Effects of a Large Group Combined Narrative and Expository Language Intervention on Oral Language in Third Graders

Kylie Lynn Lee
Brigham Young University

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Effects of a Large Group Combined Narrative and Expository Language Intervention
on Oral Language in Third Graders

Kylie Lynn Lee

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
Kendra Hall-Kenyon
Christopher Dromey

Department of Communication Disorders
Brigham Young University

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ABSTRACT

Effects of a Large Group Combined Narrative and Expository Language Intervention on Oral Language in Third Graders

Kylie Lynn Lee
Department of Communication Disorders, BYU
Master of Science

The purpose of this study was to examine the effects of a combined narrative and expository language intervention on third graders’ oral language. The participants included 96 third-grade students from two schools in the Mountain West region of the United States. In a quasi-experimental design, all third-grade students in one school (n = 46) were assigned to a treatment condition and all third-grade students in another school in the same school district (n = 50) were assigned to a control condition. Both treatment and control groups received large group oral narrative language intervention led by classroom teachers. The treatment group received additional large group expository language intervention led by the investigators. At posttest, students’ narrative retells were analyzed for story grammar and language complexity. Primary and generalized expository outcomes were also analyzed for text structure and language complexity at posttest. Performances of the treatment and control groups were compared using ANCOVA across all measures. The results indicated that the control group and the treatment group did not have statistically significantly different narrative outcomes. However, the treatment group did make statistically significant improvements in expository text structure and some features of expository language complexity across both the primary and generalized expository measures when compared to the control group. This early efficacy study demonstrated the effects of a combined narrative and expository language intervention on expository language of third-grade students over and above narrative language intervention alone. It is possible that a dual focus on narrative and expository oral language instruction will not only impact students’ oral language, but also reading comprehension and writing. Future research with a stronger experimental design should investigate the effect of narrative and expository oral language instruction on such distal outcomes.

Keywords: oral language, expository, large group interventions, third grade, note taking
ACKNOWLEDGMENTS

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DESCRIPTION OF THESIS STRUCTURE AND CONTENT

To adhere to traditional thesis requirements and journal publication formats, this thesis, *Effects of a Large Group Combined Narrative and Expository Language Intervention on Oral Language in Third Graders*, 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 includes the primary expository outcome measure. Appendix C provides an example of the CUBED Narrative Language Measures. The generalized expository outcome measure is included in Appendix D. Appendix E contains a sample of the expository graphic organizer used in the intervention. Appendix F includes the expository retell peer monitoring tool. Finally, Appendix G contains the Institutional Review Board approval form.
Introduction

The National Assessment of Educational Progress (NAEP) reports that the majority of U.S. students do not meet national reading expectations (National Center for Education Statistics, 2017). In 2017, 63% of fourth-grade students and 64% of eighth-grade students could not read at grade level, and approximately 80% of culturally and linguistically diverse (CLD) students scored below grade level reading expectations. Similarly, NAEP has documented poor performance in reading for almost 30 years (National Center for Education Statistics, 1992) with little to no growth occurring each year.

This lack of grade-level reading proficiency and disproportionately poor performance from the CLD population is primarily due to language-related factors. According to Gough and Tunmer’s (1986) simple view of reading, reading is a process that entails two distinct constructs: decoding and language comprehension. Decoding is the ability to associate sounds with printed letters in order to identify words; this skill is made manifest in a student’s ability to read words and sentences aloud. The construct of language comprehension consists of a student’s ability to understand what they read and is founded in their overall language development or ability. In this paper, the terms language, language ability and reading comprehension all refer to the construct of language comprehension. The term oral language is used to describe language comprehension which has been treated or assessed through verbal, rather than written, means.

Research focused on CLD children, children with learning disabilities, and the general student population indicated that decoding difficulty does not account for the current reading crisis in the United States. Mancilla-Martinez and Lesaux (2011) found that school-age Spanish-English bilingual children demonstrated rates of growth in decoding that met U.S. averages. However, these children began school with lower levels of oral English language proficiency
than monolingual English-speaking children and, despite having faster rates of growth in language ability than those documented by the national average, never achieved grade-level proficiency in reading comprehension. In a similar study, Nakamoto, Lindsey, and Manis (2007) found that school-age Spanish-speaking English language learners (ELLs) learned to decode just as well as their native English-speaking peers by performing similarly on assessments of decoding from first to sixth grade. However, the ELLs tended to fall behind on assessments of reading comprehension in third grade and did not catch up to their peers in later grades. Additionally, Craig, Connor, and Washington (2003) found that early language ability was critical to later reading achievement through third grade in speakers of African American English.

The CLD students in these studies who performed poorly in measures of reading comprehension were shown to have insufficient language ability rather than a deficiency in decoding. Further research suggests that this trend is also observed in children with learning disabilities. For example, Clarke, Snowling, Truelove, and Hulme (2010) conducted a randomized controlled trial involving 160 fourth-grade students with developmental language disorder (DLD) from 20 schools in England. Participants were randomly assigned to one of four treatment conditions: oral language intervention, reading comprehension strategies intervention, a combined oral language and reading comprehension strategies intervention, and regular classroom instruction (i.e., control condition). Intervention was supplemental to regular classroom instruction and was administered for 30 minutes three times a week over 20 weeks. Immediately following treatment, Clarke et al. found that children in the control condition declined in measures of reading performance while all children receiving intervention made significant growth in reading comprehension. However, children receiving purely oral language
intervention made the greatest gains immediately following treatment and maintained significantly greater performance in reading comprehension 11 months post treatment. In a supporting longitudinal study, Larney (2002) determined early language delay to be a strong risk factor for developing subsequent literacy difficulties. Additionally, within a large group of diverse children with mild intellectual disability, Barton-Hulsey, Sevcik, and Romsiki (2017) found that narrative story grammar accounted for variability in reading comprehension.

Additional evidence demonstrates that early language ability is predictive of later reading comprehension in typically developing children. In 1998, Chaney found that overall language development at age three predicted reading comprehension at age seven. Similarly, in a more recent study, Lee (2010) found that vocabulary size at age two more significantly predicted language ability and literacy achievement up to age ten than did lexical composition at age two. Furthermore, Catts, Nielsen, Bridges, and Liu (2016) found that measures of kindergarten language ability predicted third-grade reading comprehension difficulties over and above early measures of decoding. Further research supports the finding that strong language comprehension is essential for students to thrive in school (Bishop & Edmondson, 1987; Fazio, Naremore, & Connell, 1996; Griffin, Hemphill, Camp, & Wolf, 2004; Mehta, Foorman, Branum-Martin, & Taylor, 2005).

Given the strong link between oral language abilities in young and school-age children and later success in reading comprehension, it seems clear that a lack of language ability is the primary reason why U.S. students struggle with reading comprehension on high stakes assessments such as the NAEP. To combat this, relatively new state standards have introduced elevated reading expectations with a greater focus on oral and written narrative and expository language (e.g., Common Core State Standards [CCSS]; National Governors Association Center
for Best Practices and Council of Chief State School Officers, 2010). This increased focus on the construct of language comprehension in standards such as the CCSS is significant for three reasons. First, standards for language comprehension have been pushed down into the early grades, being emphasized sooner and more intensively than before. For example, the CCSS include standards for working with both narrative and expository texts in kindergarten, the earliest grade addressed in the initiative. The CCSS state that students will, when working with expository texts, “with prompting and support, identify the main topic and retell key details of a text” and “with prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text” (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010, CCSS.ELA-LITERACY.RI.K2 & K3). Students are also expected to, “with prompting and support, retell familiar stories, including key details” and “with prompting and support, compare and contrast the adventures and experiences of characters in familiar stories” when working with narrative texts (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010, CCSS.ELA-LITERACY.RL.K2 & K9).

Second, there is a greater focus on expository language in every grade, creating a balanced focus between narrative and expository language from kindergarten to fifth grade. Whereas language arts classes commonly provide students with extensive exposure to narrative language, additional experiences with expository language are made possible with the integration of informational expository texts in other subjects such as social studies, science, and history (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010).
Third, the standards’ balanced focus on narrative and expository language favors expository in higher grades until it dominates language instruction time in the classroom. Although language instruction is split evenly between narrative and expository texts in fourth grade, eighth grade students are expected to spend 45% of language instruction time working with narrative texts and 55% of the time with expository texts. This imbalance increases dramatically by the twelfth grade where expository language commands 70% of classroom language instruction (National Center for Education Statistics, 2009).

It is clear that most of the students who are struggling to meet updated standards for grade-level reading comprehension are typically developing and do not have a language or reading disability (Beitchman, Nair, Clegg, Ferguson, & Patel, 1986; Law, Boyle, Harris, Harkness, & Nye, 2000; Tomblin et al., 1997). However, traditionally, only students with disabilities qualify for individualized reading instruction through special education. Therefore, under the current general and special education process, typically developing students do not receive individualized support for reading difficulty. It is clear that the traditional dichotomy of placing children in either general education or special education according to disability status does not meet the majority of students’ language needs in a way that promotes adequate growth in reading comprehension. In 2004, Individuals with Disabilities Education Act (IDEA) outlined the need to provide various levels of instruction and intervention in a timely manner to all children, regardless of language ability and disability status, in order to prevent academic failure and foster greater academic achievement. This approach may be conceptualized as a multi-tiered system of support (MTSS) which provides three levels of support: Tier 1, which consists of general instruction in the classroom, also known as large group intervention; Tier 2, or intensified intervention in small groups; and Tier 3, which is further intensified one-on-one
intervention (i.e., special education). In this model, a typically developing child in a general education classroom who struggles academically may transition to Tier 2 intervention in order to receive additional academic support with a small number of peers. This intervention is provided by an educator other than the classroom teacher. If the student’s performance does not improve sufficiently with this level of increased support, the student may move into Tier 3. These tiers are fluid and a child may transition through them according to the level of support they need to reach grade-level academic expectations. Additionally, whereas the traditional dichotomy causes a child to wait to receive additional academic services until the cause of poor academic performance is determined, transition between tiers in the MTSS model occurs as soon as a need for additional support is identified.

**Multi-Tiered Systems of Support for Narrative Language**

MTSS has largely been implemented in U.S. schools for early reading intervention with a focus on decoding, but rarely focuses on language comprehension. Because students are struggling with academic language, using MTSS to build students’ language comprehension is critical to their success. In order to provide preventative and academic support for all children, regardless of language ability, recent multi-tiered approaches to language intervention have emerged.

**Fully integrated multi-tiered systems of support for narrative language.** Weddle, Spencer, Kajian, and Petersen (2016) implemented three tiers of a narrative-based language intervention for preschool children. The researchers conducted intervention at Tier 1 whole classroom instruction with a group of 41 students over a period of three days and subsequently found that 22 of the students needed additional academic support in Tier 2 intervention based on low language comprehension scores. Seven of these students were randomly assigned to receive
Tier 2 intervention. Following Tier 2 intervention, the researchers found that one student required further support in Tier 3 intervention due to low language comprehension scores. The MTSS model used in this study allowed for all of the students to receive the amount of support needed to achieve grade-level expectations in language comprehension regardless of disability status. In a follow-up study, Spencer, Weddle, Petersen, and Adams (2018) tested this full, integrated MTSS for narrative language in three Head Start classrooms where teachers and teaching assistants were responsible for administering all aspects of the intervention. The researchers found that teachers and teaching assistants were able to effectively and reliably implement the model in their natural classroom environments and that the intervention effectively helped the preschool children to improve in narrative retells and narrative language comprehension.

