr>
<td>Typically</td>
<td>1 point</td>
</tr>
<tr>
<td>Cozy</td>
<td>1 point</td>
</tr>
</tbody>
</table>

**PERSONAL GENERATION**

Turn on audio recorder. Examiner says, “In this story, someone was sitting in Holly’s seat. Tell me a story about a time when someone was in your seat.” If the student doesn’t tell a story, encourage the student (up to 3) to produce a thematically related story. Score the story using the NLM Flow Chart (see Examiner’s Manual for details).
APPENDIX D

Small Group Narrative Intervention Fidelity Checklist

Enhanced Story Structure

**Materials**
- Choose any CLASSIC or BLITZ Level B story from story book
- Illustrations
  - If using illustration cards, select cards from corresponding story (for BLITZ stories, use only cards 1, 2, 3, 7 and 8)
  - If using digital presentation, click on the purple Level B button and select the corresponding story
- Story Grammar Icons (icons are included in the digital presentation)
- Choose a Story Game
  - Each student should have 1 cube, 1 bingo card, OR 7 sticks (game materials are not needed to play Story Gestures)

<table>
<thead>
<tr>
<th>1 – Model Story</th>
<th>5 – Individual Personal Story 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display 5 illustrations</td>
<td>Leave icons on table</td>
</tr>
<tr>
<td>Read the story</td>
<td>Select one student to tell a personal story</td>
</tr>
<tr>
<td>Place Story Grammar icons on or near illustrations</td>
<td>Say, “Has something like that every happened to you?”</td>
</tr>
<tr>
<td>As needed: Name the Story Grammar parts</td>
<td>Help the student generate all parts of the student’s personal story</td>
</tr>
<tr>
<td>As needed: Students name the Story Grammar parts</td>
<td>Everyone, but the storyteller, plays a Story Game</td>
</tr>
<tr>
<td>2 – Team Retell</td>
<td>6 – Individual Personal Story 2</td>
</tr>
<tr>
<td>Leave illustrations on table</td>
<td>(skip if fewer than 4 students)</td>
</tr>
<tr>
<td>Pick up icons and give each student 1-2 icons; keep one for yourself if necessary</td>
<td>Remove icons from table</td>
</tr>
<tr>
<td>Starting with the person who has the Character icon and moving through the parts in order, each person retells the part of the story</td>
<td>Select one student to tell a personal story</td>
</tr>
<tr>
<td>Students place icons on or near illustrations</td>
<td>Say, “Has something like that every happened to you?”</td>
</tr>
<tr>
<td>Summarize the story quickly and ensure that all parts are included</td>
<td>Help the student generate all parts of the student’s personal story</td>
</tr>
<tr>
<td>3 – Individual Retell 1</td>
<td>Everyone, but the storyteller, plays a Story Game</td>
</tr>
<tr>
<td>Leave illustrations and icons on table</td>
<td>Summarize the student’s story</td>
</tr>
<tr>
<td>Select one student to retell entire story</td>
<td></td>
</tr>
<tr>
<td>Help the student retell all parts of the story</td>
<td></td>
</tr>
<tr>
<td>Everyone, but the storyteller, plays a Story Game</td>
<td></td>
</tr>
<tr>
<td>Summarize the story quickly and ensure that all parts are included</td>
<td></td>
</tr>
<tr>
<td>4 – Individual Retell 2</td>
<td></td>
</tr>
<tr>
<td>Remove illustrations and leave icons on table</td>
<td></td>
</tr>
<tr>
<td>Select one student to retell entire story</td>
<td></td>
</tr>
<tr>
<td>Help the student retell all parts of the story</td>
<td></td>
</tr>
<tr>
<td>Everyone, but the storyteller, plays a Story Game</td>
<td></td>
</tr>
<tr>
<td>Summarize the story quickly and ensure that all parts are included</td>
<td></td>
</tr>
</tbody>
</table>

