Improving the Oral Narrative and Expository Language of Kindergarten Students and Reducing the Matthew Effect

Taylor Camille Magleby

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

Master of Science

Douglas B. Petersen, Chair
Kathryn Cabbage
Garrett Cardon

Department of Communication Disorders

Brigham Young University

Copyright © 2021 Taylor Camille Magleby

All Rights Reserved

ABSTRACT

Improving the Oral Narrative and Expository Language of Kindergarten Students and Reducing the Matthew Effect

Taylor Camille Magleby
Department of Communication Disorders, BYU
Master of Science

The purpose of this study was to examine the effects of a tier-2 combined oral narrative and expository language intervention on kindergarteners' narrative and expository skills in comparison to an alternate decoding intervention and no treatment control condition. This study included 54 kindergarten students. After being administered The Predictive Early Assessment of Reading and Language [PEARL] Kindergarten Screener at the beginning of the school year, eight students were found as at-risk for future reading comprehension difficulty and were matched to nine students not-at-risk, and all assigned to a language treatment group. Additional students not-at-risk for future reading comprehension difficulty were randomly assigned to an alternate decoding treatment group (n = 9) and to a no treatment control group (n = 9). Narrative intervention took place for approximately four months biweekly for 15 minutes, then expository language intervention was provided for approximately two months biweekly for 15 minutes. Students across all conditions were administered narrative and expository measures at the conclusion of the study. Results indicated that the typically developing students had significantly higher narrative and expository outcomes when compared to the typically developing students in the alternate decoding treatment and no treatment condition. Additionally, we found that the at-risk students who received oral language intervention were able to catch up to their typically developing peers in both narrative and expository outcomes with a trajectory that suggested that they would eventually meet grade level narrative language benchmark expectations. Early oral language intervention is the first step in reducing the poor reading comprehension outcomes across the nation. By targeting oral language comprehension, even young kindergarten students can improve both decoding and comprehension, better preparing them for future academic success.

Keywords: oral language, narrative, expository, tier-2 intervention, kindergarten

ACKNOWLEDGMENTS

I express my sincere appreciation to my committee chair, Dr. Petersen. Working on this project with him for the last 3 years has been a privilege, and one of my most rewarding academic experiences. His tutelage, vision, patience, and encouragement were invaluable to me. My gratitude is profound. I also express gratitude for the support of my other committee members, Dr. Cabbage and Dr. Cardon. Their thoughtful insights, support, and feedback provided much needed clarity. I also direct thanks to many undergraduate research assistants who gave many hours in the name of "Changing the World" while providing intervention and data analysis. Lastly, I express my sincere gratitude to my husband and family who provided me with crucial support and love throughout the entirety of the process.

TABLE OF CONTENTS

TITLE PAGE i

ABSTRACT ii

ACKNOWLEDGMENTS iii

TABLE OF CONTENTS iv

LIST OF TABLES vi

LIST OF FIGURES vii

DESCRIPTION OF THESIS STRUCTURE viii

Introduction 1

Oral Language and Reading Comprehension 2

Narrative Language 3

Expository Language 5

Method 10

Research Design and Participants 10

Measures 11

PEARL 11

Narrative Language Measures 13

Oral Expository Language 14

Intervention Procedures 14

Tier-2 Oral Narrative Language Intervention 14

Tier-2 Oral Expository Language Intervention 15

Alternate Treatment: Decoding Instruction 15

Results 15

Data Analysis 15

Question 1 16

Question 2 17

Question 3 17

Question 4 18

Results Summary 19

Discussion 19

Research Question 1: Oral Narrative Language Outcomes for Typically Developing Students 20

Research Question 2: Oral Narrative Language Outcomes for At-Risk Students 21

Research Question 3: Oral Expository Outcomes for Not-At-Risk and At-Risk Students 22

Study Limitations 23

Conclusion 24

References 25

APPENDIX A: Annotated Bibliography 32

APPENDIX B: CUBED Narrative Language Measure 51

APPENDIX C: Small Group Narrative Intervention Fidelity Checklist 52

APPENDIX D: Post-Test Expository Language Retell 53

APPENDIX E: Sample Expository Graphic Organizer 54

APPENDIX F: Institutional Review Board Approval 55

LIST OF TABLES

Table 1 *Descriptive Information for Treatment and Comparison Group Participants* 11

Table 2 *Unadjusted Means for Each Post-Test by Treatment Group* 16

LIST OF FIGURES

Figure 1 *Rate of Improvement for At-Risk Students* 18

DESCRIPTION OF THESIS STRUCTURE

To adhere to traditional thesis requirements and journal publication formats, this thesis, *Improving the Oral Narrative and Expository Language of Kindergarten Students and Reducing the Matthew Effect,* is written in a hybrid format. The initial pages of the thesis adhere to university requirements while the thesis report is presented in journal article format. The annotated bibliography is included in Appendix A. Appendix B contains information regarding the CUBED Narrative Language Measures followed by Appendix C, which contains the Tier-2 Narrative Intervention Fidelity Checklist. Appendix D includes the Post-test Expository Language Retell Measure. Appendix E includes the Sample Expository Graphic Organizer. Appendix F contains Institutional Review Board approval form.

Introduction

Since 1992, 50-80% of fourth and eighth grade students have not met reading comprehension expectations according to the National Assessment of Educational Progress (NAEP, 1992, 2002, 2016, 2017). Although successful reading requires the ability to decode (Gough & Tumner, 1986), research has clearly demonstrated that difficulty with decoding only accounts for a small percentage of students struggling with reading comprehension (Nakamoto 2007; NAEP, 2002). In an effort to improve reading performance, new standards have been adopted which have a greater focus on reading comprehension and foundational oral language including narrative and expository discourse (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). However, in spite of this new focus on comprehension, reading assessments and intervention practices for younger students have a disproportionate emphasis on decoding. For example, Multi-Tiered Systems of Supports (MTSS) have been introduced into the education system for the past 17 years (Individuals with Disabilities Act, 2004). Yet the progress monitoring assessments and accompanying tiered interventions required for implementation of MTSS have placed greater emphasis on decoding rather than comprehension, especially when applied to younger grades (Petersen & Stoddard, 2018; Ukrainetz, 2006). Early identification and intervention of oral academic language can prevent reading comprehension difficulty from emerging (Catts et al., 2001; Catts et al., 2002; Spencer et al., 2018). Students who have a strong oral language foundation tend to build upon that footing and accelerate their academic language growth, while students who start out with weaker language tend to fall further and further behind. This Matthew Effect can potentially be averted given the appropriate dose of evidence-based early intervention. Students who have weaker language at the beginning of kindergarten, for example, could have steep slopes of

improvement that put them on trajectory to meet the level of their typically developing peers. However, when reading comprehension is explicitly targeted, it does not usually occur until later grades, once a strong foundation for decoding has been laid. Though this approach may seem logical in many ways because younger students are still learning to decode, it also leads to negative outcomes for students with reading comprehension deficits. By not intentionally targeting language comprehension in earlier grades, students who have difficulty with language comprehension may fall under the radar for many years. Because of this lack of focus on comprehension, the vast majority of students are still not reading at grade level (NAEP, 2019).

Oral Language and Reading Comprehension

Oral academic language is foundational for reading comprehension and overall academic success (Catts et al., 2006; Catts et al., 2016; Language and Reading Research Consortium [LARRC], 2015; LARRC & Logan, 2017). Oral academic language differs from the informal vernacular of everyday conversation or language typically spoken at home. It is the language of academics and written-text, containing less frequently used and yet more academically meaningful vocabulary and complex sentence structure (Nagy & Townsend, 2012). Oral academic language must be acquired in order for students to be academically successful (Westby, 1985). For example, Lee (2010) reported in a longitudinal study that young children with expressive language difficulty had academic difficulty when older. Lee followed 1,071 two-year-old children to the age of 11 and also found a strong correlation between oral language and literacy. Smith and Dickinson (1994) noted that a focus on oral language is of greatest importance for at-risk students, including culturally and linguistically diverse students. Additionally, there is also evidence to suggest a causal relationship; oral academic language intervention leads to greater reading comprehension and other literacy outcomes (Barton-Hulsey

et al., 2017; Catts et al., 2016; Griffin et al., 2004; Spencer & Petersen, 2018). For example, LARRC et al. (2019) found that students who had large group oral language instruction performed significantly higher on comprehension monitoring, vocabulary, narration, and reading comprehension when compared to a control group. Petersen et al. (2020) found that large group oral language instruction improved reading comprehension and writing outcomes. Clarke et al. (2010) found that oral language instruction had the strongest and most lasting effect on reading comprehension. They examined the reading comprehension scores of students receiving three different interventions: text comprehension training, oral language training, and a combined text and oral language training. Though all three groups of students made gains in their reading comprehension scores, the students in the oral language training intervention group achieved the most progress and retained the higher scores after 11 months of follow up.

Narrative Language

In an attempt to improve the oral language of at-risk young students with the aim of establishing a stronger foundation for literacy outcomes, some researchers have implemented more intensive tier-2 and tier-3 oral narrative language intervention in the early grades. Weddle et al. (2016) examined the effect of multi-tiered narrative language intervention with culturally diverse preschool students. Participants from three Headstart preschool classrooms (n=41) were provided tier-1 narrative language intervention using *Story Champs* (Spencer & Petersen, 2016). After three intervention sessions, the students were administered a language screener to identify students who had limited response to large-group instruction. Of the 41 students, 22 students demonstrated the need for additional language instruction. Of the 22 students, seven were randomly chosen to receive tier-2 intervention. All seven of these students were bilingual Spanish/English speakers. The students were pulled out for approximately 15-20 minutes twice a

week in a small group format. In these sessions they were taught to include the basic parts that make up a story structure and then some also began to receive instruction for including complex language in their story retells. During each session they listened to a story, retold that story, and then were prompted to tell their own story. Retell and personal story generations were elicited after/before each session. The students received a total of 16 intervention sessions, and then one follow-up maintenance session 4 weeks after they administered the post-test. Results indicated that six out of the seven students made gains in their oral narrative ability after the implementation of the tier-2 narrative intervention. Moderate to high levels of maintenance were observed four weeks after the intervention had concluded.

Spencer et al. (2015) also investigated the efficacy of small group narrative intervention. They examined the narrative retell and personal narrative generation skills of culturally and linguistically diverse preschoolers who had been identified as needing more intensive intervention. They found that the preschoolers who had received the small group intervention demonstrated significantly greater gains on measures of narrative language ability compared to the children in the control group.

Brown et al. (2014) also found significant results for small group narrative language instruction. They investigated the effects of narrative intervention on African American kindergarteners in a multiple baseline design study. Students were arranged in groups to promote positive peer modeling through a range of ability, each group containing an at-risk target child. All three target children spoke African American English dialect and had been previously identified as at-risk for language disorder. Intervention took place two-three times per week for 15 minutes each session and contained a self-monitoring piece. Intervention targeted teaching the five basic story grammar elements. The researchers found that all three target children showed

increased levels of story grammar inclusion from baseline to the conclusion of intervention, and even higher scores after a two-week maintenance period.