**Tier 3 narrative language intervention.** Petersen, Thompson, Guiberson, and Spencer (2016) tested the efficacy of a Tier 3 intervention on English-Spanish bilingual first, second, and third graders with and without language disorder. The participants were randomly assigned to a treatment or control condition. The results of the study demonstrated that all children who received intervention, including children with and without language disorder, made significant gains in complex syntax and narrative grammar in English relative to the control group. Furthermore, all children in the treatment condition generalized their knowledge to Spanish; however, children with language disorder generalized less knowledge than their typically developing bilingual peers. This narrative-based Tier 3 intervention was also administered to three young males with high-functioning autism spectrum disorder (Petersen et al., 2014). The three participants showed immediate gains in targeted elements of narrative grammar and
linguistic complexity following intervention and maintained progress in narrative grammar and some progress in linguistic complexity twelve weeks following treatment.

**Tier 2 narrative language intervention.** In a randomized controlled trial, Spencer, Petersen, and Adams (2015) investigated the efficacy of small group narrative intervention on the narrative retell and personal narrative generation skills of CLD preschoolers who had been identified for more intensive intervention. They found that children who had received the small group intervention demonstrated significantly greater gains on proximal and distal measures of narrative language ability than the children in the control group.

**Tier 1 narrative language intervention.** Spencer, Petersen, Slocum, and Allen (2015) investigated the extent to which a Tier 1 oral narrative language intervention improved narrative retells, personal narrative generation, and the comprehension of factual and inferential story questions. The purpose of the study was also to identify children who needed more intensive narrative language support in Tiers 2 and 3, and whether different language learners (DLLs) responded differently to the intervention than did native English-speaking children. Participants included a diverse sample of preschool children in a Head Start program. Four individual classrooms in a single Head Start facility were selected for the study; these classrooms were matched for the number of bilingual children and for the regular classroom teachers’ years of teaching experience. The pairs of classrooms were randomly assigned to treatment and control conditions. Intervention consisted of large group narrative language intervention for approximately 15 to 20 minutes four times a week for three weeks. In the control condition, the regular Head Start teachers continued typical classroom language and literacy activities such as reading a storybook and answering comprehension and inferential questions as a class. The results of this study indicate that the children in the treatment group made significantly greater
improvements in narrative retell and language comprehension than their peers in the control group. However, these gains did not generalize to personal narrative generation. The results of the study also suggest that analysis of the children’s responses to the intervention was an effective strategy for identifying children in need of greater support in Tier 2 and Tier 3 intervention, regardless of being a DLL or native English speaker. In a similar study, Gillam, Olszewski, Fargo, and Gillam (2014) examined the early efficacy of a large group narrative language and vocabulary instruction on narrative language skills and vocabulary acquisition in first-grade students at high and low risk for language disorder. The investigators identified two first-grade classrooms in a Title 1 elementary school with a total of 43 children for participation in the study. The classrooms were assigned to a treatment or comparison condition and the children in each classroom were divided into high- and low-risk groups based on their scores on a norm-referenced standardized measure of expressive and receptive language. The investigators then assessed the children’s baseline narrative language ability and vocabulary knowledge. The children in the treatment classroom received narrative and vocabulary intervention from a speech-language pathologist for 30 minutes three times a week across six weeks. Results from this study demonstrated that the children in the treatment group made clinically significant progress in measures of narrative language ability and vocabulary while the children in the comparison group did not. In fact, the investigators’ data indicated that the children in the treatment group experienced three times more improvement in narrative language ability than the children in the comparison group. Furthermore, within the treatment group, the children considered to be high risk by the investigators made greater progress in narrative language than the low-risk children, causing them to catch up to the low-risk children. These findings strongly
suggest that all children, regardless of risk for language disorder, benefit from large group narrative language instruction.

**Expository Language Intervention**

Although the extant research on multi-tiered narrative-based language intervention strongly suggests that narrative language ability can be significantly and meaningfully improved, there is less empirical evidence to support a causal relationship between narrative language intervention and expository language outcomes. Preliminary research does suggest that there are some carryover effects of narrative language intervention on expository language ability, yet the effect sizes have been only small to moderate (Brough, 2019; Douglas, 2019; Evans, 2013). However, there is evidence that explicit expository language intervention can have a significant impact on expository language outcomes, including text structure and language complexity. Text structure refers to the way information is organized within a passage; language complexity refers to those language features that make language more complex or literate in nature (Greenhalgh & Strong, 2001; Nippold, 1993) such as subordinating conjunctions, modifiers, and less frequent and specialized vocabulary (i.e., Tier 2 and Tier 3 vocabulary; Beck, McKeown, & Kucan, 2002).

For example, Culatta, Hall-Kenyon, and Black (2010) examined the effects of a large and small group narrative and expository language intervention for preschoolers. The intervention took place over 16 weeks and was delivered in different contexts and activities throughout the school day. These activities included relating previous knowledge relevant to the topic at the beginning of class, reading expository passages out loud in a large group setting, acting out texts, telling personal narratives related to the topic, explicitly instructing students in vocabulary terms, mapping out conceptual relationships between ideas in the text using a graphic organizer, and
other tactile experiences related to the topic of the expository texts. The researchers found that all 72 participants increased in measures of comparing and contrasting with small effect sizes and significantly increased in problem-solving skills with large effect sizes. They also reported that children with diminished language ability at the start of the intervention made significantly greater gains on the comparing and contrasting measure than their peers. Students did not make gains on language complexity features such as conjunctions that were explicitly taught (e.g., alike; different).

Additionally, Westby, Culatta, Lawrence, and Hall-Kenyon (2010) explored how instruction of expository text structure affected the language complexity and text structure elements in fourth and fifth-grade students’ written summaries of expository texts. A total of 494 fourth and fifth graders participated in the study. Following the large group intervention, Westby et al. found that the fifth graders consistently scored higher on measures of text structure than the fourth graders and that children in the treatment groups had significantly higher scores than the children in the control groups regardless of grade. Furthermore, these differences between the treatment and control groups were larger than those between the fifth and fourth graders, suggesting that this change was more likely due to the treatment than to natural growth due to development. In fact, fourth-grade students in the treatment group performed significantly higher than the fifth-grade students in the control group.

In a related study, Williams et al. (2005) found that second-grade students who participated in large group expository language intervention targeting text structure and vocabulary improved significantly more than their peers who received traditional treatment or no treatment in measures of expository language ability, including vocabulary recall, identification
of “clue” words (i.e., alike, both, however, but, and) within a text, and generation of oral summaries with the support of graphic organizers.

Hall, Sabey, and McClellan (2005) strengthened these findings with an additional study examining the effectiveness of text structure intervention on second graders’ expository language comprehension. 72 students from six classrooms participated in the study. Each classroom was randomly assigned to one of three conditions: text structure intervention, content intervention (i.e., background knowledge and vocabulary instruction), and a control group with no intervention. Following six weeks of intervention, Hall et al. found that students participating in the text structure treatment group showed greater improvements in the use of comprehension strategies, comprehension of compare/contrast concepts, and production of well-structured summaries of expository texts than the students in the content and control groups.

Recently, a Tier 3 intervention targeting oral expository language ability reported positive effects (Ukrainetz, 2018). 44 fourth to sixth-grade students with language disorder participated in this study. Students who participated in treatment made significantly greater gains in components of oral expository retell than their peers in a control group who did not receive treatment. Specifically, the students who participated in treatment produced shorter and more concise oral retells of expository texts with a greater number of complete sentences, opening and closing vocabulary, sentences composed in their own words, and fewer irrelevant details.

With research evidence indicating that explicit multi-tiered instruction in narrative language improves narration and explicit instruction in expository language improves exposition, it may be the case that a multi-tiered approach emphasizing both oral narrative and expository language is needed to effectively prepare the majority of students to meet the narrative and expository language expectations established by the CCSS. Previous research has indicated that
expository language intervention has resulted in improved text structure and vocabulary in pre-k, second, fourth, fifth, and sixth grade students. However, only one study focused on informational text, and that was only with children with DLD. Informational texts are especially important because they are emphasized frequently in the curriculum (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010). Furthermore, only one study implemented a note-taking strategy that has long-term functional utility. Although the CCSS has a dual focus on narrative and expository language, only one study used a combined narrative and expository focus. No research regarding expository language intervention has been conducted with third-grade students. Few studies have demonstrated that both text structure and language complexity learned in the context of one genre (e.g., informational) generalize to different text structure genres (e.g., compare-contrast). Therefore, the purpose of this study is to determine whether a large group combined narrative and expository language intervention improves oral language of third grade students over and above narrative language intervention alone, and to what extent this improvement generalizes to a different text structure derived from curriculum materials. Our specific research questions are as follows:

1. To what extent does a combined narrative and expository large group intervention improve third graders’ text structure and language complexity in informational expository retells when compared to students who only receive narrative large group intervention?

2. To what extent do gains in informational text structure and language complexity generalize to a compare-contrast expository passage derived from the classroom curriculum?
Method

Participants

A total of 96 third-grade students from six classrooms in two elementary schools from the Mountain West region were recruited to participate in this study. This study was approved by the University of Wyoming Institutional Review Board and by the participating school district. The assessment and intervention procedures described in this study were part of a district-wide initiative, with one school assigned to pilot the additional expository language intervention procedures. Participant demographic information is provided in Table 1 (see below).

Procedures

A quasi-experimental pretest, posttest study design was implemented. All third-grade students in one school were designated as the treatment group (n = 46) and all third-grade students in a neighboring school in the same school district served as the control group (n = 50). All students were evaluated for expository language ability at pretest and were administered narrative reading comprehension and narrative listening comprehension pretests using the CUBED Narrative Language Measures (NLM; Petersen & Spencer, 2012). The treatment and control groups participated in large group oral narrative intervention as a district-wide initiative for approximately 30 minutes four times per week over five weeks. Classroom teachers led these interventions. In addition to the oral narrative intervention, the treatment group also participated in large group expository language intervention for approximately one hour once a week across eight weeks as led by the investigators. The large group expository language intervention replaced the usual Scott Forsman Reading Street reading curriculum instruction. The control group continued to receive the Reading Street instruction while the treatment group received the expository language intervention.
Table 1

*Descriptive Information for Treatment and Comparison Group Participants*

<table>
<thead>
<tr>
<th></th>
<th>Treatment Group</th>
<th>Control Group</th>
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<tbody>
<tr>
<td></td>
<td>(N = 46)</td>
<td>(N = 50)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>20 (43.5%)</td>
<td>29 (58.0%)</td>
</tr>
<tr>
<td>Male</td>
<td>26 (56.5%)</td>
<td>21 (42.0%)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>35 (76.1%)</td>
<td>36 (72.0%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8 (17.4%)</td>
<td>13 (26.0%)</td>
</tr>
<tr>
<td>African American</td>
<td>0 (0.0%)</td>
<td>1 (2.0%)</td>
</tr>
<tr>
<td>Asian</td>
<td>2 (1.2%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Native American /</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Islander/Hawaiian</td>
<td>1 (4.3%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td><strong>SES (Free/Reduced Lunch)</strong></td>
<td>12 (26.1%)</td>
<td>29 (58.0%)</td>
</tr>
<tr>
<td><strong>DLD (Developmental Language Disorder)</strong></td>
<td>7 (15.2%)</td>
<td>5 (10.0%)</td>
</tr>
</tbody>
</table>

*Note.* DLD was determined based on an active Individualized Education Program for language services under the classification of Speech or Language Impairment.