**REMEMBER!**
- Assign students to steps 3-6 so the order in which they retell and tell stories changes frequently
- Use 2-Step Prompting to help students
  1. Ask a question
  2. Model what the student should say
- Make corrections immediately
- Differentiate targets for each student
APPENDIX E

NLM Flow Chart Used to Score the Personal Story Generations

NLM Flow Chart
©2016 Language Dynamics Group

<table>
<thead>
<tr>
<th>Prepositions</th>
<th>Verb/Noun Modifiers</th>
<th>Vocabulary/Rhetoric</th>
<th>Temporal Ties</th>
<th>Causal Ties</th>
<th>Dialogue</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or more prepositions (e.g., over, than, for, under, in on, at, with, through, by, since)</td>
<td>relative pronouns (e.g., who, which, whom) and (e.g., he noted prophetically)</td>
<td>3 or more less-common words/similes/ analogies/metaphors/similes (e.g., the old and worn or the air was clear)</td>
<td>1 or more subordinating (e.g., when, after, before)</td>
<td>3 or more subordinating (e.g., because, as, that, since)</td>
<td>2 or more quoted speakers (e.g., I said, &quot;I need your help&quot; and then said, &quot;I'll get a brownie&quot;)</td>
</tr>
<tr>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>1 preposition (e.g., across)</td>
<td>1 discursive modifier before or after verb/noun (e.g., the big day or the way we talk)</td>
<td>1 less-common words/similes/ analogies/metaphors/similes (e.g., he toiled or quick as light)</td>
<td>1 or more common coordinating (e.g., then, next, so then)</td>
<td>1 or more common coordinating (e.g., because, as, that, since)</td>
<td>1 quoted speaker (e.g., then said, &quot;I'll get a brownie&quot;)</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

Language Complexity Score: [ ]
APPENDIX F

Expository Pretest

Examiner says, "I'm going to tell you some information. When I'm done you are going to tell me the same information. Are you ready?" "Some tigers live in the jungle." "Now you tell me that information." (If necessary, help child say at least 2 or 3 key words).
Examiner says, I'm going to ask you a question about what I just told you. "Where do some tigers live?" [Help child say answer]. Examiner says, "Now I'm going to tell you a lot more information. Please listen carefully. When I'm done you are going to tell me the same information. Are you ready?"

Sea pigs are unusual animals. They are a type of sea cucumber that dwells in the deep dark ocean. Sea pigs find their food by smell because they do not have eyes. They eat rotten wholes that are dead on the bottom of the ocean. They can be 6 inches long and fit in your hand.

Examiner says, "Thanks for listening. Now you tell me that information." (Prompt: If child does not respond or only tells main idea or one detail)
Prompt (up to 3x), "It's OK. Just do your best! / I can't help but you can just tell me everything you remember." Examiner says, "Are you finished?"

<table>
<thead>
<tr>
<th>TEXT STRUCTURE (TS)</th>
<th>2 POINTS</th>
<th>1 POINT</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main idea 1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detail 1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detail 2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detail 3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detail 4</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detail 5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detail 6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| TS SUBTOTAL         |          |         |   |

<table>
<thead>
<tr>
<th>LANGUAGE COMPLEXITY (LC)</th>
<th>1 pt each use</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modifiers</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Prepositional</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unusual</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotten</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| LC SUBTOTAL              |          |         |   |

| INFORMATION RETELL SCORE (TS+LC) |          |

<table>
<thead>
<tr>
<th>TEXT QUESTIONS (TQ)</th>
<th>2 POINTS</th>
<th>1 POINT</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where do sea pigs live?</td>
<td>2</td>
<td>water</td>
<td>1</td>
</tr>
<tr>
<td>How big are sea pigs?</td>
<td>6 inches / a hand</td>
<td>small</td>
<td>1</td>
</tr>
<tr>
<td>Why do sea pigs find their food by smell?</td>
<td>blind / no eyes / can't see</td>
<td>hungry / need to</td>
<td>1</td>
</tr>
</tbody>
</table>

