

2013

Does Teaching Narrative Structure to Children with Language Impairments Improve Comprehension of Expository Text?

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DOES TEACHING NARRATIVE STRUCTURE TO CHILDREN WITH LANGUAGE
IMPAIRMENTS IMPROVE COMPREHENSION
OF EXPOSITORY TEXT?

by

Brynne Cook Evans

A publication submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Speech-Language Pathology

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2013

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ABSTRACT

Does Teaching Narrative Structure to Children with
Language Impairments Improve Comprehension
of Expository Text?

by

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Research has shown that knowledge of narrative text structure enhances students' abilities to comprehend and produce narrative discourse. The current study was designed to determine if training in narrative text structure was associated with improved comprehension for expository passages that adhered to a narrative structure. Six children between the ages of 5:3 and 9:7 with language impairments participated. Children were matched by grade and randomly assigned to the intervention or control group. Participants in the intervention group received instruction 2 times a week for 45-minute sessions for a duration of 12 weeks from a graduate student in speech-language pathology with 80% supervision by a certified speech-language pathologist. A literature-based narrative intervention that centered on knowledge of story grammar components, use of new vocabulary and grammatical structures, as well as, answering comprehension questions and retelling stories was utilized. Narrative outcomes and expository outcomes were measured before and after intervention. Narrative outcome measures included the

Test of Narrative Language Index Score (TNLAI) and the Monitoring Indicators of Scholarly Language rubric (MISL) analyzing a single scene narrative. Expository outcomes included two expository passages provided to each participant. After the participants were told the expository passage, they were asked to answer explicit and implicit comprehension questions about the passage as well as recall the passage in its entirety. Inter-rater reliability was determined to be 85% or above for scoring of all measures. Analysis of pre-test measurements found no significant difference between the groups. A series of one-way analysis of variance tests were conducted to evaluate whether children who received narrative instruction differed from children who did not receive instruction on the narrative and expository dependent variables after intervention. The ANOVAs conducted to test the relationship between group and narrative outcomes were significant favoring the experimental group for the TNLAI and the MISL scores. The ANOVAs conducted to test the relationship between group and expository outcomes were also significantly favoring the experimental group for the number of comprehension questions answered correctly, but not for the number of story details recalled. The implications of these results are discussed.

(41 pages)

PUBLIC ABSTRACT

Does Teaching Narrative Structure to Children with Language Impairments Improve Comprehension of Expository Text?

The current study asked whether training in narrative text structure was associated with improved comprehension for expository passages that contained aspects of narrative structure. Six children identified as having language impairment between the ages of 5:3 and 9:7 participated, 3 assigned to an experimental and 3 to a control condition. Participants in the intervention group received instruction 2 times a week for 45-minute sessions for a duration of 12 weeks. Findings revealed improved comprehension and production of narration, and in comprehension of informational text favoring the experimental group. There was no difference in recall performance between groups.

Brynne Cook Evans

ACKNOWLEDGEMENTS

I would like to thank Dr. Sandra Gillam for sharing her knowledge, talents and warm personality with me throughout the process of writing this publication. I would also like to thank my committee members, Drs. Ronald Gillam and Cindy Jones, for being willing to support me in this endeavor.

Lastly, I would like to thank my sweet husband and family for their support and encouragement throughout my graduate program and life. I could not have done it without all of you.

Brynne Cook Evans

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INTRODUCTION

Research has shown that knowledge of text structures enhances students' abilities to identify important ideas, construct meaning, acquire new content knowledge, predict future events, summarize, and monitor comprehension when reading or writing narrative and informational texts (Gajria, Jitendra, Sood, & Sacks, 2007). An emerging body of evidence suggests that training in oral language skills can result in significant and lasting improvements in later reading comprehension (Clarke, Snowling, Truelove, & Hulme, 2010; Gillam, Gillam & Reese, 2012; Paquette, Fello, & Jalongo, 2007).