Following treatment, all participants were administered alternate forms of the NLM. The NLM is a standardized, criterion-referenced assessment with 25 analogous forms for every grade from preschool to third grade. It can be used to monitor students’ progress in response to language instruction and identify students in need of greater language support. To administer the
NLM, a speech-language pathologist reads a narrative passage, asks the student to retell it, and listens to the student’s narrative while giving only neutral prompts as needed. Visual supports are not used in this assessment. It takes approximately three to five minutes to administer. The speech-language pathologist scores the student’s narratives in real time using a rubric in which the inclusion and clarity of story grammar elements (i.e., character, setting, problem, feeling, action, consequence, and ending) are scored on a zero to two-point scale and weighted for inclusion of episodic elements (e.g., problem, action, consequence) and appropriate inclusion of features of language complexity (i.e., causal subordinating conjunctions such as because and temporal subordinating conjunctions such as after) are scored for frequency. A total score is obtained by adding together points earned for story grammar, episodic elements, and language complexity. According to psychometric analyses, the NLM has good to excellent reliability and validity (Petersen & Spencer, 2012). The CUBED manual (Petersen & Spencer, 2012) details evidence of reliability and of concurrent criterion-related validity, predictive criterion-related validity, indexes of sensitivity and specificity, as well as other sources of evidence of construct validity with over 4,000 preschool and school-age students.

A primary expository measure and a generalized expository measure were also administered at posttest. The primary expository measure consisted of an informational text created by the investigators about an unusual animal (i.e., sea pig). The generalized measure included a compare-contrast passage taken from the students’ classroom curriculum about the planet Venus which was aligned with the CCSS. In each measure, the administrator read an expository passage to a single student, asked the student to retell it, and listened to the student’s oral summary. They gave neutral prompts as needed. Visual supports were not used in the assessment. The administrator scored the student’s response in real time with a rubric which
evaluated both text structure and language complexity. For the text structure outcome, students were awarded points for inclusion and clarity of the main idea and supporting details of the expository passage on a zero to two-point scale. For the language complexity outcome, students received points according to the number of times they used modifiers, conjunctions, and specific Tier 2 and Tier 3 vocabulary words which had been presented in the text. Both posttest expository measures were administered on the same day.

Because this is an early-stage study designed to determine the efficacy of expository language intervention, only an additive effect of the expository language intervention on oral language will be examined in this study. Reading comprehension is not being examined as an outcome at this time since the intervention is only being administered on a small scale and is not expected to have a large impact on reading comprehension in third-graders.

**Narrative intervention.** The teachers of the treatment and control groups implemented Story Champs intervention (Spencer & Petersen, 2012). Story Champs involves an increasingly complex set of stories that targets specific language features (e.g., temporal and causal subordinations, modifiers) and story grammar elements (e.g., setting, attempt, consequence). In Story Champs, teachers first read one of several model stories to the students using pictures and icons that represent story grammar and language complexity features. Students then participate in a large group retell of the story, followed by a partner retell activity. During the partner retell, one student retells the modeled story while a peer monitors the retell to verify that all targeted story grammar and language complexity features are included. Students then reverse roles. See Spencer, Petersen, Slocum, & Allen (2015) for a detailed description of large group Story Champs procedures.
**Expository intervention.** The investigators implemented the supplemental expository intervention with only the students from the treatment group. These students came from three third-grade classrooms and combined once a week for one hour across four weeks to receive the intervention. The oral expository language intervention is an experimental extension of Story Champs designed to facilitate oral and written expository language skill. Informational passages used in the intervention were developed with content from science and history curriculums used in the children’s classrooms and which aligned with the CCSS. During each session, students were presented with an informational passage comprising a main idea and four supporting details. Icons representing the main idea and key details, corresponding pictures representing key vocabulary, and gestures were used to scaffold student learning. The expository instructional procedures followed the Story Champs procedures described above (i.e., where students retold the main idea and supporting details of a passage in place of story grammar elements), with the addition of an increased focus on vocabulary instruction and a writing activity that included training on note taking and peer writing assessment.

**Results**

In addition to visually and statistically examining the data for outliers in the text structure outcome, preliminary analyses were completed to determine whether it was appropriate to complete a one-way analysis of covariance (ANCOVA) based on the assumption of homogeneity of regression slopes and assumption of homogeneity of variance. The interaction between the group and a pretest measure was used to examine the homogeneity of slopes’ assumption, while Levene’s test (1960) was completed to evaluate the assumption that the population variances for the two groups were equal. Second, based on the results of the preliminary analyses, either ANCOVA or simple main effects tests were conducted. Estimates of the effect size of the
differences between the treatment and control groups were computed for the text structure
dependent measure using partial eta squared. Effect sizes of .14 or larger was considered to be
large, a value of .06 was considered to be moderate, and a value of .01 was considered to be
small (Kirk, 1982).

For the six language complexity outcomes from the primary dependent measure, a one-
way multi-variate analysis of covariance (MANCOVA) was conducted with follow-up post hoc
analyses. For the language complexity outcomes from the generalized dependent measure, we
conducted independent samples \( t \)-tests based on results from the post hoc analyses of the primary
outcome. Means of pretest and posttest measures are reported in Table 2 (see below).

**Narrative Retell**

**Narrative retell pretest.** An independent samples \( t \)-test was conducted to determine
whether there were significant differences in narrative retell scores between groups at pretest.
Although mean pretest performance in the treatment group was higher, nearing significance,
results indicate that there was no statistically significant difference between the students in the
treatment and control group, \( t(89.90) = -1.81, p = .07 \).

**Narrative retell posttest.** Skewness and kurtosis were less than +/- 1, indicating that the
data were normally distributed with no outlying data. The evaluation of the homogeneity of
slopes assumption indicated that the relationship between the covariate, pretest narrative retell,
and the dependent variable, posttest narrative retell, differed significantly as a function of group,
\( F(1, 86) = 5.94, p = .02 \). Levene’s test (1960) indicated that the error variance of the dependent
variable, posttest narrative retell, did not differ significantly as a function of group, \( F(1, 88) =
2.17, p = .14 \). Because the assumptions of an ANCOVA were not met, an independent samples \( t \)-
test was conducted to determine whether there were significant differences in narrative retell
scores between groups at posttest. Results indicate that there was no statistically significant
difference between the students in the treatment and control group. The treatment group posttest
performance was higher than that of the control group to the same degree relative to pretest
results, $t(81.52) = 1.67, p = .10$ (see Table 2).

Table 2

Means (Standard Deviations) of Pretest and Posttest Measures

<table>
<thead>
<tr>
<th></th>
<th>Treatment Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative Retell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Narrative Pretest</td>
<td>$(n = 46) M = 24.02 (7.18)$</td>
<td>$(n = 50) M = 21.52 (6.30)$</td>
</tr>
<tr>
<td>Narrative Posttest</td>
<td>$(n = 43) M = 29.07 (4.32)$</td>
<td>$(n = 47) M = 27.17 (6.35)$</td>
</tr>
<tr>
<td>Expository Text Structure (TS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Expository Pretest TS</td>
<td>$(n = 43) M = 8.00 (7.80)$</td>
<td>$(n = 48) M = 7.29 (2.71)$</td>
</tr>
<tr>
<td>Primary Expository Posttest TS</td>
<td>$(n = 45) M = 9.24 (2.37)$</td>
<td>$(n = 44) M = 6.48 (2.94)$</td>
</tr>
<tr>
<td>Generalized Expository Posttest</td>
<td>$(n = 45) M = 8.16 (3.03)$</td>
<td>$(n = 44) M = 5.93 (3.28)$</td>
</tr>
<tr>
<td>TS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expository Language Complexity (LC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Expository Pretest LC</td>
<td>$(n = 43) M = 1.12 (1.01)$</td>
<td>$(n = 48) M = 1.02 (0.86)$</td>
</tr>
<tr>
<td>Primary Expository Posttest LC</td>
<td>$(n = 45) M = 1.51 (.97)$</td>
<td>$(n = 44) M = 0.91 (1.01)$</td>
</tr>
<tr>
<td>Generalized Expository Posttest LC</td>
<td>$(n = 45) M = 1.40 (1.12)$</td>
<td>$(n = 44) M = 1.25 (1.35)$</td>
</tr>
</tbody>
</table>
Primary Expository Outcome

Primary expository text structure pretest. ANOVA was conducted and indicated that there were no significant differences between the treatment and control groups, $F(1, 89) = 1.50$, $p = .22$.

Primary expository text structure posttest. Skewness and kurtosis were less than +/- 1, indicating that the data were normally distributed with no outlying data. The evaluation of the homogeneity of slopes assumption indicated that the relationship between the covariate, pretest text structure, and the dependent variable, posttest text structure, did not differ significantly as a function of group, $F(1, 81) = .75$, $p = .39$. Likewise, Levene’s test indicated that the error variance of the dependent variable, posttest text structure, did not differ significantly as a function of group, $F(1, 83) = 2.57$, $p = .11$. ANCOVA was conducted since the preliminary analyses were not significant. The ANCOVA was significant, $F(1, 82) = 23.38$, mean squared error (MSE) = 4.99, $p < .001$. The strength of relationship between narrative intervention and the dependent variable was strong, as assessed by partial eta squared = .22, with the intervention accounting for 22% of the variance of the dependent variable, holding constant the primary expository pretest performance.

Primary expository language complexity pretest. ANOVA was conducted and indicated that there were no significant differences between the treatment and control groups, $F(1, 89) = .24$, $p = .63$.

Primary expository language complexity posttest. Skewness was -1.05 and kurtosis was .77, indicating that the data were fairly normally distributed with no outliers. The evaluation of the homogeneity of slopes assumption indicated that the relationship between the covariate, pretest language complexity, and the dependent variable, posttest language complexity, did not
differ significantly as a function of group, $F(1, 81) = .02, p = .90$. Likewise, Levene’s test indicated that the error variance of the dependent variable, posttest language complexity, did not differ significantly as a function of group, $F(1, 83) = .03, p = .87$. MANCOVA was conducted since the preliminary analyses were not significant. Significant differences were found among the language complexity outcomes. Wilk’s lambda = .837, $F(6, 77) = 2.49, p = .03$. Post hoc analyses indicated that the treatment group had superior performance on the use of the word *because* and the use of the word *rotten*. A one-way multi-variate analysis of covariance (MANCOVA) was conducted to analyze the six multiple language complexity dependent variables for the primary expository passage. Significant differences were found among the language complexity outcomes. Wilk’s lambda = .837, $F(6, 77) = 2.49, p = .03$. Post hoc analyses indicated that the treatment group had superior performance on the use of the words *because* and *rotten*.

**Generalized Expository Outcome**

The generalized expository measure was not administered at pretest. The results of the primary expository pretest were used as a covariate in the analysis of the generalized expository outcomes at posttest.

**Generalized expository text structure posttest.** Skewness and kurtosis were less than +/- 1, indicating that the data were normally distributed with no outlying data. The evaluation of the homogeneity of slopes assumption indicated that the relationship between the covariate, primary expository text structure pretest, and the dependent variable, generalized expository text structure posttest, did not differ significantly as a function of group, $F(1, 81) = .73, p = .39$. Levene’s test indicated that the error variance of the dependent variable, posttest story retell, did not differ significantly as a function of group, $F(1, 83) = .04, p = .84$. ANCOVA was conducted
since the preliminary analyses were not significant. The ANCOVA was significant, \( F(1, 82) = 8.68 \), mean squared error (MSE) = 7.21, \( p < .01 \), partial eta squared = 0.10.