| SQ SUBTOTAL         |          |         |   |

<table>
<thead>
<tr>
<th>VOCABULARY QUESTIONS (VQ)</th>
<th>2 POINTS</th>
<th>1 POINT</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: What does unusual mean? (If incorrect ask Q2)</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Q2: Sea pigs are unusual. They are not like lots of other animals. What does unusual mean?</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Q3: What does dwells mean? (If incorrect ask Q4)</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Q4: Sea pigs dwell in the ocean. You can find them in the deep dark ocean. What does dwell mean?</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Q5: What does rotten mean? (If incorrect ask Q6)</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Q6: They eat rotten wholes. The wholes are dead on the bottom of the ocean. What does rotten mean?</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

| VQ SUBTOTAL         |          |         |   |

| COMPREHENSION SCORE (TQ+VQ) |          |         |   |

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APPENDIX G

Annotated Bibliography


**Objective** Barton-Hulsey, Sevcik, and Romski (2017) explored the correlation between functional narrative language skills and reading comprehension in 102 elementary students with mild intellectual ability (MID). **Method** Students qualified for participation in this study if they had previously been identified as having MID and were either behind in developing reading skills or were not yet reading at all and spoke English as their first language. Narrative language samples were gathered using the wordless picture book, *Frog Goes to Dinner* by Mercer Mayer. Students were asked to first look at each picture in the book and then tell a story about the pictures to the examiner. Student narratives were transcribed and analyzed using SALT software. Students were also assessed using standardized tests to measure their reading, vocabulary comprehension, and descriptive language ability. **Results** Overall, results from the students with MID showed a relationship between reading comprehension and language ability similar to the one seen in typically developing peers. Specifically, language skills of narrative macrostructure predicted reading comprehension ability better than decoding skills and linguistic components of narrative microstructure. **Conclusions** Narrative language skills are a better predictor of reading comprehension than decoding skills. **Relevance to current work** This study provides evidence that oral narrative skills are strongly linked to reading comprehension ability.

**Objective** This article shows that vocabulary knowledge plays a role in reading success. Five factors of vocabulary that influence successful reading are discussed. (1) individual differences in vocabulary acquisition, (2) the amount of vocabulary needed for successful learning, (3) the predictable sequence of vocabulary acquisition, (4) the need for direct instruction for vocabulary growth, and (5) promising methods for promoting vocabulary knowledge. (1) Home influences: children use language they hear from their parents. Exposure to “high level words” is strongly linked to a larger working vocabulary. In the school setting: With direct instruction of vocabulary words, children learn and retained about 50% of the words. Gains were also seen in reading comprehension as a result of teaching target vocabulary words. (2) It is very important to build vocabulary in the early years. It is estimated that by the end of elementary school children should have a vocabulary of about 9000 root words. (3) Research supports the notion that vocabulary words are acquired in a predictable sequence. Dale and O’Rourke’s (1981) book, *Living Word Vocabulary* provides an accurate list of word acquisition. (4) Reading books several times aloud to children while explaining the meaning of 5-10 words is an effective way to directly teach vocabulary words to school children. (5) Begin by teaching words that the children will encounter in their daily lives rather than uncommon or complex words. Encourage children to ask questions about unfamiliar words. **Conclusions** Vocabulary knowledge is best acquired with direct instruction. It is paramount that children develop adequate levels of vocabulary knowledge by third grade because the gap in reading skills can become too large to “catch up” after third grade. **Relevance to current work** Adequate vocabulary knowledge is essential to reading success.

**Objective** This meta-analytic review sought to identify the effectiveness and outcomes of four response to intervention (RTI) approaches. Twenty-one articles were analyzed to better understand three questions. (1) How effective are large-scale RTI models currently in practice as compared to those developed for research? (2) Does RTI lead to improved systemic and student outcomes? (3) On average, what percentage of the student population was determined to have a disability under RTI?