Expository Language

Narrative language is not the only discourse that children need to understand in order to meet grade level reading comprehension standards. Expository text and discourse are also imperative for students to understand in order to be successful in an academic setting, specifically preparing for higher education. The purpose of expository language is to convey factual information and theoretical ideas (Boscolo, 1990). Expository text usually includes both tier-2 and tier-3 vocabulary (academic language), sometimes requiring greater depth and knowledge in a specific field. Expository text and discourse are often implemented after students have learned to read in later elementary grades and then heavily used in higher education settings. However, state standards and assessments have begun to include comprehension of these informational texts at earlier grades (Common Core State Standards, 2010). As a result, researchers have begun to explore how to effectively teach expository skills to younger students.

For example, Culatta et al. (2010), examined the effectiveness of teaching expository skills to preschoolers. The participants included 71 pre-k students in one preschool. Initially the preschoolers were each administered two expository comprehension tasks. The two texts focused on compare/contrast and problem/solution. After completing the "pre-test," large group and small group expository language instruction was given to the participants for 16 weeks. Two times a day 15-minute instruction was given to the entire class and then the students also participated in small group instruction. Expository texts and structures were included within the instruction. Intervention activities consisted of relating text to children's prior knowledge and experience, dramatizing texts, telling personal accounts, teaching key concepts and vocabulary

explicitly, presenting expository texts aloud, mapping conceptual relationships, and providing concrete hands-on experiences. At the completion of the intervention period, a comparable "post-test" was given also consisting of compare/contrast and problem/solution texts, including the retells etc. Of the 71 children, 61 made significant gains in their retelling of problem/solution text. The *t*-test revealed a significant gain between pre- and post-test and a large effect size. A significant gain score was also found for Compare and contrast performance however with only a small effect size.

Westby et al. (2010) analyzed how 4th and 5th grade students wrote expository summaries after receiving large group expository intervention focusing both on microstructure (e.g., vocabulary and syntactic patterns) and macrostructure (gist and overall organization) compared to a control group. Participants included 494 fourth and fifth graders from two Utah school districts. The researchers trained the teachers on expository instruction implementation and then gave the students a post-test battery after the instruction had been completed. The data indicated that fifth graders had significantly higher scores on their summaries than fourth graders, and treatment groups at both grade levels had significantly higher scores than control group students. Differences were slightly greater between treatment and control groups than between fourth- and fifth-grade groups, indicating that treatment may have promoted greater growth than age-related development.

Other researchers have examined whether expository intervention focusing on structure or content is more effective. Williams et al. (2005) randomly assigned 128 second graders into one of 3 groups: text structure, content, or a no treatment control group. All students were administered a pre-test. Expository Intervention occurred biweekly and involved 15 lessons that took about 45 minutes. The content of the teaching included clue words, book discussion and

reading, vocabulary development, reading and analyzing target paragraphs, making a graphic organizer, compare/contrast questions, summarization and a lesson review. At completion of the intervention, a similar post-test was administered to the students. They found that students who were given instruction on text structure performed much higher than the Content, and No Instruction Groups.

Ukrainetz (2019) researched the effects of expository intervention for students who have language comprehension difficulties, specifically examining the effects of note-taking and oral practice on expository reporting skills. Participants included 44 fourth to sixth grade students with an Individualized Education Program. The Clinical Evaluation of Language Fundamentals [CELF 5] was administered to each student (Wiig et al. 2013). Two groups were formed by matching students based upon the scores received on the CELF-5, gender, ethnicity, services, and free/reduced lunch. These students were then randomly assigned to the treatment and control groups. Students received 6 thirty-minute intervention sessions individually or in pairs from a Speech Language Pathologist. Treatment involved reducing statements from grade- level science articles into concise ideas, recording the ideas as pictographic and conventional notes, and expanding from the notes into full oral sentences that are then combined into oral reports. Participants were pre-tested and post-tested on taking notes from grade-level history articles and using the notes to give oral reports. Post-testing also included written reports one to three days following the oral reports. The treatment group showed significantly greater improvement than the control group on multiple quality features of the notes and oral reports. The mean number of notes showed a greater gain from pre-test to post-test for treatment than alternate treatment.

Though limited, there is evidence that explicit expository language intervention can have a significant impact on expository language outcomes. However, no studies have investigated

whether tier-2 oral narrative or expository intervention has sufficiently improved their oral language skills to the level of their not-at-risk peers. Furthermore, only one study (Clarke et al., 2010) included an alternate treatment/active control condition (Gillam et al., 2008; Herbert & Gaudiano, 2005). To our knowledge, no studies have combined an oral narrative and expository intervention with young at-risk students.

Narrative and expository studies have primarily focused on older, more typically developing students and have not compared at-risk students' performance to typically developing students' performance. Tier-2 language intervention should be sufficiently intense to accelerate at-risk students' oral narrative and expository language so that they match typically developing peers' performance and have a systemic lasting impact on students' language abilities. Furthermore, early oral language intervention with young students can potentially lay a foundation for future academic success. Therefore, the purpose of this study was to (a) determine whether tier-2 oral narrative and expository language intervention delivered to typically developing kindergarten students would significantly improve oral and expository outcomes compared to typically developing peers assigned to an alternate decoding treatment and no treatment control groups, and (b) determine whether tier-2 oral narrative and expository language intervention delivered to at-risk kindergarten students would bring at-risk students' oral language and expository language to a level where there is no longer a significant difference compared to their typically developing peers and their trajectory suggests that they will eventually meet benchmark expectations. The research questions were as follows:

1. Because the majority of students struggle with reading comprehension when older yet tend to receive only code-based intervention in kindergarten, we examined whether typically developing kindergarten students would benefit from oral narrative language

intervention in comparison to students receiving traditional decoding intervention and students receiving typical classroom instruction. Our research question was as follows: Do typically developing children assigned to the oral narrative language intervention treatment group have significantly higher oral language outcomes when compared to typically developing students assigned to a traditional treatment control group (decoding intervention) and when compared to students assigned to a no-treatment control group?

2. Students who are identified at the beginning of kindergarten as at-risk for future language difficulty need early intervention to help them catch up to their peers. And because students with weaker language tend to fall further and further behind over time (the Matthew Effect), we asked the following question: (a) Do students at-risk for language difficulty no longer have significantly different oral narrative language post treatment when compared to typically developing peers assigned to a traditional treatment control group (decoding intervention) and when compared to students assigned to a no-treatment control group? And (b) Is the rate of improvement for the at-risk students who received oral narrative language intervention sufficiently steep so that they will eventually meet benchmark expectations for oral language?
3. Finally, because expository language is an important student outcome, we examined whether there were significant differences between groups (at-risk treatment, not-at-risk treatment, alternate treatment, no treatment control) on expository retells. We also examined typically developing children who received intervention to their typically developing peers and we compared the at-risk students who received intervention to typically developing peers who did not receive intervention.

Method

Research Design and Participants

Approval to conduct this study was granted by the Brigham Young University Institutional Review Board. A quasi-experimental research design was used to examine the effects of small group oral narrative and expository language intervention on narrative and expository outcomes. The participants in this study included 69 kindergarten students from the Mountain West Region of the United States who received parent/guardian permission to participate. All of these students attended the same elementary school and were in two kindergarten classes.

Out of the 69 participants, 54 received parent/guardian consent to participate in the study. These 54 kindergarten students were administered The Predictive Early Assessment of Reading and Language [PEARL] Kindergarten Screener at the beginning of the school year. Based upon the results of the PEARL Screener, eight students were found as being at-risk for future reading comprehension difficulty and were consequently assigned to the treatment group, nine students not-at-risk were matched to the at-risk students based on gender and ethnicity and were also assigned to a treatment group. Additional students not-at-risk for future reading comprehension difficulty were randomly assigned to an alternate decoding treatment group (n = 9) and to a no treatment control group (n = 9). Demographic data for the participants will be displayed in Table 1.

Table 1

Descriptive Information for Treatment and Comparison Group Participants

	At-risk Treatment N = 8	No Risk Treatment N = 9	Alternate Treatment N = 9	No Treatment N = 9
Gender				
Female	3	7	5	5
Male	5	2	4	4
Ethnicity				
White	-	-	-	-
Hispanic	-	-	-	-
Black	-	-	-	-
Asian	-	-	-	-

Narrative intervention took place for approximately four months biweekly for 15 minutes, then expository language intervention was provided for approximately two months biweekly for 15 minutes. Students across all conditions were administered narrative and expository measures at the conclusion of the study.

Measures

PEARL

At the beginning of the school year, each kindergartener was administered the Predictive Early Assessment of Reading and Language, or the PEARL (Petersen & Spencer, 2014). The PEARL is a dynamic assessment with two brief subtests. Subtest 1 is the Dynamic Assessment

of Decoding, which examines a child's ability to decode using CVC nonsense words. At pre-test, four nonsense words are placed in front of the student and they are asked to read the words. Neutral prompts can be given if encouragement is needed. If the student does not read two or more words correctly, the examiner will then proceed to the teaching phase. Following a script, the examiner briefly teaches the student how to read the four CVC words, has the student repeat each sound in the word and then teaches the student to slowly blend the sounds together. At the conclusion of the teaching phase, the examiner then fills out a responsiveness rating scale in real time. The examiner gives ratings for the student's errors, confidence, disruptions and rate, and then an overall learning score from zero-four is given, zero being "difficult" and four representing "easy." Once the responsiveness scale is completed, the student is then given the post-test. The student is asked to read the same four CVC words and receives a score based upon the number of correct sounds and correct words read.

Subtest 2 of the PEARL is the Dynamic Assessment of Language, which examines a child's oral language comprehension. The child is read a brief narrative and is then asked to retell the story. The examiner scores the retell in real-time, giving points based upon the story grammar elements that are included (such as the character, problem, feeling, action consequence, and ending), the language complexity (the inclusion of temporal, adverbial, and relative clauses), and the episode (groupings of story grammar elements included, i.e., problem, consequence and ending). After the pre-test is administered and scored, the examiner teaches the student how to tell the same story using pictures and icons. After the teaching phase, the examiner briefly completes a similar responsiveness scale, to measure the child's language learning potential. Following the teaching phase, the post-test with a different story is administered and scored.