**Generalized expository language complexity posttest.** Skewness was 1.25 and kurtosis 2.09, indicating that the data were not normally distributed. The evaluation of the homogeneity of slopes assumption indicated that the relationship between the covariate, primary expository language complexity pretest, and the dependent variable, generalized expository language complexity posttest, did not differ significantly as a function of group, \( F(1, 81) = 1.76, p = .19 \). Likewise, Levene’s test indicated that the error variance of the dependent variable, posttest language complexity, did not differ significantly as a function of group, \( F(1, 83) = .67, p = .41 \). Because the dependent variable was not normally distributed, an ANCOVA was not conducted. To reduce familywise error due to conducting multiple independent samples \( t \)-tests, only three independent samples \( t \)-tests were conducted for the specific outcomes that were statistically significant in the primary language complexity analysis. Those three outcomes were causality (i.e., *because*) and Tier 2 and Tier 3 vocabulary words. Because this was a preliminary study with a small dose in which only small effects were expected, a Bonferroni correction was not applied to this analysis because it is a very strict protection which tends to increase Type II errors (Nakagawa, 2004). The results of the \( t \)-tests indicated that there was a significant difference between the treatment (\( M = 0.36, SD = 0.48 \)) and control (\( M = 0.16, SD = 0.37 \)) groups in favor of the treatment group for a Tier 3 vocabulary word, \( t(1, 87) = 2.15, p = 0.04 \).

**Discussion**

The purpose of this study was to determine whether an intervention targeting both oral narrative and informational expository language delivered in a large group setting improved the expository language of third-grade students significantly more than oral narrative language.
intervention alone, and to determine the extent that expository language intervention would generalize to a different expository genre derived from the curriculum. The results of this study indicated that the treatment group had significantly higher scores in expository text structure across all primary and generalized measures, and that the treatment group had significantly higher scores in two language complexity outcomes in the primary expository measure and one language complexity outcome in the generalized measure.

**Narrative Language**

Preliminary analyses indicated that there were no significant differences between groups in narrative retell at pretest and posttest. These results were expected since the treatment and control groups received an identical dose of narrative intervention. The posttest narrative results also indicated that both groups were similarly responsive to narrative language instruction as measured by the NLM, which primarily assesses story grammar. The control group NLM mean increased by six points and the treatment group NLM mean increased by five points from pretest to posttest. It also appears that the supplemental expository intervention did not have an impact on the NLM scores of the children in the treatment group. However, because the expository intervention was delivered in a very small dose and did not focus on story grammar, such an effect would have been surprising. It is possible that expository language intervention that takes place in a smaller group or that includes more than eight one-hour sessions would have an impact on narrative language.

**Expository Text Structure Outcomes**

Although there are many types of expository text structures, including cause-effect, compare-contrast, and problem-solution, informational expository passages were used in this study in order to align with the CCSS. Informational passages are characterized by a main idea
and supporting details. Therefore, on the expository text structure outcome measures used in this study, students were given credit according to their inclusion and accuracy of the main idea and supporting details of expository passages.

The primary expository outcome of this study consisted of a brief, informational expository text that was created by the investigators about an unusual animal (i.e., sea pig). This measure was administered to treatment and control groups at pretest and posttest. The generalized expository outcome contained a compare-contrast text from the participants’ third grade science curriculum about the planet Venus. This measure was administered to treatment and control groups only at posttest. Analyses indicated that there were no significant differences between groups on measures of expository text structure at pretest. However, posttest data demonstrated that there was a significant difference between the treatment and control groups in measures of primary and generalized text structure with large and moderate effect sizes, respectively. Hence, it appears that the combined oral narrative and expository language intervention promoted growth in expository text structure in informational and compare-contrast expository texts over and above that of oral narrative language intervention alone.

These text structure findings are in alignment with other studies. Previous research also found that an explicit focus on text structure using visual supports yielded moderate to strong effect sizes (Hall et al., 2005; Westby et al., 2010; Williams et al., 2005). However, not many previous studies with a focus on expository language intervention yielded significant increases in text structure skill as measured by expository retells across genres of expository texts. It may be that focusing on the structure of main ideas and supporting details is a more compatible skill that transfers well to expository texts of various structures. Previous research did not have a strong focus on identifying and retelling main ideas and supporting details from informational texts. In
contrast, the focus of instruction in this study was to help the students identify main ideas and supporting details in an informational text, then summarize those main ideas and supporting details through note-taking and, finally, retell the main ideas and supporting details to a peer and to monitor peers’ retells for accurate and complete information. This process of identifying important pieces of information from a text, distilling the information into succinct notes or pictures, and expanding the brief notes into a coherent oral retell as used in this study may have had an important role in promoting generalization of expository skill from one text genre to another (Ukrainetz, 2018).

Whereas the results of this study showed that third-grade students improved significantly in measures of expository language with a large-group intervention that targets identification of main ideas and supporting details, it remains to be seen how identifying relationships between main ideas and details within an informational text would further enhance development of expository skill. In the current study, students were taught to identify main ideas and supporting details, yet they were not explicitly taught to connect that information together other than to indicate causal and temporal relationships. Previous research has investigated the effects of identifying relationships between information units within narrative and other expository genres (Culatta et al., 2010; Hall et al., 2005; Westby et al., 2010; Williams et al., 2005), but not with informational texts. Therefore, further research examining the additive effects of instruction targeting relationships between pieces of information in informational texts on an informational text-based large-group expository language intervention is recommended.

**Expository Language Complexity Outcomes**

In this study, language complexity features such as modifiers, conjunctions, and Tier 2 and Tier 3 vocabulary words unique to the expository texts were measured. The results of this
study showed that there was no significant difference between groups at pretest. However, there was a significant difference between the treatment and control groups at posttest, in favor of the treatment group, on the primary expository measure with a moderate effect size. The treatment group also performed significantly greater than the control group at posttest on one language complexity outcome in the generalized expository measure.

Because the primary expository outcome was administered to the treatment and control groups at pretest and posttest, certain features of language complexity such as specific vocabulary words may have been more familiar to all students at posttest. However, despite being equally familiar with these features, the students in the control group still achieved scores significantly lower than the scores of the students in the treatment group at posttest. By nature of using a descriptive approach in this intervention (i.e., describing a main idea using supporting details), the students in the treatment group were trained to pay closer attention to the language complexity of the passages and therefore may have been more likely to include these elements in their oral retells. In fact, the students in the treatment group performed significantly better than the students in the control group in their inclusion of a Tier 3 vocabulary word on the generalized expository measure, despite the fact that the measure used a compare-contrast text instead of an informational expository text. It may be that this skill of attuning to descriptive features of expository language, including Tier 2 and Tier 3 vocabulary words, regardless of expository genre, may be effectively targeted using an intervention with an explicit focus on learning to describe a main idea using supporting details gleaned from a text.

**Study Limitations and Future Research**

In this study, students were not randomly assigned to treatment and control conditions due to being organized in preexisting groups (i.e., classrooms). Therefore, as might be expected,
there were some demographic differences between the groups (see Table 1). One of the most pronounced differences in demographics between the two groups were the number of students with low SES; there were 21 students with low socioeconomic status in the treatment group (26.1%) and 29 in the control group (58.0%). However, there was no statistically significant difference between the groups on this SES variable.

Additionally, this study implemented a very low dose of intervention (i.e., eight hours of very large group instruction across eight weeks) and only immediate effects were measured. Future research with more intensive intervention with a focus on long-term immediate and distal outcomes (e.g., reading comprehension) is recommended.

Although the narrative intervention was conducted by general education teachers and paraprofessionals, the expository intervention was conducted by graduate research assistants. Thus, the level of treatment fidelity that teachers and paraprofessionals, the intended implementors of this intervention, would use while implementing the intervention in the classroom is not known. Furthermore, it is unclear what the effects of the intervention would be in a more typical large group context (i.e., instead of having three classrooms combined).

**Conclusions**

This study contributes to the body of research regarding the effects of expository language intervention on expository language in elementary school children. Although such research had been conducted on students in preschool and first, second, fourth, fifth, and sixth grade, this was the first study to include third-grade participants. Third grade is a particularly vulnerable grade because the focus of reading shifts from learning to read to reading to learn (Chall, 1983; Chall, Jacobs, & Baldwin, 1990). Just as students in other grades responded positively to expository language intervention which focuses on cause-effect, problem-solution,
and compare-contrast expository texts (Culatta et al., 2010; Hall et al., 2005; Westby et al., 2010; Williams et al., 2005), the large group informational text-based intervention used in this study significantly enhanced typically developing third-grade student performance in measures of both text structure and language complexity. This is important because the majority of students currently struggling with reading comprehension are typically developing (NAEP, 2017). To date, student performance on the NAEP reading assessment has not meaningfully improved for nearly 30 years. It is entirely possible that a major reason for this stagnation is a lack of focus on explicit narrative and expository language instruction for all students.

Furthermore, this particular study is unique because gains in text structure and language complexity were demonstrated across two genres of expository texts with a very large group of typically developing third-grade students. Previous research has demonstrated that gains in text structure within one expository genre did not transfer to other expository genres (Hall et al., 2005; Williams et al., 2005). Unlike this study, the interventions used in previous research did not have an explicit focus on informational expository texts. Additionally, previous research has focused largely on gains in language complexity within the expository genres treated and has yielded mixed results. Fewer studies have demonstrated transfer of such gains across expository genres. For example, in one study, there were no gains in language complexity within the expository genre used in the intervention (Culatta et al., 2010) while in another, participants increased significantly in vocabulary recall on outcome measures which included two expository genres (Williams et al., 2005). The latter finding is similar to the results obtained in this study. Third-grade students who received informational text-based expository language intervention also increased in their ability to recall and incorporate Tier 2 and Tier 3 vocabulary words from informational texts into expository retells at posttest. These gains transferred to a compare-
contrast passage which was derived from the classroom curriculum. Thus, this is the first study investigating large group expository language intervention to demonstrate gains in both expository text structure and language complexity that transfer to another expository genre.

Current research supports specific instructional strategies used in this study. During the intervention, students had repeated exposure to and practice with text structure. They learned strategies for taking notes, including pictographic notes (Ukrainetz, 2018), on the main idea and supporting details of an informational text. Students wrote or drew their notes on a basic graphic organizer and practiced orally retelling the information from the text to a peer. In this way, the students reduced information from an informational text into succinct notes and, subsequently, expanded this information into a cohesive oral summary. Although more research needs to be conducted, it is possible that teaching a note-taking strategy that has immediate and long-term functionality was an important feature of the current intervention. Research on note-taking has clearly demonstrated that writing tasks enhance reading comprehension and content learning (Bangert-Drowns, Hurley, & Wilkinson, 2004; Graham & Hebert, 2011; Kobayashi, 2006). Such a strategy can be useful for a student throughout their academic life. The ability to understand and work with expository texts will support students’ ability to succeed academically and meet the requirements of the CCSS, especially as there is a greater demand for expository language proficiency in later grades. Because language skills support reading comprehension as well as writing skills, we hypothesize that the improvements in oral expository language that were shown in the scores of the treatment group will transfer to written language.

Additionally, peer tutoring was used in the intervention during oral retells of expository passages. Peers monitored each other for the use of main ideas, supporting details, and features of language complexity using a checklist. Peer tutoring research has established that peer
interaction and engagement facilitate learning. For example, Dion et al. (2011) argued that peer tutoring would combat inattention and enhance a student’s ability to learn from effective instructional strategies. They conducted a randomized controlled trial involving 58 first-grade students in which peer tutoring activities were incorporated into regular classroom reading instruction in the treatment condition. Dion et al. found that the students assigned to classrooms which utilized the peer tutoring activities increased in both attention and reading skills.