**Method** Articles were found in PsycINFO, ERIC, and Education Abstracts databases. Four specific RTI models were studied, namely the Heartland Agency (Iowa) Model, Ohio’s Intervention Based Assessment, Pennsylvania’s Instructional Support Teams and Minneapolis Public School’s Problem-Solving Model. Results (1) Strong effects were found in the field-based RTI approaches currently in practice. Consistently, field-based RTI models demonstrated stronger effects than university research-based efforts. (2) Student and systemic outcomes were improved. Field-based models had slightly smaller improvements in student outcomes, but systemic outcomes were three times larger than research-developed models. (3) Within the field-based RTI models an average of less than 2% of the student population were identified as LD.

**Conclusions** RTI models may reduce the number of students needing special education services because students are supported at every level of the intervention. Relevance to current work This study identifies that RTI models provide support for all students when they need it, which prevents students from being referred to special education services unnecessarily.

**Objective** This study investigated the possibility that language abilities and response to intervention in kindergarten can predict reading comprehension difficulties in third grade.

**Method** Participants were 366 kindergarten children at risk for reading disabilities. Screening measures in vocabulary, grammar and narration were administered at the beginning of kindergarten. A subset of students received Tier 2 language intervention for 26-weeks. Students were assessed again in second grade for word reading abilities and in third grade for reading comprehension abilities. **Results** Language abilities in kindergarten are a reliable predictor of reading comprehension ability in third grade. The group of students who received narrative language intervention showed improvement in word knowledge and narrative skills. **Conclusions** Measuring language abilities at the beginning of kindergarten successfully aides in predicting reading comprehension abilities in third grade. Response to intervention is a valuable resource to help at risk students. **Relevance to current work** This study supports the connection of narrative language skills and reading comprehension. It also identifies that language intervention is effective in improving word knowledge and narrative skills.


**Objective** The objective of this article is to examine the effectiveness of three reading interventions including: text-comprehension training (TC), oral-language training (OL), and a combined approach incorporating text-comprehension and oral-language training (COM). These
interventions were designed to improve reading comprehension in students who can read accurately but have poor comprehension. **Method** Students were assessed preintervention midintervention, postintervention, and 11 months after the intervention ended. Participants received the intervention three times a week for 30-minutes. Interventions were delivered by trained teaching assistants. **Results** Reliable increases in reading comprehension and vocabulary knowledge were seen in the intervention groups which incorporated oral-language training (OL and COM). Additionally, in the OL group, which received the most vocabulary instruction, students demonstrated improvements in directly taught words and also generalized to untaught words. **Conclusions** This study concluded that deficits in reading comprehension are easily identifiable and remediable. **Relevance to current work** This article supports the assertion that oral language intervention improves reading comprehension.


**Objective** Students were followed from first grade until fourth grade to better understand (a) the co-occurrence of writing disability (WD) and reading disability (RD) and (b) the cognitive burden that WD + RD places on a student compared to students with WD-Only and TD peers. **Method** Each year of school from first grade until fourth grade students were administered a cognitive battery of their writing and reading abilities. **Results** It was found that 50% of the first-grade students with WD + RD continued to exhibit these difficulties in fourth grade. Additionally, it was observed that WD can occur without RD. **Conclusions** There is a significant relationship between WD and RD. Students with WD and RD experience a significant cognitive
burden across all of their cognitive abilities. *Relevance to current work* This article establishes the relationship between oral language and reading comprehension.