Narrative Language Measures

The Narrative Language Measures (NLM) was administered immediately after the four months of narrative intervention as a primary outcome measure for oral language, and again two months later at the conclusion of the study as a maintenance measure. The NLM is a narrative-based criterion-referenced assessment used for students from preschool to third grade. The NLM can be used as both a diagnostic and progress monitoring tool having 25 analogous forms for each grade. Taking approximately 3-5 minutes to administer. The examiner prompts the student to listen carefully, and then reads a brief narrative to the child with no visual supports or prompting. The student is then asked to retell the story. The retell is scored in real time, with points given for inclusion of story grammar elements (such as the character, problem, feeling, action consequence, and ending), language complexity (the inclusion of temporal, adverbial, and relative clauses), and episodic complexity (groupings of story grammar elements included, i.e. problem, consequence and ending). Petersen & Spencer (2012) have found the NLM to have good to excellent reliability and validity. Additional psychometric data including reliability and concurrent criterion-related validity, predictive criterion-related validity, sensitivity and specificity for the NLM with over 4000 students ranging from preschool to third grade is reported in the CUBED Manual (Petersen & Spencer, 2012). In this study, the NLM was administered to every student at the conclusion of the study and was also administered as a progress monitoring tool for the at-risk and not-at-risk language intervention groups during the narrative intervention phase. The NLM includes benchmark expectations at the end of each grade which were based on state curriculum standards and regression analysis (see the CUBED Technical Manual; Petersen & Spencer, 2016). The kindergarten spring benchmark is 14.

Oral Expository Language

An oral expository measure was administered at the conclusion of the study to all students in all conditions. This expository measure was administered previously in several studies (Brough, 2019; Douglas, 2019; Lee, 2020), and has emerging evidence of validity and reliability. For this measure, the examiner reads an expository passage, then asks the student to retell that passage. The examiner can give neutral prompts as needed. The assessment is then scored in real time based upon the extent to which the student includes proper text structure (points given on a scale from zero-two for main idea and supporting details) and for language complexity (modifiers, conjunctions, and specific Tier-2 and Tier-3 vocabulary words included in the child's retell were each awarded a point).

Intervention Procedures

Tier-2 Oral Narrative Language Intervention

The students at-risk for language-based reading comprehension difficulty assigned to the treatment condition and students not-at-risk assigned to the treatment condition received small group Story Champs intervention (Spencer & Petersen, 2012). The small groups included two-four children and one research assistant. The research assistants followed the *Story Champs* small group procedures. Each session lasted approximately 15 minutes and was completed right outside the students' classroom. The small group *Story Champs* procedures involved first, the examiner modeling a story with pictures and icons, then having the small group retell the story together, then having the students take turns retelling the story with and without visual support. These steps are described in detail in the *Story Champs* manual (Spencer & Petersen, 2012) and in Spencer and Slocum (2010). Story games such as Bingo were used to increase children's active engagement.

Tier-2 Oral Expository Language Intervention

After receiving the Oral Narrative Language Intervention, the treatment group then received two months of small group oral expository language intervention. The intervention kindergarten expository passages were selected from a database of materials aligned with Common Core State Standards. The expository intervention followed identical procedures to the narrative intervention with the exception of an additional focus on note-taking. While the examiner modeled the passage, they would also model note-taking procedures, helping the students identify the main idea and three supporting details. Students were taught to take notes using both pictography and words.

Alternate Treatment: Decoding Instruction

The fourteen students assigned to the alternate treatment condition participated in a decoding focused intervention, similar in dosage to the narrative intervention. The "I See Sam" digital application was used as the primary intervention tool. The interventionists would model how to read the sounds used in the words used in the short story, then had all students respond chorally. This was then done at the word and sentence level.

Results

Data Analysis

ANOVAs were conducted to answer our first two questions. Specifically, the ANOVAs helped determine whether typically developing children assigned to the oral narrative treatment group had significantly higher oral language outcomes when compared to typically developing peers assigned to the alternate treatment and no-treatment control groups, and to examine whether students who were identified at the beginning of kindergarten as at-risk for future language difficulty no longer had significantly different oral narrative language outcomes when

compared to typically developing peers who did not receive oral narrative language intervention. For our third question, we plotted the rate of growth for the two groups of students who received oral narrative language intervention to determine whether the at-risk students had steeper slopes of improvement, suggesting that their trajectory would eventually bring them to the same level as their typically developing peers. Finally, to answer our fourth research question, we conducted an ANOVA to compare the effects of the expository language intervention on expository language outcomes across all groups. Before carrying out an ANOVA, the researchers verified that the data met ANOVA assumptions. Table 2 reports the unadjusted and adjusted means for each outcome.

Table 2

Unadjusted Means for Each Post-test by Treatment Group

	Unadjusted Means							
	No Risk Treatment		At-risk Treatment		Alternate-Treatment		No Treatment	
	M	SD	M	SD	M	SD	M	SD
Narrative	17.89*	2.03	7.63	6.67	9.56	4.28	9.13	4.64
Expository	20.00*	4.30	17.50	5.90	14.56	5.05	15.25	3.69

* Statistically Significant $p > .05$

Question 1

Do typically developing children assigned to the oral narrative language intervention treatment group have significantly higher oral language outcomes when compared to students

assigned to a traditional treatment control group (decoding intervention) and when compared to students assigned to a no-treatment control group?

For the typically developing group comparison for the narrative language outcome, the ANOVA was significant $F(2, 22) = 19.25$, $MSE = 151.11$, $p < .001$, partial eta squared = .64. Follow up tests were conducted to evaluate pair-wise differences among the adjusted means. Based on the LSD procedure, the adjusted mean for the typically developing treatment group was significantly higher than the alternate-treatment group, $p < .001$ and the no-treatment control group, $p < .001$. The alternate-treatment group was not significantly different from the control group, $p = .87$.

Question 2

Students who are identified at the beginning of kindergarten as at-risk for future language difficulty need early intervention to help them catch up to their peers. Our research question was as follows: Do students at-risk for language difficulty no longer have significantly different oral narrative language when compared to typically developing peers assigned to a traditional treatment control group (decoding intervention) and when compared to students assigned to a no-treatment control group?

When comparing the at-risk treatment group to the typically developing groups on the narrative language outcome, the ANOVA was not significant $F(2, 21) = 2.11$, $MSE = 1.32$, $p = .15$, partial eta squared = .17.

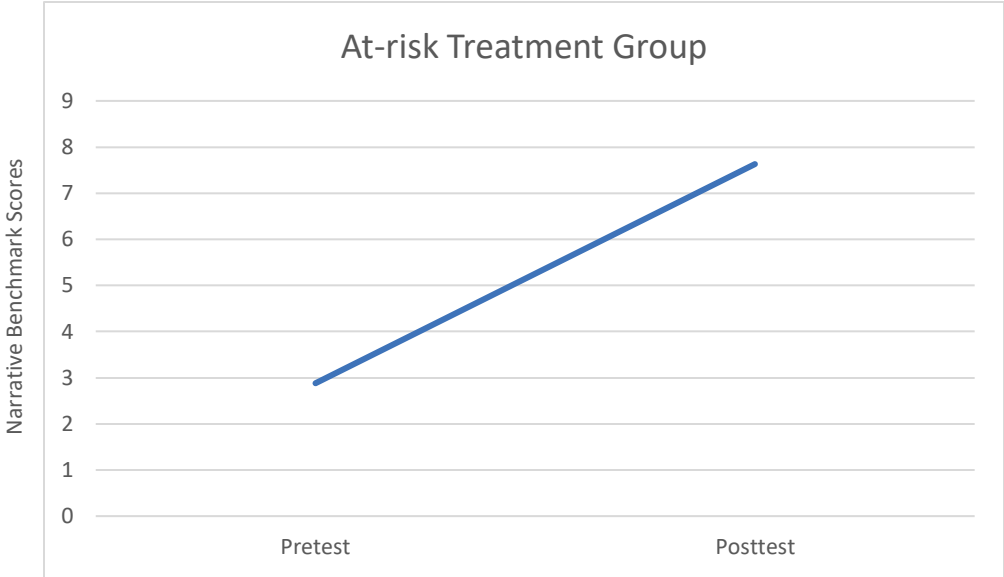
Question 3

In order to determine whether the rate of improvement for the at-risk students who received oral narrative language intervention would suggest that the students would likely meet the end of kindergarten NLM benchmark expectation (14), we plotted growth from pre-test to

post-test (Figure 3). At pre-test, the at-risk students had a mean NLM score of 2.88. When given the post-test, the at-risk students had a mean NLM score of 7.63.

Figure 1

Rate of Improvement for At-Risk Students



Note. At-risk students' trajectories suggest they will eventually meet benchmark.

Question 4

Finally, because expository language is an important student outcome, we examined whether there were significant differences between typically developing groups (not-at-risk treatment, alternate treatment, no treatment control) on expository retells and whether there were no significant differences between the at-risk treatment group and the typically developing control groups.

For the typically developing group comparison for the expository language outcome, the ANOVA was significant $F(2, 22) = 4.56$, $MSE = 19.27$, $p < .05$, partial eta squared = .29. Follow

up tests were conducted to evaluate pair-wise differences among the adjusted means. Based on the LSD procedure, the adjusted mean for the typically developing treatment group was significantly higher than the alternate-treatment group, p =.01 and the no-treatment control group, p =.02. The alternate-treatment group was not significantly different from the control group, p = .77.

When comparing the at-risk treatment group to the typically developing groups on the expository language outcome, the ANOVA was not significant F(2, 21) = 0.83, MSE = 25.38, p = .45, partial eta squared = .07.

Results Summary

The results of the study indicated that typically developing students that received oral narrative and expository tier-2 intervention had significantly higher language outcomes compared to typically developing peers assigned to an alternate decoding treatment, and no treatment group. We also found that after oral narrative and expository language intervention had been delivered that there was no longer a significant difference between the at-risk students and their not-at-risk peers in the no control group and alternate treatment decoding group. Additionally, an examination of the rate of growth of the at-risk students' oral narrative language scores suggest that their trajectory would likely meet benchmark expectations after further intervention.

Discussion

The purpose of this study was to examine whether tier-2 oral narrative and expository language intervention delivered to typically developing kindergarten students would significantly improve oral and expository outcomes compared to typically developing peers and determine whether tier-2 oral narrative and expository language intervention delivered to at-risk

kindergarten students would accelerate at-risk students' oral language and expository language to a level where there is no longer a significant difference compared to their typically developing peers and their trajectory suggest that they will eventually meet benchmark expectations.

At the beginning of the school year all kindergarten students were administered a brief dynamic assessment to measure the students' oral language comprehension and decoding abilities. Students identified as at-risk for oral language comprehension were matched with students not-at-risk and assigned to an oral language treatment group and were given a combined narrative and expository intervention. Additional students not-at-risk for oral language comprehension were assigned to an alternate treatment decoding group and were administered a similar dosage of decoding treatment. The last group also consisted of students identified as not-at-risk for oral language comprehension and were assigned to the no treatment control condition. At the completion of all treatment, all students were tested on their oral language comprehension abilities.