The results of this study suggested that the exclusive focus on narrative language in the dosage delivered in this study does not appear to be sufficient to improve expository language. This is not to say that narrative language instruction should be abandoned; there is considerable research evidence showing that narrative-based language intervention has a causal impact on narrative outcomes. Rather, a combined narrative and expository language approach, as piloted in this study, appears to improve both language discourses which are critical for academic success. Because the portion of the intervention targeting expository language can be administered using any informational expository text, it may be feasible and simple to significantly improve children’s expository language with minimal interruption of the curriculum, especially as teachers are already working with these texts.
References


APPENDIX A

Annotated Bibliography


**Objective:** The aim of this study was to assess the relationship between oral narrative skill and later reading comprehension in children with mild intellectual disability. This objective is significant as past research regarding the link between early oral language and later reading comprehension has been conducted on typically developing children. **Method:** 102 diverse students age 7 to 12 with mild intellectual disability, English as a first language, lack of hearing and/or visual impairment, and lack of serious emotional and/or psychiatric disorders participated in this study. Preliminary measures of IQ and receptive and expressive vocabulary, including the Peabody Picture Vocabulary Test–III (PPVT–III), Expressive Vocabulary Test (EVT), and the Clinical Evaluation of Language Fundamentals–Fourth edition (CELF–4), were administered to establish baseline data. Narrative language samples were then elicited with a wordless picture book, transcribed with SALT software, and analyzed for seven elements of macrostructure (i.e., introduction, character development, mental states, referencing, conflict and resolution, cohesion, and conclusion) and microstructure (i.e., MLU, percent intelligible utterances, total utterance length, and number of different root words). Finally, a series of standardized assessments measuring reading comprehension (i.e., phonetic decoding, passage comprehension, and expressive and receptive vocabulary) was administered. This test battery included the word attack and passage comprehension subtests of the Woodcock Reading Mastery Test–Revised, the PPVT–III Form A, the EVT, and the CELF–4. **Results:** Measures of macrostructure in the students’ narratives was more closely correlated with reading comprehension ability than were measures of microstructure. This pattern complements the established association of language skills with reading comprehension achievement in typically developing children. Therefore, this evidence indicates that targeting elements of narrative macrostructure in intervention may improve reading comprehension ability in children, especially those with mild intellectual disability. **Relevance:** Language skill is associated with reading comprehension achievement in children with mild intellectual disability as well as in typically developing children. Furthermore, mastery of macrostructural elements is vital to text comprehension and production. The macrostructural elements included in this study are nearly identical to the story grammar elements included in Story Champs Blitz, an intervention approach utilized in this study on combined narrative and expository large-group intervention.

**Objective:** This study investigated whether measures of kindergarten language skill and/or response to intervention are more predictive of third grade reading comprehension difficulties than early predictors of third grade word reading ability. **Method:** 366 kindergarten children were selected from a diverse, medium-sized school district to participate in this study through the third grade. 263 of these children were considered at risk for reading disabilities according to school-based beginning-of-year assessments. 103 children not considered to be at risk for reading disabilities were also randomly selected to participate. Children with limited English proficiency and severe disabilities were excluded from the sample. 27% of the children did not complete the study, rendering a complete data set for 264 of the children at its conclusion. A screening battery composed of established predictors of third grade word reading ability (i.e., letter naming, sound matching, rapid automatized naming, and nonword repetition) and measures of language ability (i.e., vocabulary, grammar, and narrative skill) was administered to each child at the beginning of kindergarten. In addition, the 263 at-risk children were randomly assigned to receive supplementary small-group narrative intervention (i.e., vocabulary instruction, narrative comprehension and production, phonological awareness, and letter knowledge) administered by the research team throughout the kindergarten year \( n = 156 \) or to participate in an at-risk control group without additional intervention \( n = 107 \). The children’s response to intervention was periodically assessed throughout kindergarten with measures of vocabulary and at the conclusion of intervention with measures of narrative skill. Measures of word reading ability (i.e., word and nonword decoding) were administered to all children during second grade. Reading comprehension of expository and narrative passages for all participants was assessed in third grade. Finally, all participants were classified as either having reading disabilities or not having reading disabilities. This was determined by the children’s reading comprehension scores, which were adjusted for oversampling of at-risk children; children performing at or below the 16th percentile, one standard deviation below the mean, were considered to have reading disabilities. **Results:** Measures of kindergarten language ability administered as a part of the screening battery added significantly to the prediction of reading comprehension difficulties in third grade and were found to be more effective in predicting third grade reading outcomes than established measures related to word reading ability. Of these early language ability measures, vocabulary consistently proved to be the best indicator of subsequent reading comprehension difficulties. Because assessment of expressive vocabulary is simple and brief, the researchers recommend adding such a measure to kindergarten screening protocols. Furthermore, this study found that measures traditionally expected to predict word reading ability more strongly predicted reading comprehension ability in some cases. In regard to response to intervention as a predictor of reading comprehension difficulties, this study found that vocabulary growth achieved throughout the course of the intervention was significant in predicting reading comprehension status and was more effective at predicting reading comprehension difficulties in third grade than predictors of word reading. It is also important to note that the narrative intervention designed for this study produced significantly better narrative scores in the group of at-risk children receiving the intervention than the control group of at-risk children; however, these increased results were still lower than those obtained for the typically developing children in the study. **Relevance:** Because reading comprehension is essential for academic success, the findings of this study are significant.
as they determine a predictive relationship between deficits in early language skill and third grade reading comprehension difficulties. It is noteworthy that measures of third grade reading comprehension administered by the researchers included assessment of both narrative and expository passages. Finally, the Tier 2 narrative intervention administered as a part of this study produced significant gains in reading comprehension in at-risk children, demonstrating that MTSS can be effective for promoting language proficiency in the classroom.


**Objective:** This study explored the degree to which early language skill, early metalinguistic skill, and family background factors influence children’s literacy development later in life. **Method:** 41 diverse, monolingual children with typical language development were studied longitudinally over four years. Primary measurements of linguistic skill (i.e., overall language development, receptive vocabulary, phoneme knowledge, and syntactic knowledge), metalinguistic skill (i.e., phonological awareness, word awareness, and structural awareness), print awareness (i.e., sorting and naming numbers, letters, and shapes and answering questions about how to read a book), and family variables (e.g., income, literacy involvement) were taken when the children were 3 years of age. At age 7, further assessment of phonological awareness (i.e., oral phoneme segmentation and phoneme deletion) and reading achievement (i.e., sound-symbol knowledge, word identification, and narrative and expository text comprehension) was conducted. **Results:** The data obtained in this study concluded that family literacy involvement was not a significant predictor of later literacy skills in 3-year-olds, while metalinguistic ability, print awareness, and overall language development were significant predictors of reading achievement after first grade. Of those three factors, overall language development was found to be the strongest predictor of later literacy development. **Relevance:** This data collected in this study support the idea that early language ability is important to reading success in school-age children.


**Objective:** This randomized controlled trial examined the effects of oral language and text comprehension training on reading comprehension ability and expressive vocabulary in fourth grade children with language impairment. Specifically, the researchers hoped to determine whether reading comprehension difficulties in children with language impairment are a result of factors related directly to reading or factors relating to comprehension of spoken language, or both. **Method:** 160 children from 20 schools in England (8 children from each school) were identified for participation in this study based on their performance of measures indicative of language impairment. These children were randomly assigned to one of four treatment conditions: oral-language training (OL), text comprehension training (TC), combined oral-language and text comprehension training (COM), or control. The OL, TC, and COM groups received the
associated interventions in addition to regular class instruction while the control group received only regular class instruction. The three intervention approaches consisted of three 30-minute sessions a week for 20 weeks. The OL intervention focused primarily on spoken language, with instruction in vocabulary, reciprocal teaching with oral language, figurative language, and oral narrative. The TC intervention centered on texts in print with metacognitive reading strategies, reciprocal teaching with text, text inferencing, and written narrative instruction. The COM intervention combined the eight components of the OL and TC approaches into one program, with time split equally between the OL and TC tasks. The children’s performance of reading comprehension and expressive vocabulary was measured before treatment began, after 10 weeks of treatment, after 20 weeks of treatment, and 11 months after treatment concluded via the NARA II, Form B, the Wechsler Individual Achievement Test 2nd Edition, and the vocabulary subtest of the Wechsler Abbreviated Scale of Intelligence. Results: Students in each of the three experimental treatment conditions, OL, TC, and COM, demonstrated increased reading comprehension following intervention while the reading comprehension scores of students in the control condition actually decreased over time, which was expected given the nature of language impairment. Students in the OL group displayed the greatest increase in comprehension post intervention. These results suggest that reading difficulties in children with language impairment stem from deficits in oral language; therefore, explicitly teaching oral language skill to these students is crucial to their academic success as it increases their ability to comprehend texts. Relevance: Reading comprehension is a language skill that is necessary to academic success. This study found that training students with language impairment in oral language strategies yielded increases in reading comprehension ability, which demonstrates that language skills are indeed necessary to academic success. These results are also significant to the current study as they provide support for the inclusion of oral language intervention as an efficacious approach.


Objective: This retrospective longitudinal study examined whether or not measures of preschool oral language skill (i.e., mean length of utterance [MLU], quantity of complex syntax, size of expressive vocabulary, and oral response to requests for information) are predictive of reading comprehension success in first through third grade for students who are speakers of African American English (AAE). Method: 50 typically developing preschool (n = 25) and kindergarten (n = 25) speakers of AAE were selected from the Detroit, Michigan area. Due to a state program which provides at-risk children with free preschool services, the preschoolers came from low-income families and the kindergarteners from middle-income families. An oral language assessment measuring expressive vocabulary, syntactic complexity, MLU and comprehension of requests for information as well as an assessment of nonverbal cognition were conducted during the second half of the school year for both the preschoolers and the kindergarteners. Later assessments of reading comprehension were conducted during grades one, two, and three via the Metropolitan Achievement Tests–Seventh Edition with scores anchored at age 9
Results: Both preschoolers and kindergarteners demonstrated similar performances of oral language skill on the initial oral language assessment. However, there was a significant difference between the two groups on the comprehension of requests for information task, with kindergarteners scoring higher than the preschoolers. This is to be expected as the kindergarteners were older than the preschoolers at the time of scoring. Furthermore, analysis of reading comprehension scores revealed that children from both groups increased in reading achievement linearly over time from grades one to three. However, during those three grades, preschoolers made progress at a significantly more rapid pace than did the kindergarteners and the kindergarteners fell behind grade expectations after first grade while the preschoolers consistently met grade expectations. The difference in reading comprehension ability between the two groups was significant at grades two and three. Finally, performance on nonverbal cognitive tasks and measures of syntactic complexity were predictive of reading comprehension outcomes for the preschool participants. Relevance: The significant difference in performance between African American children who did and did not receive preschool services indicates that early intervention in literacy development may play an important part in supporting reading comprehension development in this population in later grades. The results of this study also indicate that early language skill is critical to later reading achievement in speakers of AAE. These findings are significant as they support the idea that early language skill is critical to academic success in subsequent grades for students of all backgrounds.