**Objective** This study explored the impact that active and passive storybook reading has on vocabulary acquisition in Kindergarteners. *Method* Sixty-six participants were randomly assigned to active or passive storybook reading groups. The active storybook group listened to a storybook narrative. What or where questions were asked after each sentence containing a target word and students actively answered the questions. The passive group listened to the storybook narrative and passively listened to a recast containing a familiar synonym for each target word. *Results* Students in the active group learned more new words than the passive group. Analysis found that students with a greater vocabulary knowledge before the intervention were able to acquire significantly more words than their peers with a smaller working vocabulary. Additionally, there was no difference in word acquisition in students with a high versus low working memory. *Conclusions* Active participation in the storybook reading facilitates greater understanding of vocabulary. *Relevance to current work* Shared storybook reading has been a heavily researched approach to teaching oral language, with a particular emphasis on vocabulary. Gillam, S. L., Olszewski, A., Fargo, J., & Gillam, R. B. (2014). Classroom-based narrative and vocabulary instruction: Results of an early-stage, nonrandomized comparison study. *Language, Speech, and Hearing Services in Schools, 45*, 204-219.

doi:10.1044/2014_LSHSS-13-0008
Objective This study evaluated both low-risk and high-risk students in a regular education classroom, using a Tier 1 narrative intervention program with embedded vocabulary instruction. Method Participants were 43 first-grade students from two different classrooms. Students were assessed and divided into high risk and low risk subgroups based on their scores from a narrative test. The experimental classroom participated in vocabulary instruction for 30 minutes a day, three times a week for 6 weeks. The control classroom continued receiving the reading, vocabulary and listening comprehension lessons that were in place prior to this study. Results Students who received the narrative interventions were able to produce more complex narratives after the intervention. For example, they added details to their stories using elaborated noun phrases. Low-risk and high-risk students in the comparison group made no such gains in their narrative storytelling abilities. Conclusions Significant gains were seen in narrative complexity and vocabulary knowledge in the experimental group after the intervention. Relevance to current work This article supports the assertion that narrative intervention improves narrative storytelling ability. Goldstein, H., Kelley, E., Greenwood, C., McCune, L., Carta, J., Atwater, J., . . . Spencer, T. (2016). Embedded instruction improves vocabulary learning during automated storybook reading among high-risk preschoolers. Journal of Speech, Language & Hearing Research, 59, 484-500. doi:10.1044/2015_JSLHR-L-15-0227

Objective This study focused on improving vocabulary acquisition and comprehension skills in preschoolers since these skills are reliable predictors of future academic success. Researchers examined whether embedding vocabulary and comprehension lessons into audio recorded storybooks would produce greater improvement in vocabulary knowledge and comprehension than listening to storybooks with no embedded lessons. Method Participants were
163 preschool students at risk for language and reading disabilities. The experimental group received vocabulary and comprehension lessons embedded into the prerecorded story. The lessons taught challenging vocabulary words and asked story comprehension questions. The comparison group listened to the same story without the embedded lessons. Results It was found that the embedded lessons facilitated vocabulary learning whereas the children in the comparison group did not demonstrated understanding of the new vocabulary words. Comprehension was not significantly improved in either group. Conclusions Embedding storybooks with lessons teaching target vocabulary is a reliable method to increase understanding of new words. Relevance to current work Explicitly teaching new vocabulary increases vocabulary knowledge but does not increase reading comprehension.


Objective This article defines decoding as the ability to isolate words quickly, accurately and silently using letter-sound correspondence. Decoding is necessary for reading because decoding is the act of translating print into language. However, the decoded language must be understood for reading to take place. The article goes on to explore decoding skills in people with dyslexia and hyperlexia. Dyslexic readers are said to have nonexistent decoding skills even though they otherwise have normal intelligence and physical ability. Students with hyperlexia have superior decoding skills but their comprehension skills are average to inferior. Conclusions The article concluded that proficient reading skills incorporate decoding and comprehension. Relevance to current work This article defined decoding and established decoding as an important part of reading but needs to be accompanied by comprehension.