Research Question 1: Oral Narrative Language Outcomes for Typically Developing Students

Because the majority of students struggle with reading comprehension when older (NAEP, 2019), yet tend to receive only code-based intervention in kindergarten, we examined whether typically developing kindergarten students would benefit from oral narrative language intervention in comparison to students receiving traditional decoding intervention and students receiving typical classroom instruction. Results indicated that the typically developing students that received oral narrative and expository tier-2 intervention had significantly higher oral narrative outcomes (Mean = 17.89, SD = 2.03) in comparison to the students in the alternate decoding treatment (Mean = 9.56, SD = 4.28) and no treatment control groups (Mean = 9.13, SD

1.64) with large effect sizes (partial eta squared = 0.64). These findings align with prior oral narrative intervention research conducted with young typically developing students (Petersen et al., 2018; Weddle et al., 2016; Spencer et al., 2015). This study adds to the research base that oral narrative intervention can benefit typically developing students in their oral language development. It also suggests that tier-1 general curriculum may not be sufficient to help kindergarten students meet oral narrative language expectations. Additionally, explicit tier-2 decoding instruction is no more effective than tier-1 general curriculum to strengthen their oral narrative language which is foundational for academic success. A focus on decoding in current tier-1 kindergarten instruction has not improved reading outcomes for over almost 30 years (NAEP, 1992, 2019). These findings suggest that it is possible to improve oral narrative language as early as kindergarten, which is imperative for successful reading comprehension (Gough & Tumner, 1986). Thus, typically developing young students can be prepared to understand complex academic language that they will be required to read by targeting oral language skills at an earlier age. This early oral language intervention approach may have a significant clinical outcome by targeting comprehension before students learn to decode.

Research Question 2: Oral Narrative Language Outcomes for At-Risk Students

Students identified at the beginning of kindergarten as at-risk for future language difficulty need early intervention to help them eventually reach the level of their peers. Initially, the at-risk students' oral narrative language was considerably weaker based upon their performance on the PEARL, which classified the students as being at-risk and not-at-risk for future reading comprehension difficulty. The results of this study indicated that the oral narrative language of the at-risk students at the conclusion of tier-2 intervention was no longer statistically significantly different than the oral narrative language of their typically developing peers.

Additionally, an examination of the at-risk students' performance in oral narrative over time suggested that these students would eventually meet grade level benchmark expectations. This growth took place with a relatively low dose of intervention (two 15-minute sessions each week), showing that with minimal disruption, oral narrative language intervention can be provided with sufficient intensity to significantly impact language outcomes for at-risk students. Furthermore, none of the interventionists who provided the intervention had a college degree and had limited training in delivering language intervention, indicating that effective tier-2 intervention can be provided by paraprofessionals with minimal training. By targeting oral language early, we can mitigate the Matthew Effect and help at-risk students catch up to their typically developing peers.

Research Question 3: Oral Expository Outcomes for Not-At-Risk and At-Risk Students

In later grades, seventy percent of what students are expected to read is expository text (NAEP, 2009). Because of this, expository language expectations have been included in early grade curriculum standards. Accordingly, we compared the expository language of typically developing students and at-risk students to the expository language of typically developing students. The expository results mirrored the results found with oral narrative language intervention. There were significant differences with expository results between the typically developing students who received the oral narrative and expository intervention compared to typically developing students in the decoding alternate treatment group and no treatment control group. Also, there was no statistically significant difference in expository outcomes between the at-risk students who received language treatment and the not-at-risk alternate treatment and no treatment control groups. Expository language is often targeted in later grades. The results of the study indicate that both at-risk and typically developing students can respond to targeted

expository oral language intervention as early as kindergarten. These findings are in alignment with previous research (Culatta et al., 2010). Additionally, the students in this study only received a relatively low dose of oral expository intervention (sixteen 15-minute sessions over two months).

Study Limitations

This study did not have a true experimental design due to the kindergarten students being assigned to treatment groups based upon their scores on the PEARL assessment rather than being randomly assigned. Students identified as at-risk for language comprehension were then matched to students not-at-risk; however, the matching criteria was limited due to a small participate pool from the kindergarten grade. Additional study limitations were both the sample size and diversity of the populations. Though the entire kindergarten grade of an elementary school participated, the demographics of the area had little ethnicity and SES. In some regards, this allows for generalization to specific population, yet limits the inferences that can be made for other populations. Future research in this area should target larger populations as well as students with more diversity.

A further limitation of the study is our inability to report pre-test scores for all groups. Due to an unforeseen circumstance, we were only able to obtain and report the pre-test scores for the at-risk and not-at-risk language groups, lacking the specific scores for the alternate treatment and no treatment control groups. However, we do know that the students in the alternate treatment and no treatment control groups were identified as not-at-risk for language, which indicates that they had a pre-test score of 10 or higher due to the procedures of the PEARL (Petersen & Spencer, 2014).

Another limitation of the study may be that the intervention for the decoding, oral narrative and expository language groups was mostly conducted by undergraduate research assistants. Though each research assistant had received training in an effort to maintain treatment fidelity, all research assistants had limited professional experience. However, in some ways this provides evidence that kindergarten students can make progress with intervention administered by paraprofessionals, or those with limited training.

Conclusion

This study examined the efficacy of oral narrative and expository language intervention for at-risk and not-at-risk kindergarten students in comparison to an alternate decoding intervention and no treatment control condition. With a relatively low dose of oral language intervention, typically developing students had significantly higher narrative and expository outcomes compared to the typically developing students in the two control conditions. Additionally, we found that the at-risk students who received oral language intervention were able to catch up to their typically developing peers in both narrative and expository outcomes with a trajectory that suggested that they would eventually meet grade level narrative language benchmark expectations.

The results of this study suggest that students who receive oral narrative and expository intervention can accelerate their academic language, reducing the Matthew Effect. This in turn will establish a strong foundation for reading comprehension. This early oral language intervention is the first step in reducing the persistently poor reading comprehension outcomes across the nation. By targeting oral language comprehension, even young kindergarten students can improve both decoding and comprehension, better preparing them for future academic success.

References

Barton-Hulsey, A., Sevcik, R. A., & Romski, M. A. (2017). Narrative language and reading comprehension in students with mild intellectual disabilities. *American Journal on Intellectual and Developmental Disabilities*, *122*(5), 392–408. https://doi.org/10.1352/1944-7558-122.5.392

Boscolo, P. (1990). The construction of expository text. *First Language*, *10*(30), 217–230. https://doi.org/10.1177/014272379001003003

Brough, M. (2019). A large scale clustered randomized control trial examining the effects of multi-tiered oral narrative language intervention on kindergarten oral and written narratives and oral expository language. *Theses and Dissertations, 8270.* https://scholarsarchive.byu.edu/etd/8270

Brown, J. A., Garzarek, J. E., & Donegan, K. L. (2014). Effects of a narrative intervention on story retelling in at-risk young children. *Topics in Early Childhood Special Education*, *34*(3), 154–164. https://doi.org/10.1177/0271121414536447

Catts, H. W., Adlof, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the simple view of reading. *Journal of Speech, Language, and Hearing Research*, *49*(2), 278–293. https://doi.org/10.1044/1092-4388(2006/023)

Catts, H. W., Fey, M. E., Tomblin, J. B., & Zhang, X. (2002). A longitudinal investigation of reading outcomes in children with language impairments. *Journal of Speech, Language, and Hearing Research*, *45*(6), 1142–1157. https://doi.org/10.1044/1092-4388(2002/093)

Catts, H. W., Fey, M. E., Zhang, X., & Tomblin, J. B. (2001). Estimating the risk of future reading difficulties in kindergarten children. *Language, Speech, and Hearing Services in Schools*, *32*(1), 38–50. https://doi.org/10.1044/0161-1461(2001/004)

Catts, H. W., Nielsen, D. C., Bridges, M. S., & Liu, Y.-S. (2016). Early identification of reading comprehension difficulties. *Journal of Learning Disabilities*, *49*(5), 451–465. https://doi.org/10.1177/0022219414556121

Clarke, P. J., Snowling, M. J., Truelove, E., & Hulme, C. (2010). Ameliorating children's reading-comprehension difficulties: A randomized controlled trial. *Psychological Science, 21*(8), 1106-1116. https://doi:10.1177/0956797610375449

Culatta, B., Hall-Kenyon, K. M., & Black, S. (2010). Teaching expository comprehension skills in early childhood classrooms. *Topics in Language Disorders*, *30*(4), 323–338. https://doi.org/10.1097/tld.0b013e3181ff5a65

Douglas, K. (2019). *Improving narrative and expository language: A comparison of narrative intervention to shared storybook reading* [Master's thesis, Brigham Young University]. Brigham Young University ScholarsArchive. https://scholarsarchive.byu.edu/etd/8276

Fey, M. E., Catts, H. W., Proctor-Williams, K., Tomblin, J. B., & Zhang, X. (2004). Oral and written story composition skills of children with language impairment. *Journal of Speech, Language, and Hearing Research*, *47*(6), 1301–1318. https://doi.org/10.1044/1092-4388(2004/098)

Gillam, R. B., Loeb, D. F., Hoffman, L. V. M., Bohman, T., Champlin, C. A., Thibodeau, L., Widen, J., Brandel, J., & Friel-Patti, S. (2008). The efficacy of fast forword language intervention in school-age children with language impairment: A randomized controlled trial. *Journal of Speech, Language, and Hearing Research*, *51*(1), 97–119. https://doi.org/10.1044/1092-4388(2008/007)

Gough, P. B., & Tumner, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, *7*(1), 6–10. https://doi.org/10.1177/074193258600700104

Griffin, T. M., Hemphill, L., Camp, L., & Wolf, D. P. (2004). Oral discourse in the preschool years and later literacy skills. *First Language*, *24*(2), 123–147. https://doi.org/10.1177/0142723704042369

Herbert, J. D., & Gaudiano, B. A. (2005). Introduction to the special issue on the placebo concept in psychotherapy. *Journal of Clinical Psychology*, *61*(7), 787–790. https://doi.org/10.1002/jclp.20125

Individuals with Disabilities Education Act. IDEA §300.8 (c) (10), (2004). https://sites.ed.gov/idea/regs/b/a/300.8/c/10

Language and Reading Research Consortium. (2015). The dimensionality of Spanish in young Spanish–English dual-language learners. *Journal of Speech, Language, and Hearing Research*, *58*(3), 754–766. https://doi.org/10.1044/2015_jslhr-l-13-0266

Language and Reading Research Consortium, Jiang, H., & Logan, J. (2019). Improving reading comprehension in the primary grades: mediated effects of a language-focused classroom intervention. *Journal of Speech, Language, and Hearing Research*, *62*(8), 2812–2828. https://doi.org/10.1044/2019_jslhr-l-19-0015

Language and Reading Research Consortium, & Logan, J. (2017). Pressure points in reading comprehension: A quantile multiple regression analysis. *Journal of Educational Psychology*, *109*(4), 451–464. https://doi.org/10.1037/edu0000150

Lee, J. (2010). Size matters: Early vocabulary as a predictor of language and literacy competence. *Applied Psycholinguistics, 32*(1), 69-92. https://doi:10.1017/s0142716410000299

Lee, K. (2020). Effects of a large group combined narrative and expository language intervention on oral language in third graders. *Theses and Dissertations, 8139.* https://scholarsarchive.byu.edu/etd/8276

Nagy, W., & Townsend, D. (2012). Words as tools: learning academic vocabulary as language acquisition. *Reading Research Quarterly*, *47*(1), 91–108. https://doi.org/10.1002/rrq.011

Nakamoto, J., Lindsey, K. A., and Manis, F. R. (2007). A longitudinal analysis of English language learners' word decoding and reading comprehension. *Reading and Writing, 20*(7), 691-719. https://doi:10.1007/s11145-006-9045-7

National Assessment of Educational Progress. (1992). *1992 reading assessment*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

National Assessment of Educational Progress. (2002). *2002 reading assessment*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

National Assessment of Educational Progress. (2009). *2009 reading assessment*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

National Assessment of Educational Progress. (2016). *2016 reading assessment*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

National Assessment of Educational Progress. (2017). *2017 writing assessment*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

National Assessment of Educational Progress. (2019). *2019 writing assessment*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards: English Language Arts*.