A randomized clinical trial was conducted by Clarke et al. (2009) who compared three approaches to improving comprehension for participants with specific reading-comprehension deficits. Eighty-four children ages 8;0-9;0, who demonstrated specific reading comprehension deficits (i.e., an average discrepancy of 16 standard points between reading comprehension and reading fluency) were randomly assigned to one of three interventions targeting reading comprehension including text comprehension training, oral language training and a combination of both trainings. The text comprehension program focused on working with written texts and developing skills such as application of metacognitive strategies (i.e., visualizing, rereading, thinking aloud etc.), inferential reasoning from written texts and producing written narratives. The oral language program concentrated on spoken language and included learning specific vocabulary, figurative language and production of spoken narratives. The combined program incorporated all components from both the text and oral programs equally. Results indicated that all children made significant gains in reading comprehension. However, the children who received the oral language intervention demonstrated increased reading-comprehension skills up

to 11-months after the intervention; whereas, those who were part of the text comprehension and combined programs did not show as much generalization of skills or increases in their ability to comprehend reading passages. This provides evidence that oral-language therapy may have far-reaching effects as it pertains to knowledge of text structures and reading-comprehension.

(Clarke, Snowling, Truelove, & Hulme, 2010)

Other research studies have also indicated that oral language instruction, which focuses on facilitating awareness of narrative text structure, is associated with improved comprehension (Hogan, Bridges, Justice, & Cain, 2011). Narrative text structure is very predictable in nature and generally contains characters that are motivated into action by some initiating event. The characters then take a series of actions as part of an overall “goal”. Text structure based interventions such as those that increase knowledge of the narrative structure by teaching story elements (e.g., character, setting, initiating event, internal response, attempt, consequence) have been shown to contribute to story recall and comprehension performance for children developing typically and who demonstrate language and learning disabilities (Sencibaugh, 2007).

An intervention study conducted by Westerveld and Gillon (2008) placed specific emphasis on an oral narration intervention to enhance knowledge of narrative text structure through teaching specific story grammar components. In this study, 10 children ages 7;11-9;2 who demonstrated reading and oral narrative production as well as comprehension deficits, participated in an intervention that taught seven story grammar elements (e.g., setting, characters, problem, goal/plan, attempts, resolution and conclusion) in relation to spoken narratives. Five children were placed in a group that immediately received intervention. The others would later receive intervention.

Intervention sessions consisted of: discussing a story grammar element, identification of that element using a visual story map and participants retelling part of the story including the story grammar element discussed during the session. Oral feedback was given from the Speech-Language Therapist providing intervention and other participants in the group were encouraged to give each other feedback also. Results specified that, post-intervention, there were no significant differences for the production of narratives between the two groups or typically developing peers. There were also no significant effects for reading-comprehension accuracy in either group. However, the children in Group 1 who received the oral narration intervention first had significantly improved oral narrative comprehension abilities as compared to Group 2 who had not yet received intervention and their typically developing peers. Both groups showed superior development of oral narrative comprehension abilities over their matched typically developing peers (Westerveld and Gillon, 2008).

A non-experimental study by Swanson and Fey (2005) was completed to determine the feasibility of narrative based language intervention and its effects on children's knowledge of narrative text structure (Swanson and Fey, 2005). In this study, ten 7-8 year olds with specific language impairment (i.e. -1.5 standard deviations on the speaking composite and/or spoken language quotient of the Test of Language Development- Primary: Third Edition (TOLD-P:3; Newcomer and Hammill, 1997) participated in a narrative based language intervention that incorporated story content, story and sentence form and generation tasks. Each child was seen individually three times per week for six weeks. Each session consisted of: repeated story-retell imitation tasks, a sentence imitation task to target grammatical structures and provide appropriate models, story generation tasks using single picture scenes and verbal prompts to remember to include story elements. Results determined that children had improved narrative quality in

which, they could produce stories that included most of the story grammar elements discussed in the intervention. With adult prompts, they could produce all the story grammar elements. This indicates that narrative-based language intervention can produce significant results in production and knowledge of story grammar components. (Swanson and Fey, 2005.)