**Objective** The purpose of this study was to investigate the relationship of oral narrative skills and reading comprehension in African-American children. Universally, oral narratives are a fundamental way to communicate experiences, which makes oral narrative skills easily transferable across cultural boundaries. Furthermore, developmentally children tell stories before they learn to read which suggests that early oral narrative ability (preschool) might be an indicator of a child’s reading ability in upper elementary grades. **Method** Participants for this study included 80 African-American fourth and sixth grade students from public schools in the southwestern USA. Students were asked to create an original story about a picture. An example story was first given to facilitate understanding of the task. Each child was allowed ample time to create a story and prompts such as, “What else?” were used to help the child develop a complete narrative. **Results** Both the fourth and sixth grade groups demonstrated a mean story level of 5. Level 5 is characterized by complex, well developed oral narrative skills. The authors suggest the reason that both groups achieved the same level is that children go through a development process in acquiring oral narrative skills. They reach a peak at about 11 or 12 years of age, when they have mastered the structures used in oral narratives. Also, story level significantly correlated to reading achievement. Specifically, they found that emphasis on the development of oral narrative skills directly or indirectly influence a student’s reading ability. **Conclusions** Children at risk academically could be identified as early as preschool using an assessment of their oral narrative skills. Narrative skills are universal and can confidently be used as a measure
of academic success across cultures when cultural influences and preferences are taken into consideration. *Relevance to current work* This study supports that assertion that oral narrative ability directly correlates with reading comprehension. Additionally, it identifies that oral narratives are universal across cultures and can successfully be used to identify students at risk academically.


*Objective* This is a longitudinal study focused on the development of reading comprehension in children as they grow from second grade to seventh grade. This article sought to understand how vocabulary, grammatical and inferential skills influence the development of listening and reading comprehension. Also, to gain a better understanding of how word reading and listening comprehension impact reading comprehension. *Method* Participants included 189 Norwegian second-grade students. Students were tested six different times over a five-year period. The first testing session measured language comprehension, word decoding and reading comprehension. Testing sessions two through six measured reading comprehension. *Results* Results indicate that in second grade, differences in listening comprehension and reading comprehension varied as a function of decoding skills. For example, variations in listening comprehension were predictive of how well the written text was understood when children were good at decoding. Children with poor decoding skills, however, did not have adequate levels of decoding to engage oral language comprehension skills to begin understanding the written text. *Conclusions* Listening comprehension and decoding are essential in developing reading comprehension skills. Interventions that focus on oral language skills including narrative
language are effective in improving reading comprehension scores in children. Relevance to current work This article supports the understanding that proficient reading comprehension is link to proficient oral language.


Objective This article explores the challenge faced by bilingual Spanish students in immersion programs who are expected to learn to read in a language different than the one spoken at home. The purpose of this study was to identify the relationship between the cognitive skills of the students at the beginning and ending of kindergarten in Spanish and the reading comprehension abilities at the end of first grade in both Spanish and English. Method This is a longitudinal study incorporating 249 five-year-old students with no previous experience with the English language. The study began when the students first entered kindergarten and ended when they finished first grade. Each student was administered a series of tasks at the beginning and end of kindergarten and at the end of first grade. The tasks administered in kindergarten were in Spanish and the tasks administered in first grade were in Spanish and English. The Spanish tasks included picture vocabulary, memory for sentences, sound matching, sound categorization, rapid automatized naming, letter knowledge, concepts about print, letter-word identification and Spanish passage comprehension. The English tasks were letter names and letter sounds, letter-word identification, word attack, passage comprehension, picture vocabulary, memory for sentences, sound matching, phoneme elision, and rapid automatized naming. Results The first assessment identified that the student’s Spanish-letter word identification scores were below average but increased to the average range by the end of kindergarten. The scores continued to
improve and were above average by the end of first grade. Spanish passage comprehension was all above average at the end of first grade. Conclusions The findings of this study support previous studies that found phonological awareness is predictive of word-identification skills and has a high degree of transfer from Spanish to English. Oral-language language skills forecasted reading comprehension ability better than word identification skills. Additionally, letter and word knowledge, print concepts and sentence memory also transferred from Spanish to English. Relevance to current work This study supports the assertion that there is high correlation between oral-language skills and reading comprehension.