Petersen, D. B., Mesquita, M. W., Spencer, T. D., & Waldron, J. (2020). Examining the effects of multitiered oral narrative language instruction on reading comprehension and writing. *Topics in Language Disorders*, *40*(4), E25–E39. https://doi.org/10.1097/tld.0000000000000227

Petersen, D. B., & Spencer, T. D. (2012). The narrative language measures: tools for language screening, progress monitoring, and intervention planning. *Perspectives on Language Learning and Education*, *19*(4). 119–129.

Petersen, D. B., & Spencer, T. D. (2014). *The Predictive Early Assessment of Reading and Language (PEARL)*. Language Dynamics Group. Retrieved from http://www. languagedynamicsgroup.com

Petersen, D. B., & Spencer, T. D., (2016). *CUBED Technical Manual*. Language Dynamics Group. Retrieved from http://www. languagedynamicsgroup.com

Petersen, D. B., & Stoddard, A. (2018). Psychometric requirements of oral and written language progress monitoring assessments. *Perspectives of the ASHA Special Interest Groups*, *3*(1), 180–197. https://doi.org/10.1044/persp3.sig1.180

Smith, M. W., & Dickinson, D. K. (1994). Describing oral language opportunities and environments in head start and other preschool classrooms. *Early Childhood Research Quarterly*, *9*(3–4), 345–366. https://doi.org/10.1016/0885-2006(94)90014-0

Spencer, T. D., & Petersen, D. B. (2012). *Story Champs: A multi-tiered language intervention program*. Retrieved from http://www.languagedynamicsgroup.com

Spencer, T. D., & Petersen, D. B. (2018). Bridging oral and written language: An oral narrative language intervention study with writing outcomes. *Language Speech and Hearing Services in Schools, 49*(3), 569. doi:10.1044/2018_lshss-17-0030

Spencer, T. D., Petersen, D. B., & Adams, J. L. (2015). Tier-2 language intervention for diverse preschoolers: An early-stage randomized control group study following an analysis of response to intervention. *American Journal of Speech-Language Pathology, 24*(2), 619-636. doi:10.1044/2015_ajslp-14-0101

Spencer, T. D., & Slocum, T. A. (2010). The effect of a narrative intervention on story retelling and personal story generation skills of preschoolers with risk factors and narrative language delays. *Journal of Early Intervention*, *32*(3), 178–199. https://doi.org/10.1177/1053815110379124

Spencer, T. D., Weddle, S. A., Petersen, D. B., & Adams, J. A. (2018). Multi-tiered narrative intervention for preschoolers: A head start implementation study. *NHSA Dialog*, 20(1), 1– 28.

Ukrainetz, T. A., (2006). The implications of RTI and EBP for SLPs: commentary on L. M. Justice. *Language, Speech, and Hearing Science in Schools, 37*(4), 298-303.

Ukrainetz, T. A. (2019). Sketch and Speak: An expository intervention using note-taking and oral practice for children with language-related learning disabilities. *Language, Speech, and Hearing Services in Schools*, *50*(1), 53–70. https://doi.org/10.1044/2018_lshss-18-0047

Weddle, S. A., Spencer, T. D., Kajian, M., & Petersen, D. B. (2016). An examination of a multitiered system of language support for culturally and linguistically diverse preschoolers: implications for early and accurate identification. *School Psychology Review*, *45*(1), 109–133. https://doi.org/10.17105/spr45-1.109-132

Westby, C., Culatta, B., Lawrence, B., & Hall-Kenyon, K. (2010). Summarizing expository texts. *Topics in Language Disorders*, *30*(4), 275–287. https://doi.org/10.1097/tld.0b013e3181ff5a88

Westby, C. (1985). Learning to talk—talking to learn: Oral literate language differences. In C. S. Simon (Ed.), *Communication skills and classroom success: therapy methodologies for language-learning disabled students* (pp. 181–218). College Hill Press.

Wiig, E., Semel, E., & Secord, W. A. (2013). *Clinical Evaluation of Language Fundamentals* (5th ed.). San Antonio, TX: Pearson.

Williams, J. P., Hall, K. M., Lauer, K. D., Stafford, K. B., DeSisto, L. A., & deCani, J. S. (2005). Expository text comprehension in the primary grade classroom. *Journal of Educational Psychology*, *97*(4), 538–550. https://doi.org/10.1037/0022-0663.97.4.538

APPENDIX A

Annotated Bibliography

Brown, J. A., Garzarek, J. E., & Donegan, K. L. (2014). Effects of a narrative intervention on story retelling in at-risk young children. *Topics in Early Childhood Special Education*, *34*(3), 154–164. https://doi.org/10.1177/0271121414536447

Objective: Examine the effects of small group narrative intervention for at-risk culturally and linguistically diverse students. Method: This study was a multiple base line single-case design. Participants included nine students from a four- and five-year-old inner city school classroom with very low SES. All students were African American. Students were arranged in groups to promote positive peer modeling through a range of ability, each group containing a target child. All three target children spoke AAE dialect and had been previously identified as at-risk for language disorder. Intervention took place two-three per week for 15 minutes each session and included a self-monitoring piece. Intervention targeted teaching the five basic story grammar elements. Results: All three target children showed increased levels of story grammar inclusion from baseline to the conclusion of intervention, and even higher scores after a two-week maintenance period. Relevance to Current Work: Narrative intervention in this study was provided to at-risk kindergarten students. All targeted students showed significant improvement which held after a brief maintenance period.

Catts, H. W., Fey, M. E., Tomblin, J. B., & Zhang, X. (2002). A longitudinal investigation of reading outcomes in children with language impairments. *Journal of Speech, Language, and Hearing Research*, *45*(6), 1142–1157. https://doi.org/10.1044/1092-4388(2002/093)

Objective: To answer questions from the previous (a) Do kindergarten children with LI have poorer reading achievement in second and fourth grades than do children with typical language development? If so, what proportion of kindergarten children with LI have reading problems in second and fourth grades? And (b) Do reading outcomes vary for children with SLI versus those with NLI? And (c) What variables in children with LI are related to reading outcomes in second and fourth grades? Method: They had data of 328 kids with LI and 276 typical kids, of these 604 total, they were able to use the complete data of 570. In kindergarten they had been administered a battery of assessments that focused on Grammar, Vocabulary, and narratives. In second and fourth grade they were administered a general language normed referenced assessment, two vocabulary assessments, and a narrative task. They were also administered in 2nd and 4th grade with phonological processing and measures for reading comprehension. Results: They found a strong relationship between developmental language impairment and reading abilities. They found that 50-65% of children with LI had reading comprehension problems. Relevance: Those who are at-risk for language or who have language impairment often have reading comprehension difficulties.

Catts, H. W., Fey, M. E., Zhang, X., & Tomblin, J. B. (2001). Estimating the risk of future reading difficulties in kindergarten children. *Language, Speech, and Hearing Services in Schools*, *32*(1), 38–50. https://doi.org/10.1044/0161-1461(2001/004)

Objective: The purpose of this study was to examine which kindergarten measures predicted 2nd grade reading ability. Additionally, the purpose was to provide a statistical procedure for clinicians to use directly in practice. Method: 604 kindergarten students from an epidemiologic study that included 7,218 kindergarteners were recruited for this

study. Of those students, 328 students had language impairment and/or cognitive impairment, and 276 students were typically developing. In kindergarten a battery of tests were administered to the students that included conventional test of language abilities, narrative abilities, phonological awareness, rapid automatized naming, letter identification, and non-verbal cognition. In 2nd grade the same students were given an additional battery of reading comprehension tests. Based upon the results of the 2nd grade battery, the students who scored 1 SD below the mean were identified as having reading comprehension difficulty (183 students). Results: They performed a logistic regression analysis to determine which kindergarten measures were predictive of 2nd grade reading ability. When using Block Design, sentence imitation, letter identification, mother's education, phonological awareness, and narrative comprehension as predictor measures, they found 94% accuracy in predicting future reading comprehension difficulty. Because of concerns with access to the block design subtest, it was removed from the analyses and the following five measures emerged as most predictive: letter identification, sentence imitation, mother's education, phonological awareness (deletion). Using the combined five predictors, the logistic regression yielded 93% accuracy in predicting future reading difficulty. Relevance: They found narrative language comprehension as a predictor for future reading comprehension difficulty in addition to other factors.

Chaney, C. (1998). Preschool language and metalinguistic skills are links to reading success. *Applied Psycholinguistics*, *19*(3), 433–446. https://doi.org/10.1017/s0142716400010250

Objective: The purpose of this study was to explore the relationships between metalinguistic awareness and literacy in children younger than kindergarten age. Method: 43 monolingual English speakers ranging from 33 to 50 months participated in the original project. All of these individuals had typical hearing and typical language development. They all attended quality preschool programs. However, they varied in family income, maternal education, race, and family literacy practices. They were given tests of linguistic proficiency, metalinguistic skills, and print awareness in addition to a home interview measuring involvement in literacy. These students were then left to business as usual until after first grade where they were retested. In the testing battery they were given two tests of phonological awareness and three measures of reading achievement. Results: The data of the two testing sessions was then analyzed to see if the performance on linguistic, metalinguistic, and print tasks given at age 3 were related to reading and metalinguistic skills at age 7, also taking into account extraneous and social variables. The found that there was very low correlation between metalinguistic scores at age 3 and the time the test was given, the gender of the student, and other social variables. Ruling out these variables, they found that there was just as high correlation between overall language development at 3 and reading scores at age 7, as it was to metalinguistic and print awareness scores at age 3. They also found significant correlations between metalinguistic domain and print domain scores at age 3 and phoneme deletion and reading scores at age 7. Additionally, a set of hierarchical multiple regressions was performed to see whether the 3 year old performance of metalinguistic and print awareness would predict their reading ability (using metalinguistic and reading test scores) at age 7. They found that language development at age 3 was highly

predictive of reading achievement at the end of first grade and that overall metalinguistic skills and print awareness made significant contributions to reading achievement. Relevance: Researchers were able predict reading scores for 2nd graders based upon preschool ability. These researchers also emphasized the decoding aspects of reading, with less emphasis placed on the language comprehension aspect of reading.