Objective: This study sought to determine whether a “theme-based unit” targeting expository language skills had an effect on preschool children’s expository comprehension. Method: 71 children from 4;1 to 5;0 participated in the study, which was conducted by SLPs and early childhood educators. The intervention consisted of activities which were topically related to narrative texts, expository texts adapted to fit the theme, and “mapping tasks” which took place in various classroom settings, including large group, small group, and regular class routines. Various instructional activities were incorporated and included relating previous knowledge about a topic at the beginning of instruction, acting out texts, telling personal narratives, explicit instruction of key ideas and vocabulary, reading expository passages out loud, “mapping conceptual relationships,” and meaningful/salient activities related to the topic. Measurements of progress include comprehension of expository compare/contrast and problem/solution texts during an independent retell (instruction included visual support; retells were unsupported), informal classroom observation, interviews with teachers and parents, and parent surveys. Results: Most children showed improvement in their ability compare and contrast and problem and solution probes. There was a significant increase in pre to posttest compare/contrast scores but with a small effect size. Trends in these data show that children improved their ability to make comparisons between animals based on a “shared attribute,” such as where an animal lives or what they eat. However, the children did not make significant gains in using “signal” words such as alike or different in their descriptions. An intriguing finding from this study is that several children who seemed to
lack comparing and contrasting skills at pretest had made significant gains by posttest. The intervention seems to effectively promote the increase of comparing and contrasting skills. In addition, there was a significant increase in problem/solution reasoning among children from pretest to posttest with a large effect size. Many demonstrated the ability to use problem and solution strategies spontaneously in informal settings, showing that the children had generalized the knowledge to their regular classroom environment. Teachers and parents had favorable views of the intervention which kept children engaged in the intervention. Relevance: Young children appear to be responsive to expository language instruction, especially when activities which are of natural interest to them are incorporated. Children showed strong gains in the ability to use compare/contrast and problem-solving strategies following the intervention but did not make expected gains in targeted vocabulary terms such as alike and different.


**Objective:** The purpose of this study was to examine the early efficacy of a large group narrative language and vocabulary instruction on narrative language skills and vocabulary acquisition in first grade students at high and low risk for language disorder. **Methods:** The investigators identified two first grade classrooms in a Title 1 elementary school with a total of 43 children for participation in the study. The classrooms were assigned to a treatment or comparison condition and the children in each classroom were divided into high- and low-risk groups based on their scores on a norm-referenced standardized measure of expressive and receptive language. The investigators then assessed the children’s baseline narrative language ability and vocabulary knowledge. The children in the treatment classroom received narrative and vocabulary intervention from a speech-language pathologist for 30 minutes 3 times a week across 6 weeks. **Results:** Results from this study demonstrated that the children in the treatment group made clinically significant progress in measures of narrative language ability and vocabulary while the children in the comparison group did not. In fact, the investigators’ data indicated that the children in the treatment group experienced three times more improvement in narrative language ability than the children in the comparison group. Furthermore, within the treatment group, the children considered to be high-risk by the investigators made greater progress in narrative language than the low-risk children, causing them to catch up to the low-risk children. **Relevance:** These findings strongly suggest that all children, regardless of risk for language disorder, benefit from large group narrative language instruction.


**Objective:** The purpose of this study was to investigate the effectiveness of text structure intervention on second graders’ expository language comprehension. **Methods:** 72 students from 6 classrooms participated in the study. Each classroom was randomly assigned to one of three conditions: text structure intervention, content intervention (i.e.,
background knowledge and vocabulary instruction), and a control group with no intervention. **Results:** Following 6 weeks of intervention, the investigators found that students participating in the text structure treatment group showed greater improvements in the use of comprehension strategies, comprehension of compare/contrast concepts, and production of well-structured summaries of expository texts than the students in the content and control groups. **Relevance:** This study strengthens the findings of other studies which suggest that elementary students are amenable to expository language intervention with an explicit focus on text structure.


**Objective:** This article examined four longitudinal studies for evidence of a continuous relationship between early language delay and subsequent difficulty in literacy development. **Method:** The findings of four collections of studies were reviewed. In the first collection of studies (i.e., Bishop & Adams, 1990; Bishop & Edmundson, 1987; Stothard, Snowling, Bishop, Chipchase, & Kaplan, 1998), 87 children between the ages of 3;9 and 4;2 years old with language impairment were identified via local speech-language pathologists and pediatricians. These children were assessed in three stages. First, Bishop et al. measured their expressive phonology, syntax, morphology, semantic relationships, expressive vocabulary, receptive vocabulary and grammar, verbal comprehension, and nonverbal IQ at the ages of 4, 4;6, and 5;6. Second, the children’s spoken language and literacy skills were examined when they reached age 8;6. Third, an assessment of spoken language and literacy skills was repeated when the children reached age 15-16 years. Results of each assessment stage were compared with a control group of age-matched, typically developing peers (however, this group was not studied longitudinally). In the second collection of studies (i.e., Paul, 1991; Paul, Hernandez, Taylor & Johnson, 1996; Paul, Murray, Clancy & Andrews, 1997), 32 children with expressive language delay were recruited at age 2 through pediatricians, radio announcements, and newspaper advertisements and followed for five years. A control sample composed of 27 normally developing peers with equivalent nonverbal IQ scores and socioeconomic status was developed and used throughout the duration of the study. Initial assessments of expressive vocabulary, syntax, and semantic skills were conducted at ages 3 and 4. Later assessments of higher-order literacy (i.e., narrative development, including MLU, lexical diversity, inclusion of relevant content, amount of complete cohesive ties, and overall maturity) were conducted at ages 5, 6, and 7. Additional assessments of higher-order literacy (i.e., metaphonological skill, speech, language, cognitive skill, and reading achievement) were conducted during second grade. Furthermore, in the third study (i.e., Lewis, Freebairn, & Taylor, 2000), 52 children ages 4-6 with moderate to severe speech sound disorders were recruited through local speech-language pathologists and audiologists. These children were assessed in the areas of phonological processing, phonological encoding, phonological production, and semantic and syntactic skills. They were later assessed in the areas of decoding, reading comprehension, and spelling skill at ages 8-11 years. No control group was used. Finally, in the fourth study (i.e., Johnson, Beitchman, Young, Escobar, Atkinson, Wilson,
Brownslie, Douglas, Taback, Lam, & Wang, 1999), 242 children with \((n = 114)\) and without \((n = 128)\) language and speech impairments from a community near Ontario, Canada were recruited at age 5 and followed for 14 years. The children were then evaluated at ages 5, 12, and 19 for speech and language skill, demographic information, developmental and medical history, cognitive and academic ability, psychiatric condition, and parental and marital status. **Results:** There appears to be a continuous relationship between early language delay and subsequent literacy difficulties in all children with early language delay. However, the severity of the early language delay and the age at which it is resolved (if it is resolved) are key factors affecting the severity of later literacy difficulty, where those with early language delay of greater severity and whose early language delay persists past age five are at greater risk for subsequent problems in literacy development. However, it is important to note that even children with mild early language delay and whose early language delay had resolved by age 5 still experienced some residual difficulties in literacy later in life. Thus, this study concludes that early language delay is a key risk factor in the development of later literacy difficulty.

**Relevance:** Children with early language delay are highly likely to experience difficulty with literacy development to varying degrees later in life. Because strong literacy skills are integral to academic success, especially in higher grades, this demonstrates that early language skills are also critical to academic success.


**Objective:** This longitudinal study investigated the degree to which expressive vocabulary size and lexical composition at 2 years of age are predictive of language and literacy skill in typically developing children in later years up to fifth grade (i.e., age 3 to 11). Additionally, the study sought to determine which factor, expressive vocabulary size or lexical composition, is a stronger predictor of language and literacy development. **Method:** 1,071 diverse children from a National Institute of Child Health and Human Development (NICHD) data set were selected to participate in this study. Language measures were administered periodically throughout the study and include the MacArthur-Bates Communicative Development Inventories (CDI) checklist (administered at 24 months), the Reynell Developmental Language Scale (administered at 36 months), and the Preschool Language Scale—Third Edition (administered at 54 months). The children were then categorized as having small or large vocabularies according to the total number of words, the total number of verbs, and the proportion of verbs and total words they possessed as shown by the CDI. Literacy measures were also administered via the letter-word identification, word attack, picture vocabulary, and passage comprehension subtests of the Woodcock-Johnson Psycho-Educational Battery—Revised. These were administered periodically at 54 months and in first, third, and fifth grade. Finally, a multivariate analysis of covariance (MANCOVA) was used to compare the group of children with small vocabularies and the group of children with large vocabularies. Results were controlled for gender, birth order, ethnicity, and socioeconomic status. **Results:** The data in this study indicated that expressive vocabulary size at 2 years of age is a significant predictor of later language and literacy skill in later years up to fifth grade. Furthermore, expressive vocabulary size at age 2 was
a better predictor than lexical composition ability. **Relevance:** The amount of vocabulary that children possess in early years has a negative impact on their success in language and literacy during grade school as they tend to lag behind their peers in developing fluency and literacy. Therefore, language difficulties in young students tend to persist throughout the academic experience.


**Objective:** This study sought to compare scores of decoding (i.e., “word reading”) and oral language skills and rates of growth in Spanish-speaking children from ages 4.5 to 11 years of age to U.S. national average scores and rates of growth. **Method:** 173 Spanish-speaking students from low socioeconomic status backgrounds were selected for participation in this study. **Results:** The investigators found that school-age Spanish-English bilingual children demonstrated rates of growth in decoding that met U.S. averages. However, these children began school with lower levels of oral English language ability than monolingual English-speaking children and, despite having faster rates of growth in language ability than those documented by the national average, never achieved grade-level proficiency in reading comprehension. **Relevance:** These findings suggest that decoding difficulty does not account for the current reading crisis in the US.


**Objective:** This study was designed to map out the progress that Spanish-speaking English language learners (ELLs) made on English word decoding and reading comprehension from first to sixth grade. Furthermore, the study investigated whether or not English phonological awareness, rapid automatic naming, and measures of oral language administered during first grade served as effective predictors of a child’s reading ability and progress. **Method:** 261 Spanish-speaking ELL children (120 boys, 141 girls) were selected for participation in the study based on their very limited English language skills at the beginning of kindergarten. The children were from two schools in a border town in Texas; 15 whole classrooms were randomly selected for the study. In addition, the children came from very low socioeconomic statuses (98% qualified for free and reduced lunches). Although much of the classroom instruction took place in Spanish as part of a transition program called Esperanza, the majority of the children were able to transition to English language instruction halfway through first grade. Assessments were administered twice during kindergarten and once during first, second, third, fifth, and sixth grade. The assessments tested the children in the following areas: letter-word identification, expressive vocabulary, sentence memory, reading comprehension, phonological awareness, word repetition and elision, rapid automatized naming, and non-word reading. The researchers used growth curve modeling to track the children’s progress over time in each of these measures. **Results:** The children’s decoding and reading comprehension scores increased rapidly during second grade relative to their
growth in later grades. This is likely due to the fact that most children were transitioned into an English-only instructional program in the middle of second grade; therefore, their exposure to English was greater than it had been before. The children also kept up with average decoding scores set by the English-speaking (L1) control group throughout the study. However, a disparity in reading comprehension scores between the bilingual students and the English-speaking students emerged in third grade. This is likely due to the fact that later reading comprehension tasks required greater English oral language skills. Another likely factor influencing this outcome is the reality that reading difficulties often begin to appear in fourth grade. Thus, the bilingual children struggled to improve in reading comprehension ability starting in third grade despite maintaining average decoding scores during that time. \textit{Relevance:} The findings of this study indicate that CLD children learn to decode just as well as L1 learners. Rather, disparities between CLD children and L1 learners appear in reading comprehension around third grade, indicating a lack of oral language knowledge in the CLD children.


\textit{Objective:} The NAEP is a large-scale national assessment which measures reading skill in United States students. It assesses these skills in 4th and 8th graders every two years and those of 12th graders every four years. The latest assessment of 4th and 8th graders took place in 2017; the latest assessment of 12th graders in 2015. \textit{Results:} The data from 2017 reveal that 37% of 4th grade students and 36% of 8th grade students performed at or above proficiency, with a significant increase in proficiency in Black and Hispanic students. Furthermore, only 8% of Black students and 16% of Hispanic students are reading at a proficient level. \textit{Relevance:} These results indicate that millions of students in the United States still do not possess sufficient language skills for academic success. Therefore, it is necessary to explore additional intervention and instructional approaches to determine how to bridge the gap between where students are performing and where the NAEP and CCSS standards require that they be.