Objective This article reviews variables to consider as schools set up their response to intervention (RTI) structure. Primary level of instruction in schools has been defined as delivering the core curriculum using high-quality instruction. This level is directed at the whole population. Secondary-level is directed at a specific segment of the population who demonstrate a need for more intense supports. It is estimated that in schools this level will be used by 15 percent of the student population. Tertiary-level serves those students who need a more intense, specialized and often individualized intervention to succeed in the given area. Five to seven percent of the population will benefit from level three. This intervention is meant to be a short-term and is aimed at helping the student step-down to a less intense level. The purpose of implementing RTI is “to prevent long-term academic and social failure,” it is not meant “to prevent special education.” The intensity of the intervention can be adjusted by varying the dosage of the intervention. Dosage refers to the opportunities the student has to practice the
curriculum or skill. Dosage can be adjusted by changing (1) how many instructional minutes the student receives for each lesson; (2) how many sessions the student attends each week; and/or (3) how many weeks the student attends the intervention. All or some of these elements will increase as the student moves from a less intense tier to a more intense tier. Other factors to consider when assessing instructional intensity is group size, immediacy of corrective feedback, mastery requirements of the content, number of response opportunities, number of transitions among contents or classes, specificity and focus of curricular goals, and instructor specialty and skills.

**Conclusions** RTI framework requires a clear distinction between levels. Each level becomes increasingly intense as instructional group size, instructional session time, frequency of instructional sessions, duration of interventions, and expertise of the instructional staff are adjusted. **Relevance to current work** This article outlines a multi-tiered intervention system.


**Objective** This article is a longitudinal study exploring word decoding and reading comprehension measures of Spanish-speaking English language learners (EELs). **Method** This study included 303 Latino kindergarten students from 10 different schools. Students participated in early transition bilingual curriculum at their school. Testing measures were administered six times throughout the longitudinal study. Initial testing began in kindergarten and ended when the students were in sixth grade. Spanish tasks administered in kindergarten and first grade include, Letter–Word Identification, Picture Vocabulary, Memory for Sentences, and Passage Comprehension. English tasks administered in only first grade include, Sound Matching, Elision, RAN-Objects and Digits, and Memory for Sentences. English tasks administered in all grades
include Letter–Word Identification, Word Attack, Passage Comprehension, and Picture Vocabulary. Results The children showed a relatively large amount of growth in both decoding and reading comprehension between the end of first grade and the end of second grade. After second grade decoding scores remained in line with the normative group. However, in third grade reading comprehension abilities decreased when compared to the normative English-speaking sample. Conclusions The decrease in reading comprehension could mean that the items on the reading comprehension task in first and second grade emphasize decoding ability but in third grade the tasks required higher levels of oral language skills. Relevance to current work This article supports the fact that reading comprehension is not directly tied to decoding ability rather, oral language skills directly impact reading comprehension.


Objective The goal of this article was to better understand the point at which improving reading fluency no longer clearly correlates to improved reading comprehension. Method This study included 337 students with reading difficulties and 150 typical readers. Participants were in second and fourth grade. To test oral reading rate, students read three different passages. The median score for the words read correctly per minute (wcpm) was recorded as the final score. To measure reading comprehension, students orally read passages that increased in difficulty. After the passage was read the examiner asked comprehension questions about the passage. The questions required both literal comprehension and inferential comprehension. Results Improved reading fluency impacted reading comprehension in second grade students with reading disability only between 35 and 75 wcpm. In fourth graders with reading disabilities, reading
comprehension was not improved beyond a reading fluency score of 90 wcpm. Conclusions The results of this study are useful in understanding the connect between how fast a student is reading and the impact their reading fluency might have on their reading comprehension. Relevance to current work This article supports the assertion that reading fluency ability does not directly predict reading comprehension ability.