Clarke, P. J., Snowling, M. J., Truelove, E., & Hulme, C. (2010). Ameliorating children's reading-comprehension difficulties. *Psychological Science*, *21*(8), 1106–1116. https://doi.org/10.1177/0956797610375449

Objective: The objective of this study was to examine the efficacy of three different intervention designs including Text Comprehension (TC), Oral Language (OL), and a combined group including both interventions (COM). All interventions were intended to improve reading comprehension. Method: The population included 8–9-year-old students from 23 schools, then students with lowest listening comprehension scores who still had adequate decoding were selected. 84 students met these criteria. The researchers then measured the students' reading comprehension using 2 normed referenced assessments. Then they also administered two vocabulary subtests, one of which specific highlighted 24 words (16 which would be directly taught). Intervention consisted of three 30-minute sessions a week for 20 weeks. Two of the sessions were in pairs, one was individual. The TC group was taught metacognitive strategies, reciprocal teaching with text, inferencing from text, and written narratives. All of these topics involved working directly with written text. The OL group primarily focused on vocabulary, reciprocal teaching with spoken language, figurative language, and spoken narrative. The combined group was taught a combination of what had been covered in the TC and OL groups. Results: All

groups made gains immediately following intervention on measures of comprehension. At follow up, the data from the OL group showed further gains in reading comprehension than other groups. Relevance: The total amount of time devoted to oral language training is crucial (about double) for true reading improvement. Much of the improvement had to do with the children improving their vocabulary.

Culatta, B., Hall-Kenyon, K. M., & Black, S. (2010). Teaching expository comprehension skills in early childhood classrooms. *Topics in Language Disorders*, *30*(4), 323–338. https://doi.org/10.1097/tld.0b013e3181ff5a65

Objective: The researchers wanted to know the effectiveness of instructional practices involved in teaching expository skills to preschoolers. They also wanted to increase teachers' awareness of how systematic and explicit instruction can be made engaging and relevant for young children. Method: The participants included 71 pre-k students in one preschool. Initially the preschoolers were each administered 2 expository comprehension tasks. The two texts focused on compare/contrast and problem/solution. Both administered in the same session. After each of the texts were read/explained the child was asked to retell what they had learned to a puppet and use a graphic organizer to also relay the information using props. After completing the "pre-test," large group and small group expository language instruction was given to the participants for 16 weeks. Two times a day 15 minute instruction was given to the entire class and then the students also participated in small group instruction. The instruction was based off of a 16-week unit entitled, "People and Animals Living Together," consisting of 8 two-week subunits of instruction. Expository texts and structures were included within the instruction. The activities consisted of relating text to children's prior knowledge and experience,

dramatizing texts, telling personal accounts, teaching key concepts and vocabulary explicitly, presenting expository texts aloud, mapping conceptual relationships, and providing concrete hands-on experiences. The instruction as given by grad students for SLP and Early Childhood teaching students and teachers. At the completion of the intervention period, a comparable "post-test" was given also consisting of compare/contrast and problem/solution texts, including the retells etc. Results: Of the 71 children, 61 made significant gains in their retelling of problem/solution text. The mean pre-test score was 2.50 (SD = 1.42), and the mean post-test score was 6.77 (SD = 3.55). The *t*-test revealed a significant gain between pre- and post-test ($t = 10.20$, $p = .001$) and a large effect size of ($d = 1.58$). Compare and contrast performance: The mean pre-test was 7.0 (SD = 2.5), and the mean post-test was 7.8 (SD = 2.6). There was a significant gain score ($t = 2.60$; $p < .01$), but the effect size (measured as Cohen's *d*) was small ($d = 0.31$). Conclusion: Teaching expository skills is appropriate and they can make gains in information, concepts and structures even as young as preschool. Relevance: Young typically developing preschool students responded well to expository instruction, making significant gains.

Griffin, T. M., Hemphill, L., Camp, L., & Wolf, D. P. (2004). Oral discourse in the preschool years and later literacy skills. *First Language*, *24*(2), 123–147. https://doi.org/10.1177/0142723704042369

Objective: The purpose of this study was to examine whether the level of competence attained in oral discourse during preschool predicts later success at literacy. Method: 32 children were participants in this longitudinal study of examining language development from ages 5-8. These children had similar home and scholastic support for literacy

development and scored in the normal range for morphosyntactic and conversational measures. The participants were all age 5 when the testing began. To assess oral discourse abilities, the researchers used play narration and picture description to elicit extended discourse with little adult support using. In the play narration task, the children were given a set of play animals and a story prompt and then asked to tell the rest of the story. The interviewers were looking for narrative clauses, textual evaluation, performed evaluation, character states, and plot structure elaboration. For the describing a picture task, the child was shown a complex scene and was asked to describe the scene on audio tape so that another child could draw it later. involved verbalizing informative content based on the visual information of the picture provided. The interviewers were looking for and tallied descriptive clauses, descriptive information, deixis, and expository discourse structure. All participants were also given a language assessment. At the age of 8, the same 32 students were given a reading comprehension assessment (Gray Oral Reading Test), and a written narrative composition task. Results: A series of regression analyses were conducted for the written narrative task as well as the reading comprehension scores. The children's ability to construct a highly structured description was associated with later written narrative proficiency while the ability to construct an informative description was associated with later reading comprehension skill. The results of the regression analysis suggested that distinct oral discourse competencies strongly predicted later achievement in writing and reading extended text, the predictors being the composite variable (using principal components analysis (Afifi & Clark, 1990), plot structure and evaluation, and the expository discourse structure. Relevance: The

results suggested that “oral discourse competencies” strongly predicted later achievement in both writing and reading extended text.

Language and Reading Research Consortium, Jiang, H., & Logan, J. (2019). Improving reading comprehension in the primary grades: mediated effects of a language-focused classroom intervention. *Journal of Speech, Language, and Hearing Research*, *62*(8), 2812–2828. https://doi.org/10.1044/2019_jslhr-l-19-0015

Objective: The researchers’ purpose of this study was to examine the effects that a particular whole-classroom intervention targeting language comprehension called “Let’s Know” (developed by LARRC) would have on first to third grade students. Specifically examining the effects of comprehension monitoring, vocabulary, and text comprehension (narrative and expository). Additionally, they wanted to see if these effects would transfer and have an effect on reading comprehension skills. Method: Preschoolers through 3rd grade students enrolled in public schools across 6 states were included in initial intervention and assessments. However, only students from 1st-3rd graders were included in the analysis of the randomized control treatment and were included in the results of this study. Schools and teachers were selected based upon the size, diversity of students, proximity to partnership university sites. Once the schools were selected, teachers were provided education about the study’s goals and objectives and teachers opted in to the study. Once the teachers were gathered, parent permission was obtained for the students who were eligible for the study. Eligibility was based upon if the students were proficient in English given a caregiver report, had no profound sensory or cognitive difficulties or disabilities that would prevent participation in assessments, and if they would be present in the classroom during the Let’s Know! language lessons. Out of those who were

eligible, six students were randomly chosen in each classroom as participants. This resulted in 938 students being included in this study from 160 classrooms. Classrooms were randomly assigned to one of 3 groups: one of two variations of Let's Know! Intervention and one business as usual group. Intervention lasted 25 weeks with 4 units discussing Fiction, Animals, Unit 3: Earth Materials, and Folktales. Both narrative and expository texts were used in instruction. The lessons were semi-scripted and lasted from 25-30 minutes daily across the 25 weeks to the entire classroom. The entire curriculum can be further examined at https:// larrc.ehe.osu.edu/ for no charge. In an effort at fidelity to the study design detailed teacher logs and 7 observation visits from the research team. However, they did not achieve the gold standard of implementation, and there was a high level of variability across teachers in the different classrooms. The measures that were further examined included curriculum-aligned measures, comprehension monitoring-two paragraphs with weird information they have to pick out (listening comprehension), vocabulary--tier-2 words were taught, and teachers were asked to give a definition, text comprehension--listened to passage and then answered 3 comprehension questions, reading comprehension --adaptation of qualitative reading QRI, GMR, T, and both narrative and expository. Read silently and then answered comprehension questions. Relevance: Let's know was a oral teacher led expository and narrative language intervention that was delivered at the classroom level. Oral language or comprehension monitoring scores had a significant affect large effect size 1.24 for first grade and moderate effect sizes for 2nd and 3rd grade (.71 and .55 respectively. 2.5-5.5 effect size. LAARC makes the case using others' work as additional evidence that "language comprehension is intricately related to reading comprehension skills" In all

three grades, the language-focused Let's Know! intervention impacted reading comprehension via the mediation of vocabulary, with sizable effects. These results converge with a small but growing line of research showing that explicit instruction focusing on lower and/or higher language skills can positively im- pact those target skills and have an indirect contribution to reading comprehension as well (e.g., Clarke et al., 2010; Williams et al., 2004, 2009).

Lee, J. (2010). Size matters: Early vocabulary as a predictor of language and literacy competence. *Applied Psycholinguistics*, *32*(1), 69–92. https://doi.org/10.1017/s0142716410000299

Objective: To examine the predictive validity of the characteristics of expressive vocabulary size and lexical composition (early oral language ability) in 24 month old to later literacy and language outcomes in children ages 3-11. Method: 1,071 typically developing two-year-old children participated in this study. These participants had previously been given the MacArthur–Bates Communicative Development Inventories (CDI), and had been found to have no serious medical complications or preexisting disabilities. Additionally, the mothers of the participants were proficient in English, over 18 years of age, and had no substance abuse problems. Based on the results of the CDI, the 1,071 were put into two either the large or small vocabulary group based on total words, total verbs, and proportion of verbs and total words. Children in both groups were then given various assessments. Results: Lee found that the level of expressive language at age 2 did indeed significantly predict language and literacy outcomes including letter identification, phonological awareness, vocabulary, and reading comprehension. "Thus, expressive vocabulary at age 2 is shown to be crucial to subsequent literacy

development." Relevance to Current Work: early expressive language significant predicted language and literacy outcomes.