The Common Core State Standards (CCSS) were created to help students be successful in college and in life and competitive in the global workforce. Being successful in freshman-level college classes, entry-level jobs, and job training programs requires strong language skills, especially with expository texts. Past expectations weren’t high enough because students appeared to be successful through graduation from high school but struggled upon beginning college. While still requiring narrative instruction in English language classes, the CCSS now require that students be exposed to a greater volume of expository texts in additional courses (e.g., science, history, etc.), especially in the higher grades, in order to meet NAEP’s increased emphasis on informational texts (shown below).
Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Literary</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>8</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>12</td>
<td>30%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Furthermore, according to the CCSS, the volume of expository texts introduced in early grades has been increased to provide teachers with more time to train students and students with more time to master expository skill.

Teaching in all disciplines in the higher grades is administered through language (i.e., reading, writing, speaking, and listening). Thus, language skills are critical to academic success in areas such as mathematics, science, and history in addition to language arts. Because the CCSS have recently increased academic expectations for language ability across all grades in order to better prepare students for the rigors of college and job training programs, it is vital to determine more effective strategies for facilitating strong language ability in students.


*Objective:* This national panel assessed the percentage of elementary school children in the United States of America who possess acceptable reading comprehension and decoding ability. *Results:* “At least 20 percent, and in some States 50 to 60 percent, of children in elementary school cannot read at basic levels. The children cannot read fluently and do not understand what they read” (page 3). *Relevance:* The fact that such a high percentage of children in the US are unable to read aloud or comprehend what they read indicates that then-existent methods of teaching reading strategies in school were not effective. This finding strengthens the position of the CCSS, which raised the standards for instruction in reading strategies and comprehension across all grades, especially in the higher grades, and introduced an emphasis on reading sooner in early grades than had been done previously.

Objective: This study examined the effect that Tier 3 language instruction would have on the ability of children with high-functioning autism to relate personal stories with certain elements of narrative grammar and linguistic complexity. Specifically, the researchers were interested to determine how quickly these effects occurred and how long changes were maintained after the conclusion of the intervention. Method: Three boys age 6;4 to 8;5 with high-functioning autism were selected for participation in this study. All three participants spoke only English and came from families with a middle socioeconomic status. The researchers used a multiple-baseline design for the study. Intervention targets were selected from those narrative grammar and linguistic complexity elements missing from baseline performance. Baseline lengths of three, eight, and twelve sessions were used, followed by up to twelve sessions of intervention and maintenance probes at two and seven weeks after treatment. Each intervention session targeted one narrative grammar element and one linguistic complexity element, with two to three story grammar elements and two to four linguistic complexity elements being targeted during the duration of intervention. Results: The participants demonstrated immediate gains in the use of targeted story grammar and linguistic complexity elements in personal narratives elicited directly after intervention. The maintenance of these gains varied; gains in story grammar were maintained whereas the majority of targeted linguistic complexity elements were not generalized in the weeks following the intervention. The researchers concluded that more intensive language intervention (i.e., spanning a longer period of time) is most likely necessary to promote long-term maintenance. Relevance: This study is significant as it involved the successful implementation of a Tier 3 approach for narrative language intervention.


Objective: This study examined whether or not English narrative intervention has an effect on English complex syntax and narrative schemas in bilingual (speaking English and Spanish) children, the extent to which improvements in English complex syntax and narrative schemas generalizes to the children’s Spanish language, and whether or not there is a difference in the amount of cross-linguistic transfer between English and Spanish in children with and without language impairment. Method: 73 first through third graders (with 37 male and 36 female) bilingual in English and Spanish participated in this study. The children were selected from three neighboring schools and came from low socioeconomic backgrounds. They ranged in age from 5;11 (years;months) to 9;8 at the start of the study. Additionally, 56 of the children were classified as developing typically and the remaining 17 children were classified as having language impairment (i.e., the children were receiving services from a speech-language pathologist according to an individualized education plan; the children scored beyond one standard deviation below the mean in English and Spanish in at least one measure of a narrative retell task; and the researchers obtained a written confirmation of the diagnosis from either a parent or SLP administering services to that child). The participants were randomly assigned to either a treatment or a control condition. Data collection occurred over four days. The researchers
assessed the children’s narrative retell ability in both English and Spanish using the Test of Narrative Retell (TNR) subtest of the Narrative Language Measures—Kindergarten (NLM-K) before and after intervention on days one and four. The data collected from these assessments was scored in real time in addition to being transcribed and scored later by trained research assistants. Narrative intervention was conducted on days three and four via the Tier 3 (i.e., individual instruction) Story Champs curriculum. This was done by modeling a story and helping the child retell the story multiple times using story illustrations and story grammar element tokens with varying levels of support. Results: Children receiving the narrative intervention, both with and without language impairment, made significantly greater gains in English complex syntax (i.e., causal subordination) and narrative grammar. Likewise, children with and without language impairment that received intervention displayed greater generalization of complex grammar and narrative grammar to Spanish. However, children without language impairment had significantly greater transfer of these elements to Spanish than did children with language impairment; the transfer of complex syntax and narrative grammar in children with language impairment was insignificant. Relevance: Story Champs is an established MTSS model. This study showed that its Tier 3 instruction (i.e., intensive individualized instruction) proved effective in helping children with and without language impairment improve their complex syntax and narrative grammar.


Objective: This study examined the influence of Tier 3 (i.e., individualized) narrative language intervention on preschoolers’ narrative language skills with developmental disabilities. Method: The researchers selected five preschoolers who received special education services and attended Head Start for this multiple baseline, multiple probe study. The children received 24 ten- to fifteen-minute treatment sessions each. The Story Champs Tier 3 intervention, which included visual supports (i.e., icons and pictures), story retell, and practice telling personal stories, was used to promote the development of narrative language skills in this study. Results: The participants improved in story retelling, the telling of personal stories, and story comprehension as a result of the intervention. Relevance: This study shows that this Tier 3 narrative language intervention promotes increased narrative language skills in preschool children with developmental disabilities.


Objective: This study investigated the treatment efficacy of large group (i.e., Tier 1) narrative intervention within the context of response to intervention by examining the effect of large group (i.e., Tier 1) narrative intervention on the narrative language skills of diverse preschool students. Method: 71 diverse preschool children were selected to participate in this study (in same or different schools?) Grouping of classrooms. The large
group narrative intervention was comprised of the direct teaching of narrative structure, narrative retell exercises, Story Champs illustrations and icons, and peer feedback. The participants’ narrative language and comprehension skills were measured prior to intervention, immediately following intervention, and four weeks post intervention.

**Results:** The results of this study indicate that the children in the treatment group made significantly greater improvements in narrative retell and language comprehension than their peers in the control group. However, these gains did not generalize to personal narrative generation. **Relevance:** The results of the study also suggest that analysis of the children’s responses to the intervention was an effective strategy for identifying children in need of greater support in tier 2 and tier 3 intervention, regardless of being a DLL or native English speaker.


**Objective:** This study investigated two main points: first, the degree to which Head Start teachers and teaching assistants could effectively incorporate Story Champs, a multi-tiered system of support for narrative language, into their classroom; and second, the effect of that intervention on preschool children’s story retelling and language comprehension. **Method:** 105 preschoolers from six Head Start classrooms were selected to participate in this study. These children were divided into two groups, where children from three classrooms received the Story Champs narrative intervention and children from the other three classrooms received usual instruction for an entire school year. All instruction, including Story Champs intervention and assessments of progress, was administered to the children by regular classroom teachers and teaching assistants. Measures of story retelling and language comprehension were conducted on all children three times across the school year (i.e., in fall, winter, and spring). Teachers and teaching assistants were trained in the administration of the Story Champs intervention and seasonal assessment by the research staff and were monitored for comfort level and reliability in administering the intervention and assessment tasks. **Results:** The administration of Story Champs as a multi-tiered system of support for narrative language by Head Start teachers and teaching assistants significantly improved story retelling and language comprehension in preschool children. Furthermore, the teachers and teaching assistants were able to effectively and reliably implement the three tiers of intervention and administer progress probes in the natural environment of their classrooms. Although it was difficult to implement the intervention during the first month of the study, the teachers and teaching assistants became very comfortable with administering Story Champs and the progress probes throughout the school year and consider it feasible to incorporate into their regular classroom instruction. **Relevance:** This study demonstrated that Story Champs is an effective multi-tiered system of support for narrative language that is commercially available for the preschool classroom.

Objective: This study examined the effects of written and pictographic note-taking and oral learning strategies on expository language in fourth-, fifth-, and sixth-grade students with language disorders in order to establish a reliable Tier 3 intervention for expository language. Method: 44 fourth-, fifth-, and sixth-grade students with language disorders were selected based on having an IEP from nine schools for participation in this study. Students with intellectual disability, autism spectrum disorder, or emotional disabilities were excluded from the sample. The resulting 44 students were assigned to a treatment or control condition. Each student participated in pre- and posttreatment testing. Students in the treatment condition participated in six 30-minute sessions over four weeks as individuals or in pairs with a speech-language pathologist in which they listened to expository passages, practiced capturing the information from the passage with written or pictographic notes, using their notes to orally present the information, and creating a written report about the information 1-3 days posttreatment. The students received instruction in note-taking strategy from the speech-language pathologists throughout the intervention. Results: Students in the treatment group made significantly greater gains in quality of note-taking (format, brevity, sufficiency; from SALT: amount of complete, opening/closing statements, and modified C-units and fewer extraneous comments)and oral reporting (ONLY in organization, fluency, and confidence—not in overall holistic quality) than the students in the control group. However, these students did not perform significantly greater in quantity (“number of notes” using SALT: number of words, number of C-units), overall oral reporting quality (the holistic measure; those with longer reports and more details got better scores), and posttreatment written reporting. The speech-language pathologists involved in the experiment reported that the participating students seemed highly engaged and learned new skills in addition to content during the intervention. Relevance: Currently, this is the only other study which seeks to establish an intervention approach for expository language. It shares many characteristics with the present study: students were instructed to take notes, including pictographic ones, for their comprehension and memory of ideas conveyed through expository passages, and students engaged in reciprocal teaching with their peers in order to encode the information. There are also several differences between the two studies. First, the present study focused on Tier 1 intervention while this study focused on Tier 3 intervention. Therefore, Ukrainetz’s sample consisted of students with an IEP while the present study included a demographically representative sample. Furthermore, the intervention utilized in the present study was conducted by classroom teachers and the intervention designed for this study was conducted by speech-language pathologists. Finally, this study’s sample size was 44 while the sample size for the present study was 96.