Objective The purpose of this study is to explore the theory that if a reader has enough alphabetic knowledge to decode fluently, he/she will comprehend the text. Additionally, to explore the understanding that reading comprehension requires oral language skills in line with the level of the text to comprehend the meaning of the text. Method This study included 135 Spanish-English speaking fourth graders from Boston, Chicago and El Paso. Decoding skills (alphabetic knowledge and fluency), vocabulary knowledge, listening comprehension and reading comprehension were assessed. Results A strong association exists between reading comprehension and oral language skills. It was found that decoding skills do not influence reading comprehension as much as oral language skills. Conclusions Oral language skills influence reading comprehension outcomes to a larger extent than decoding skills. Relevance to current work This study supports the assertion that decoding skills do not significantly influence reading comprehension abilities.

**Objective** This article identifies steps to effectively implement explicit vocabulary instruction during shared storybook reading. Step 1- Identify words to teach. Step 2- Design explicit instruction. Step 3- Make a plan for assessment. **Conclusions** Vocabulary skills are strong predictors of later reading success. Incorporating vocabulary instruction into shared storybook reading can be very effective when teachers follow the steps outlined in this article.

**Relevance to current work** This article outlines the steps to shared storybook reading.


**Objective** This study had two purposes. The first purpose used test-teach-test, dynamic assessment of narratives to identify the participants of the study. The second purpose explored Tier 2 narrative intervention for culturally and linguistically diverse students. **Method** The dynamic assessment identified 22 students from 3 Head Start preschool classrooms. Participants engaged in small-group narrative intervention twice a week for 9 weeks. **Results** Results indicated that the treatment group experienced significant improvement in narrative retells after the intervention. **Conclusions** Narrative language intervention effectively improves language skills. **Relevance to current work** This article supports the assertion that narrative intervention improves language skills.

Objective This article provides a theoretical basis for teaching inferential language skills to preschoolers while engaged in book sharing. Research based ideas of how to incorporate inferential language instruction into book sharing are also discussed. Inferencing skills are directly linked to reading comprehension ability because inferencing is the act of thinking beyond information directly provided in the text. It elaborates on the given text and inserts information needed to fully understand what was written. Storybook reading is an ideal activity to facilitate inferential language skills for many reasons. It is a simple, inexpensive activity that easily fits into daily routines at preschool and home. Children gain important oral language skills that are crucial for later reading comprehension just by listening to stories being read aloud. Also, the text stays constant which is an advantage when exposing children to inferencing skills. Furthermore, story book reading provides a context for natural discussions which can be used to practice inferencing skills. Conclusions Storybook sharing is a natural way to expose preschoolers to inferential language. Inferencing is an important part of comprehension.

Relevance to current work This article illustrates the importance of exposing preschoolers to oral language using narrative intervention.


Objective Culturally and linguistically diverse students are at a disadvantage with language-related skills and often receive special education services much later than their English language-proficient peers. This is may be due to the limited research available on how to distinguish between a language difference and a language disability. The main purpose of this
article was to explore the benefit of using a multitiered intervention system to teach narrative
retell and personal story retell to diverse preschoolers. It is well established that narrative
language ability in preschool is a reliable predictor of later academic success. The secondary
purpose was to study the possibility of using multitiered intervention to identify students in need
of Tier 2 language intervention. Method Participants include seven culturally diverse students
from three Head Start Preschool classrooms. Researchers looked at the student’s ability to use
story grammar and complex linguistic structures in the context of story retells and personal
stories. The Test of Narrative Retell (TNR) and the Test of Personal Generation (TPG) was used
to gather the language samples of personal stories and narrative retells. Narrative samples were
gathered every week during baseline, intervention and follow-up periods. Results The
storytelling abilities of the student’s improved after receiving narrative intervention. Specifically,
four weeks after the narrative intervention concluded moderate to high levels of maintenance
were recorded. Conclusions The seven participants were at risk for receiving special education
services. The narrative intervention prevented six of the seven participants from being referred to
additional services. Relevance to current work This study supports the assertion that narrative
language skills are foundational to academic success. Preschool age is an ideal time to provide
narrative intervention in a multitiered structure.