Roth, F. P., Speece, D. L., & Cooper, D. H. (2002). A longitudinal analysis of the connection between oral language and early reading. *The Journal of Educational Research*, *95*(5), 259–272. https://doi.org/10.1080/00220670209596600

Objective: The objective of this study was to follow a group of kindergarten students longitudinally to clearly indicate the connection between oral language and reading as students' progress in 1st and 2nd grade and also to determine whether different aspects of oral language are important to reading skill at different points in development. Method: The researchers followed a group of 66 typically developing kindergarten students, whose native language was English, but who varied in SES and race. 39 of those students were available for further testing in first and second grade. There were 3 types of measures: background information, oral measures, and reading variables. An extensive battery of assessments was given to the students to obtain the oral measures, looking at structural language, semantic measures, receptive vocabulary, word retrieval, and both expressive and receptive syntax and morphology. Metalinguistic skills were also examined, in addition to narrative discourse, print awareness and decoding, comprehension, and background. The full test battery was given in kindergarten in two 1-hour sessions and a reduced battery was given in first and second grades, with only one 1-hour session. Testing occurred between February and April each year. Results: The researcher used regression analysis to determine which factors and abilities in kindergarten predicted 2nd grade reading ability. She found that in fact that semantic abilities at kindergarten were the most predictive of reading and not phonological

awareness. Relevance: This study indicates that a primary focus of decoding in kindergarten may not be the most predictive factor to determine 2nd grade reading ability, but that early oral language ability is more of a predictor of later reading ability.

Spencer, T. D., Petersen, D. B., & Adams, J. L. (2015). Tier-2 language intervention for diverse preschoolers: an early-stage randomized control group study following an analysis of response to intervention. *American Journal of Speech-Language Pathology*, *24*(4), 619–636. https://doi.org/10.1044/2015_ajslp-14-0101

Objective: The purpose of this study was to examine tier-1 and tier-2 dynamic language intervention for culturally and linguistically diverse preschool students. Method: Participants included students from three Head Start classrooms, at least 10% of the students in these classrooms were receiving special education services through the local school district. The majority of the students were culturally and linguistically diverse preschoolers. A dynamic assessment approach was used to place students in appropriate tiers, twenty-two students being identified as candidates for additional small group/tier-2 language instruction. Eleven of these students were randomly selected to participate in the tier-2 intervention and the remaining at-risk students were used as a control group. Narrative intervention was given biweekly for 9 weeks, each session lasting 15-20 minutes. Results: At the end of treatment, the researchers found that the narrative retell scores of the treatment group were significantly higher than the control group with a large effect size which maintained four weeks post treatment. Relevance: Preschoolers who had received the small group intervention demonstrated significantly greater gains on measures of narrative language ability compared to the children in the control group.

Ukrainetz, T. A. (2019). Sketch and Speak: An expository intervention using note-taking and oral practice for children with language-related learning disabilities. *Language, Speech, and Hearing Services in Schools*, *50*(1), 53–70. https://doi.org/10.1044/2018_lshss-18-0047

Objective: The purpose of the study was to examine the efficacy of the intervention procedure "Sketch and Speak" employing 2 types of note-taking and oral practice to improve expository reporting skills. Research Questions: For fourth- to sixth-grade students with language-related learning disabilities, compared with a no-treatment control condition, whether a brief application of the treatment would improve (a) the quantity and quality of notes taken on a non-taught text, and (b) oral presentations immediately after composing the notes, and (c) reports written from the notes 1 to 3 days later. The participants included 44 fourth to sixth grade students with an IEP. Each student was administered the CELF-5. Two groups were formed by matching students based upon the scores received on the CELF-5, gender, ethnicity, services, and free/reduced lunch. These students were then randomly assigned to the treatment and control groups. Students received six, thirty-minute intervention sessions individually or in pairs from an SLP. Treatment involved reducing statements from grade- level science articles into concise ideas, recording the ideas as pictographic and conventional notes, and expanding from the notes into full oral sentences that are then combined into oral reports. Participants were pre-tested and post-tested on taking notes from grade- level history articles and using the notes to give oral reports. Post-testing also included written reports 1 to 3 days following the oral reports. Results/Conclusion: Conducted a Repeated-measures analysis of variance (RANOVA). The treatment group showed significantly greater improvement

than the control group on multiple quality features of the notes and oral reports. Quantity, holistic oral quality, and delayed written reports were not significantly better. The mean number of notes showed a greater gain from pre-test to post-test for treatment than alternate treatment. Relevance: Ukrainetz found note taking to be a very effective strategy when teaching students expository language comprehension.

Weddle, S. A., Spencer, T. D., Kajian, M., & Petersen, D. B. (2016). An examination of a multitiered system of language support for culturally and linguistically diverse preschoolers: implications for early and accurate identification. *School Psychology Review*, *45*(1), 109–133. https://doi.org/10.17105/spr45-1.109-132

Objective: The objective of the study was to examine the effect of multi-tiered narrative language intervention with culturally diverse preschool students, as well as the impact on special education referrals. This study was a multiple baseline design. Method: Participants came from 3 Headstart preschool classrooms. Students in these 3 classrooms (n=41) were given tier-1 narrative language intervention using story champs. After 3 intervention sessions, the students were given a language screener. Of the 41 students, 22 students demonstrated the need for additional language instruction based on their pre-test scores. Of the 22 students, 7 were randomly chosen to receive tier-2 instruction outside of the general classroom instruction. All 7 of these students were bilingual Spanish/English speakers. The students were pulled out for approximately 15-20 minutes twice a week in a small group format. In these sessions they were taught to include the basic parts that make up a story structure and then some also began to receive instruction for including complex language in their story retells. During each session they listened to a story, retold that story, and then were prompted to tell their own story. They were audio

recorded during the sessions and then received a score on their retell and personal story generation. The students received a total of 16 intervention sessions, and then one follow-up maintenance session four weeks when they were given the post-test. One student did not make any gains after participating in multiple tier-2 intervention sessions and was given individual tier-3 instruction twice a week. Results: Results indicated that six out of the seven students made gains in their oral narrative ability after the implementation of the tier-2 narrative intervention. Moderate to high levels of maintenance were observed 4 weeks after the intervention had concluded. Relevance: Tier-2 (small group) oral language intervention can be very effective in helping young students make gains in their oral narrative abilities and also help us properly identify the difference between diversity and disorder for our CLD students.

Westby, C., Culatta, B., Lawrence, B., & Hall-Kenyon, K. (2010). Summarizing expository texts. *Topics in Language Disorders*, *30*(4), 275–287. https://doi.org/10.1097/tld.0b013e3181ff5a88

Objective: The researchers wanted to explore what microstructure (e.g., vocabulary and syntactic patterns) and macrostructure (gist and overall organization) differences do fourth and fifth-grade students exhibit in their written expository text summaries? What effect does teaching of text structure have on the microstructures and macrostructures exhibited by students in their written summaries of expository texts. Method: Participants included 494 fourth and fifth graders from two Utah school districts. All teachers were trained for two days on expository teaching procedures and content (including relevant topics, highlighting text structure, representing the organization of texts, and identifying relevant connections among ideas. The researchers administered the MacGinite Reading

Test (along with other assessments) to make sure that students were not significantly different at start. Classrooms were then assigned to the treatment or the control group. As part of the initial test battery, students were asked to read and then summarize 3 expository passages. Students were also asked to create a graphic organizer in addition to their summary. Scoring of the passages was done by the teachers of the classrooms using a rubric created by the authors with a 0-4 scale with descriptions. Students were then given intervention by the teachers after teachers were trained. Results/Conclusion: Data were analyzed using a two-way analysis of variance with Bonferroni correction. Fifth graders had significantly higher scores on their summaries than fourth graders, and treatment groups at both grade levels had significantly higher scores than control group students. Effect sizes ranged from small to large. Differences were slightly greater between treatment and control groups than between fourth- and fifth-grade groups, indicating that treatment may have promoted greater growth than age-related development. Relevance: Expository instruction was administered at the tier-1/large group level. Typically developing students who received the expository instruction had significantly higher scores than the control group who did not receive instruction. An alternate treatment was not used in this study.

Williams, J. P., Hall, K. M., Lauer, K. D., Stafford, K. B., DeSisto, L. A., & deCani, J. S. (2005). Expository text comprehension in the primary grade classroom. *Journal of Educational Psychology*, *97*(4), 538–550. https://doi.org/10.1037/0022-0663.97.4.538

Objective: Researchers wanted to determine whether instruction on text structure can help second-grade students to improve their comprehension of compare–contrast expository text. Also examined whether instruction focused on text structure detracts

from the amount of content knowledge that would have been acquired had the text structure instruction not been present. Additionally, they wanted to know whether all children in an inclusion classroom, especially the ones who are most likely at-risk for academic failure, are responsive to the instruction. Method: Participants included 128 second graders from three different elementary schools. The researchers randomly assigned the different classrooms into one of 3 groups: text structure, content, or a no treatment control group. All students were individually assessed using a test battery that included the Woodcock Reading Mastery Test, 3 comprehension measures that were written by the authors, and an expository summarization measure. Based upon the results of the testing, none of the groups were found to be significantly different at pre-test. Intervention for the students occurred biweekly and involved 15 lessons that took about 45 minutes. The content of the teaching included clue words, book discussion and reading, vocabulary development, reading and analyzing target paragraphs, making a graphic organizer, compare/contrast questions, summarization and a lesson review. The classroom teachers (who were previously trained in 30 minute sessions) provided the intervention to the entire classroom. Classroom observations did occur to maintain treatment fidelity. At completion of the intervention, a similar post-test was administered to the students. The authors scored the pre and post-tests, getting a >93% inter-rater reliability. Results: Almost across the board, the Text structure group performed much higher than the Content, and No Instruction Groups with very large Effect Sizes. Relevance: The researchers found that typically developing students who were given instruction targeting the text structure of expository language rather than specific

expository content teaching resulted in students receiving higher scores. Results were presented by classroom rather than the individual.

APPENDIX B

CUBED Narrative Language Measure

NLM LISTENING Third Grade Progress Monitoring: STORY 3

Language Dynamics Group

Child/ID _____ Audio File _____ Examiner _____ Date _____

LISTENING RETELL

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 inflection.

One evening, **Sarah was getting ready to go up on the beautiful stage in a big, elegant auditorium** so that she could perform her music. After Sarah looked for her trumpet that was special to her, **she couldn't find it** because **she forgot it at home**. She felt **worried**. So then Sarah **decided to run home**. She **ran for the door** that was nearby, but she realized she **didn't have enough time to go home**. Sarah was **upset**. She **decided to search for her kind teacher**, a man who loved music, to see if he could **possibly** help. So then she **frantically looked for him**. She **rapidly looked everywhere**. Sarah **finally** found him. She said, **"I forgot my trumpet. What should I do?"** Sarah's **teacher said, "You can borrow a trumpet** since we have an **extra** one." When they went to the room that was around the corner, Sarah's **teacher found the additional, shiny trumpet**. Although she didn't have her **favorite** trumpet, Sarah felt **relieved** because she had an instrument. Then she **performed her songs beautifully**.