Objective: This study investigated the efficacy of a small-group narrative intervention on language skills (i.e., narrative retells and personal stories) in preschool children. It also examined the extent to which response to narrative intervention could inform the
identification of language differences and/or disorders in culturally and linguistically diverse (CLD) children. **Method:** 41 preschool children from three distinct Head Start classrooms were selected to participate in Tier 1 intervention, which consisted of three sessions of Story Champs large-group instruction over the period of three days. The children’s language skills were assessed briefly pre- and post-test. Seven preschool children from that group (two to three from each Head Start classroom) were randomly selected for Tier 2 instruction out of those children who failed to produce a minimally complete narrative on the assessments. The parents of each child completed a survey outlining their demographic information. Furthermore, the Clinical Evaluation of Language Fundamentals—Preschool (CELF) was administered to each child. Six of the seven Tier 2 participants were bilingual in English and Spanish; the remaining child, an American Indian, spoke only English. Tier 2 instruction was administered in groups of four, where two or three of the seven participants were accompanied by one or two other children with average language skills. The researchers used the Test of Narrative Retell (TNR) and the Test of Personal Generation (TPG) subtests of the Narrative Language Measures—Preschool (NLM-P) to assess narrative language ability in the children, where children were scored for the inclusion and detail of specific story grammar elements (e.g., problem, feeling, action) and language complexity (e.g., temporal subordination) in story retells and personal narratives. This study used a multiple baseline design. Tier 2 instruction consisted of the small-group Story Champs intervention, which is designed to teach the story grammar elements measured in the NLM-P and which allows the children to practice retelling illustrated stories and telling their own narratives with colorful grammar element tokens as guides. Children received this small-group instruction two times a week for eight weeks. The American Indian participant received Tier 3 instruction after failing to make progress with four weeks of Tier 2 intervention. This intervention was conducted almost exactly the way Tier 2 instruction was administered; the only difference was that this child received the instruction in a one-on-one situation with his instructor, rather than in a group with three other children. All intervention was administered by three trained research assistants. **Results:** All seven children participating in Tier 2 instruction demonstrated increases in story retell and personal narrative ability throughout the intervention (although one participant did not make progress until his intervention was intensified to Tier 3 instruction) and continued to score higher than they had at baseline during post-test assessments. Furthermore, as all seven children had been considered for placement in special education, monitoring response to intervention during this study proved to be preventive for the six participants who responded positively to Tier 2 instruction. This demonstrates that narrative language intervention has the potential to boost language skills in CLD children as well as provide additional information to guide the decision to place a CLD child in special education. **Relevance:** This study demonstrates that there is a complete MTSS model of narrative intervention in place that is effective for CLD children.


**Objective:** The purpose of this study was to review relevant research on how children summarize expository texts in order to determine which strategies would be most
effective for teachers to implement in the classroom with the goal of enhancing children’s ability to summarize expository texts. The researchers used graphic organizers and explicit instruction of expository text structures (including descriptive, compare/contrast, cause/effect, problem/solution structures) in their intervention. Methods: Fourth and fifth grade students participated in this study. (Not sure what the dose was.) Students in the treatment group received intervention in their classrooms from their regular teachers. Students in the control group did not receive intervention. Teachers in the treatment group received two days of instruction on how to help students identify the macrostructural elements of expository passages. They had discussions about relevant topics in class, emphasized text structure, highlighted signal words, and utilized graphic organizers. The point was to teach text structure to the children in order to support their comprehension of expository texts. Microstructure was not explicitly taught. Macrostructural elements, including text structure and signaling words (compare, contrast, cause, effect, next, because), were explicitly taught using graphic organizers. Passages used to measure progress from the intervention came from the fourth-grade curriculum. They included two compare/contrast passages and one cause/effect passage. Students were asked to read a passage and then to summarize it. Written summaries were also collected. Results: Students from the treatment group demonstrated much greater scores on measures of micro and macrostructural expository elements than the students from the control group. These differences in scores were more significant than the differences in scores between students in the fourth and fifth grades (fourth grade students in the treatment group had better outcomes in all measures than the fifth graders in the control group). Students in the treatment group showed greater improvement in using words that signal temporal and causal relationships, but not to indicate hierarchical relationships. Otherwise, it appears that students in the treatment group did have increased use of micro and macrostructural elements in their text summaries. The researchers estimate that explicit teaching of microstructural elements would greatly enhance students’ ability to use them in summarization. Relevance: This study examines in greater detail the progress students made in summarizing expository texts with specific types of text structures.


Objective: The purpose of this study was to examine the effectiveness of an expository intervention with a focus on compare-contrast texts on second graders’ language comprehension. Methods: 128 second grade students participated in the study. Classroom teachers conducted the intervention, which included strategies such as using a sequence of questions, graphic organizers, analysis of specially designed texts, and identification and instruction of clue words specific to compare-contrast expository texts. Results: The researchers found that second-grade students who participated in large group expository language intervention targeting text structure and vocabulary improved significantly more than their peers who received traditional treatment or no treatment in measures of expository language ability, including vocabulary recall, identification of “clue” words (i.e., alike, both, however, but, and, etc.) within a text, and generation of oral summaries.
with the support of graphic organizers. Relevance: Second grade students are responsive to expository language intervention which targets text structure. This study also used graphic organizers as an instructional strategy.
APPENDIX B

Primary Expository Outcome Measure

Examiner says, “I’m going to tell you some information. When I’m done you are going to tell me the same information. Are you ready?” “Some frogs live in trees. Now you tell me that information.” If necessary, help child say at least 2 or 3 key words. Examiner says, “I’m going to ask you a question about what I just told you. ‘Where do some frogs live?’ Help child say answer. Examiner says, “Now I’m going to tell you some more information. Please listen carefully. When I’m done you are going to tell me the same information. Are you ready?”

Sea pigs are unusual animals. They are a type of sea cucumber that dwells in the deep dark ocean. Sea pigs find their food by smell because they do not have eyes. They eat rotten whales that are 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.” If child does not respond or only tells the main idea or one detail, Examiner says, “Tell me everything you remember.”

<table>
<thead>
<tr>
<th>STRUCTURE</th>
<th>2 POINTS</th>
<th>1 POINT</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Idea</td>
<td>sea pig unusual / sea pig strange</td>
<td>2</td>
<td>sea pig / ocean pig</td>
</tr>
<tr>
<td>Detail 1</td>
<td>is a sea cucumber</td>
<td>2</td>
<td>like a cucumber</td>
</tr>
<tr>
<td>Detail 2</td>
<td>lives in ocean</td>
<td>2</td>
<td>swims in water</td>
</tr>
<tr>
<td>Detail 3</td>
<td>finds food by smell</td>
<td>2</td>
<td>smells things</td>
</tr>
<tr>
<td>Detail 4</td>
<td>doesn’t have eyes / can’t see / it is blind</td>
<td>2</td>
<td>gets lost</td>
</tr>
<tr>
<td>Detail 5</td>
<td>eats rotten whale / eats on bottom of ocean</td>
<td>2</td>
<td>likes yucky food</td>
</tr>
<tr>
<td>Detail 6</td>
<td>6 inches long / can fit in hand</td>
<td>2</td>
<td>little</td>
</tr>
</tbody>
</table>

STRUCTURE (ST) SUBTOTAL =
## APPENDIX C

### CUBED Narrative Language Measure

### NLM LISTENING

**Third Grade Progress Monitoring: STORY 3**

<table>
<thead>
<tr>
<th>Child ID</th>
<th>Audio File</th>
<th>Examiner</th>
<th>Date</th>
</tr>
</thead>
</table>

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 tell the parts you remember."

<table>
<thead>
<tr>
<th>STORY GRAMMAR (SG)</th>
<th>1 POINT</th>
<th>2 POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Plan</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Attempt</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Consequence</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Emotion</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Plan-2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Attempt-2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Consequence</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ending</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANGUAGE COMPLEXITY (LC)</th>
<th>1 POINT</th>
<th>2 POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Times Used</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EPISODE 1 (E1) (from 1 point SL)</th>
<th>1 POINT</th>
<th>2 POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>So that</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>She/he</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Although</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LC SUBTOTAL</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OTHER TARGETS</th>
<th>Target</th>
<th>Times Used</th>
<th>Modality</th>
</tr>
</thead>
</table>

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 How Now Chart (see Examiner's Manual for details).

### VOCABULARY QUESTIONS (VQ)

- **What if (e.g., "What if you did X?")**
- **Additional questions (e.g., "What about Y?")**

**Example:**
- **Sarah was in an elegant auditorium. If she was a special night, what does elegant mean?**
- **Sarah does not remember her trumpet. How does Sarah feel?**

### PERSONAL GENERATION

(From an audio recorded.) 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 How Now Chart (see Examiner's Manual for details).
APPENDIX D

Generalized Expository Outcome Measure

ICE
INFORMATION COMPREHENSION AND RETELL

Examiner says, "I'm going to tell you some information. Please listen carefully. When I'm done you are going to tell me the same information. Are you ready?"

3rd Grade - Posttest TEXT 1

Child: __________________________ ID #: __________________________ Examiner: __________________________ Date: __________

The second planet from the sun is Venus. Venus is about as big as Earth. It also has mountains and plains like Earth. However, Venus is different from Earth in many ways. It is covered by thick clouds of acid. The clouds hold in the sun's heat, so it is very, very hot on Venus. It is too hot and dry there for plants or animals to live. It takes Venus 225 Earth days to travel once around the sun.

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

<table>
<thead>
<tr>
<th>TEXT STRUCTURE (TS)</th>
<th>2 POINTS</th>
<th>1 POINT</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Idea 1</strong></td>
<td>Second planet from sun is Venus</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Detail 1</td>
<td>Is about as big as Earth</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Detail 2</td>
<td>Has mountains and plains</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Detail 3</td>
<td>Covered by thick clouds of acid/acid clouds</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Detail 4</td>
<td>Clouds hold sun's heat</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Detail 5</td>
<td>Too hot and dry for plants or animals</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Detail 6</td>
<td>225 Earth days to travel around sun</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEXT QUESTIONS (TQ)</th>
<th>2 POINTS</th>
<th>1 POINT</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where is Venus?</td>
<td>Second planet from the sun</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>How big is Venus?</td>
<td>As big as Earth</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Why can't plants or animals live on Venus?</td>
<td>Too hot/dry</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**COMPREHENSION SCORE (TQ+TQ)**

<table>
<thead>
<tr>
<th>LANGUAGE COMPLEXITY (LC)</th>
<th>1 pt. each use</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modifiers</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>because</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>that</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>plains</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>different</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Acid</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**INFORMATION RETELL SCORE (TS-LC)**
### Sample Expository Graphic Organizer

<table>
<thead>
<tr>
<th>All organisms live in specialized environments called habitats.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitats are perfect homes for plants and animals because everything they need to live and grow is there.</td>
</tr>
<tr>
<td>The plants that naturally grow in a particular area are called flora.</td>
</tr>
<tr>
<td>Animals found in an area are called fauna.</td>
</tr>
<tr>
<td>When the environment has the right conditions for specific flora and fauna, they will thrive.</td>
</tr>
</tbody>
</table>
APPENDIX F

Expository Retell Peer Monitoring Tool
APPENDIX G

IRB Approval Form

UNIVERSITY
OF WYOMING

Vice President for Research & Economic Development
1000 E. University Avenue, Department 3355 • Room 305/308, Old Main • Laramie, WY 82071
(307) 766-5353 • (307) 766-5320 • fax (307) 766-2608 • www.uwyo.edu/research

April 27, 2016

Douglas Petersen
Associate Professor
Communication Disorders
University of Wyoming

Re: IRB Proposal

Dear Dr. Petersen:

The proposal referenced above qualifies for exempt review and is approved as one that would not involve more than minimal risk to participants. Our exempt review and approval will be reported to the IRB at their next convened meeting May 19, 2016.

Any significant change(s) in the research/project protocol(s) from what was approved should be submitted to the IRB (Protocol Update Form) for review and approval prior to initiating any change. Per recent policy and compliance requirements, any investigator with an active research protocol may be contacted by the recently convened Data Safety Monitoring Board (DSMB) for periodic review. The DSMB’s charge (sections 7.3 and 7.4 of the IRB Policy and Procedures Manual) is to review active human subject(s) projects to assure that the procedures, data management, and protection of human participants follow approved protocols. Further information and the forms referenced above may be accessed at the “Human Subjects” link on the Office of Research and Economic Development website: http://www.uwyo.edu/research/human-subjects/index.html.

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

Sincerely,

Colette Kuhfuss
Colette Kuhfuss
IRB Coordinator
On behalf of the Chairman, Institutional Review Board