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 3x), **"It's OK. Just do your best."** and/or **"I can't help, but you can just tell the parts you remember."**

LISTENING RETELL

STORY GRAMMAR (SG)	2 POINTS		1 POINT		0
Character	Sarah / any name	2	a girl / the girl	1	0
Setting	getting ready in an auditorium	2	getting ready / school	1	0
Problem	could not find trumpet	2 [P]	couldn't find it	1	0
Feeling	upset / mad / worried	2	didn't like it / cried	1	0
Plan	decided to run home	2 [PL]	decided / thought	1	0
Attempt	ran for the door	2 [A]	tried to get it	1	0
Consequence / Same Problem	she did not have enough time / still didn't have trumpet	2 [CP]	couldn't get it / didn't have it	1	0
Emotion-2	sad / mad / upset	2	didn't like it / cried	1	0
Plan-2	planned to search for teacher	2 [PL2]	decided / planned	1	0
Attempt-2	asked teacher what to do	2 [A2]	asked	1	0
Consequence	teacher said "you can borrow a trumpet" / got another trumpet	2 [C]	she got help / got one	1	0
Ending	played her songs nicely	2 [E]	did it	1	0
End Feeling	happy / relieved	2	liked it / smiled	1	0
			SG SUBTOTAL		/26

LANGUAGE COMPLEXITY (LC) Word	#Times Used		
because	1	2	3
so that	1	2	3
since	1	2	3
when	1	2	3
after	1	2	3
although	1	2	3
LC SUBTOTAL			/18

OTHER TARGETS Target	#Times Used					
Modifiers ✓						
✓						

EPISODE 1 (E1) (from green 2 point SG)	
P+PL or PL+CP	2
P+A or P+CP or A+CP	2
P+A+CP or P+PL+CP	4
E1 SUBTOTAL	/4

EPISODE 2 (E2) (from blue 2 point SG)	
CP+PL2 or PL2+C	2
CP+A2 or CP+C or A2+C	2
CP+C+E or CP+A2+E	3
CP+A2+C or CP+PL2+C	4
CP+A2+C+E or CP+PL2+C+E	5
E2 SUBTOTAL	/5

LISTENING RETELL SCORE (SG+LC+E) /53

COMPREHENSION QUESTIONS

STORY QUESTIONS (SQ) 1x			
Who was this story about?	2	1	0
Where was Sarah in the beginning of the story?	2	1	0
Why was Sarah worried?	2	1	0
How did she first try to fix her problem?	2	1	0
Why did she talk to her teacher?	2	1	0
How did the story end? /	2	1	0
What will Sarah do the next time she has to play her trumpet on stage?	2	1	0
STORY QUESTIONS TOTAL (SQ)			/14

VOCABULARY QUESTIONS (VQ) *if QA answer is similar to the grey text, say, "What else does _____ mean?" *if QA answer is incorrect, or if no response, ask QB	3 = clear 2 = unclear 1 = correct 0 = incorrect	
QA: Sarah was in an elegant auditorium. It was a special night. What does elegant mean?*	3	2
QB: Does elegant mean *old-fashioned* or *fancy*?	1	0
QA: She frantically looked for her teacher. She looked all over. What does frantically mean?*	3	2
QB: Does frantically mean *shyly* or *in a panicked way*?	1	0
QA: The teacher found an additional trumpet. She got to play. What does additional mean?*	3	2
QB: Does additional mean *extra* or *very loud*?	1	0
VOCABULARY TOTAL (VQ)		/9

PERSONAL GENERATION

(Turn on audio recorder). Examiner says, **"In this story, Sarah forgot her trumpet at home. Tell me a story about a time when you forgot something."** If the student doesn't tell a story, encourage the student (up to 3x) to produce a thematically related story. Score the story using the *NLM Flow Chart (see Examiner's Manual for details)*.

APPENDIX C

Small Group Narrative Intervention Fidelity Checklist

SMALL GROUP
MASTER LESSON PLAN
26

TARGET
Enhanced Story Structure

Consider ADD ON lessons 58-63

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)

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

2 – Team Retell
- ☐ Leave illustrations on table
- ☐ Pick up icons and give each student 1-2 icons; keep one for yourself if necessary
- ☐ Starting with the person who has the Character icon and moving through the parts in order, each person retells the part of the story
- ☐ Students place icons on or near illustrations
- ☐ Summarize the story quickly and ensure that all parts are included

3 – Individual Retell 1
- ☐ Leave illustrations and icons on table
- ☐ Select one student to retell entire story
- ☐ Help the student retell all parts of the story
- ☐ Everyone, but the storyteller, plays a Story Game
- ☐ Summarize the story quickly and ensure that all parts are included

4 – Individual Retell 2
- ☐ Remove illustrations and leave icons on table
- ☐ Select one student to retell entire story
- ☐ Help the student retell all parts of the story
- ☐ Everyone, but the storyteller, plays a Story Game
- ☐ Summarize the story quickly and ensure that all parts are included

5 – Individual Personal Story 1
- ☐ Leave icons on table
- ☐ Select one student to tell a personal story
- ☐ Say, "Has something like that every happened to you?"
- ☐ Help the student generate all parts of the student's personal story
- ☐ Everyone, but the storyteller, plays a Story Game
- ☐ Summarize the student's story

6 – Individual Personal Story 2
(skip if fewer than 4 students)
- ☐ Remove icons from table
- ☐ Select one student to tell a personal story
- ☐ Say, "Has something like that every happened to you?"
- ☐ Help the student generate all parts of the student's personal story
- ☐ Everyone, but the storyteller, plays a Story Game
- ☐ Summarize the student's story

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 D

Post-Test Expository Language Retell

Kindergarten

ICE

INFORMATION COMPREHENSION AND EXPRESSION

Language Dynamics GROUP

Child: _____ ID#: _____ Examiner: _____ Date: _____

Examiner says, **"I'm going to tell you some information. When I'm done you are going to tell me the same information. You can use this paper to write or draw some things to help you remember the facts** *(give child notetaking sheet and pencil)*. **You can write your notes or draw while I am telling you the facts. Are you ready?"** *(examiner reads SLOWLY)* **"Tigers live in different places** *(pause-count to five)*. **Some tigers live in the jungle** *(pause-count to five)*. **Some tigers live in grasslands** *(pause-count to five)*." **"Did you write or draw some notes while I was talking? Take a few seconds to finish your notes** *(pause-count to twenty, neutral prompts "just try to remember what I told you." Or "Just do your best and draw or write what you remember")*. **"Now you tell me that information about tigers."**

Examiner says, **"Now I'm going to tell you more information about a different animal. Please listen carefully and take notes. I'll tell you the information two times** *(give child notetaking sheet and pencil)*. **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** whales 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?"**

INFORMATION RETELL

TEXT STRUCTURE (TS)	2 POINTS		1 POINT		0
Main Idea 1	sea pig is unusual	2	sea pig / ocean pig	1	0
Detail 1	is a sea cucumber	2	like a cucumber	1	0
Detail 2	lives in ocean	2	swims in water	1	0
Detail 3	finds food by smell	2	smells things	1	0
Detail 4	doesn't have eyes / can't see / is blind	2	gets lost	1	0
Detail 5	eats rotten whales / eats on bottom of ocean	2	likes yucky food	1	0
Detail 6	6 inches long / can fit in hand	2	little	1	0
					TS SUBTOTAL

LANGUAGE COMPLEXITY (LC) (1 pt each use)			
Modifiers	1	2	3
because	1	2	3
that	1	2	3
unusual	1		
dwells	1		
rotten	1		
			LC SUBTOTAL

INFORMATION RETELL SCORE (TS+LC)

COMPREHENSION

TEXT QUESTIONS (TQ)	2 POINTS		1 POINT		
Where do sea pigs live?	in the ocean	2	water	1	0
How big are sea pigs?	6 inches / a hand	2	small	1	0
Why do sea pigs find their food by smell?	blind / no eyes / can't see	2	hungry / need to	1	0
					SQ SUBTOTAL

VOCABULARY QUESTIONS (VQ) (4 or 2 Pts: correct synonym/clear definition) (3 or 1 Pts: unclear definition/example without definition)			
QA: What does unusual mean? (If incorrect ask QB)	4	3	
QB: Sea pigs are unusual. They are not like lots of other animals. What does unusual mean?	2	1	0
QA: What does dwells mean? (If incorrect ask QB)	4	3	
QB: Sea pigs dwell in the ocean. You can find them in the deep dark ocean. What does dwell mean?	2	1	0
QA: What does rotten mean? (If incorrect ask QB)	4	3	
QB: They eat rotten whales. The whales are dead on the bottom of the ocean. What does rotten mean?	2	1	0
			VQ SUBTOTAL

COMPREHENSION SCORE (TQ+VQ)

© 2014 Language Dynamics Group, LLC.

APPENDIX E

Sample Expository Graphic Organizer

INFORMATION RETELL: Block 1

All organisms live in specialized environments called habitats.

Habitats are perfect homes for plants and animals because everything they need to live and grow is there.

The plants that naturally grow in a particular area are called flora.

Animals found in an area are called fauna.

When the environment has the right conditions for specific flora and fauna, they will thrive.

© 2017 Language Dynamics Group, LLC.

APPENDIX F

Institutional Review Board Approval

INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS

Memorandum

To: Professor Douglas Petersen
Department: COMD
College: EDUC
From: Sandee Aina, MPA, IRB Administrator
Bob Ridge, PhD, IRB Chair
Date: March 23, 2018
IRB#: X17485
Title: *"The Predictive Validity of a Kindergarten Dynamic Assessment of Language'*

Brigham Young University's IRB has approved the research study referenced in the subject heading as expedited level, categories 6-7. The approval period is from **March 23, 2018 to March 22, 2019**. Please reference your assigned IRB identification number in any correspondence with the IRB. Continued approval is conditional upon your compliance with the following requirements:

1. CONTINGENCY: school district approvals
2. A copy of the informed consent statement is attached. No other consent statement should be used. Each research subject must be provided with a copy or a way to access the consent statement.
3. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.
4. All recruiting tools must be submitted and approved by the IRB prior to use.
5. In addition, serious adverse events must be reported to the IRB immediately, with a written report by the PI within 24 hours of the PI's becoming aware of the event. Serious adverse events are (1) death of a research participant; or (2) serious injury to a research participant.
6. All other non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the review and approval of the IRB.
7. A few months before the expiration date, you will receive a continuing review form. There will be two reminders. Please complete the form in a timely manner to ensure that there is no lapse in the study approval.

IRB Secretary
A 285 ASB
Brigham Young University
(801)422-3606