Recently, with the adoption of the *English Language Arts Common Core State Standards* (CCSS) in 46 states, students will be required to read and receive literacy instruction using informational text. Text structures associated with informational passages include: description, sequence, comparison, cause-effect, and problem-solution. Each structure has related signal words that aid in identification of that structure.

A description pattern in expository text implies the author describes a topic by listing characteristics, attributes, examples and features. Signal words/phrases for this type of text can be: for example, characteristics, including, to illustrate etc. For example, “The physical differentiating characteristics of a honey bear include short and sleek jet-black fur and a crescent shaped patch on the breast.”

A sequence pattern includes when the author lists items or events in numerical or chronological sequence, either explicit or implied. Signal words for this type of text can be: first, second, finally, when, previously etc. For example, “First, it is important to stretch. Then, you can begin the resistance training.”

A comparison pattern involves information presented by detailing how two or more events, concepts, theories, or things are alike or different. Signal words for this type of text can be: however, nevertheless, on the other hand, likewise, in comparison etc. For example, “Wolves and Huskies look a lot alike. However, they react to situations differently. In comparison, wolves are more predatory and domineering and huskies are more friendly and playful.”

A cause and effect pattern in expository text entails the author presenting ideas, events in time, or facts as causes and the resulting effect(s) or facts that happen as a result of an event. Signal words when reading this type of text will include: if/then, reasons why, as a result, therefore, because, consequently etc. For example, “Mount Saint Helens erupted after many years of dormancy. As a result, houses were covered in ash and many civilians died.”

A problem and solution pattern involves the author presenting a problem and one or more solutions to the problem. Signal words for this type of text can be: problem is, dilemma is, if/then etc. For example, “If economic downturn continues then many Americans will be left unemployed.”

However, many of the informational texts children will be asked to read do not follow one of the classic expository text structures, but contain aspects of other text structures including narrative (Meyer & Poon, 2001). For example, narrative structures may map onto a number of social studies lessons that are historical in nature. The following is an example of an expository text that contains aspects specific to narrative structure,

“The story of Helen Keller (Character) has given courage to many people. Helen lived in Tuscumbia, Alabama (Setting). Helen was born with normal hearing and sight, but this changed when she was one year old. She had a serious illness with a very high fever. After that, Helen was never able to see or hear again. Helen was blind and deaf. They brought a young woman named Ann Sullivan (Character) to stay at their house and teach Helen (Initiating Event). After much hard work, Helen began to learn sign language (Attempt). She learned how to read Braille. Braille is the method that blind people use to read. She even learned how to speak. When she was 20 years old, she went to college (Consequence). She decided (Plan/Attempt) to earn money by writing and giving speeches. She worked to get special schools and libraries for the blind and

deaf. She wrote many books, including one about her teacher, Anne Sullivan. Ann Sullivan made a big difference in Helen Keller's life (Reaction)." (McGraw-Hill Learning Materials in Spectrum Reading, 1998).

It is possible that heightened knowledge of narrative structure may improve comprehension of informational texts whose structure resembles that of narrative texts. This is important because there are a number of informational passages, texts, lessons and units in social studies in particular that do not follow a clear expository text structure such as compare-contrast, but rather contain information about people or "characters" who make plans, take actions and achieve goals. It may not be necessary to explicitly train every text structure that children may encounter if training in one genre transfers to another.

A study completed by Nathanson et al. (2007) provides evidence that training in one text structure (narrative) may transfer to another text structure (expository). In this study, participants included thirty-nine children diagnosed with learning disabilities by their school districts. Intervention for the experimental group included a strategy called narrative elaboration training (NET) developed by Saywitz and Snyder (1996). This strategy involved teaching students to use aspects of narrative structure to organize and recall information they had previously been taught through expository lessons. NET involved teaching students to remember and report on participant characteristics, setting details, actions and behaviors, and conversation/affective states contained in video vignettes. Initially, all participants of this study were taught a 30-minute classroom lesson about Mexican History at school. The lesson was given to groups of children in the same scripted manner. Two weeks after the lesson, the participants were randomly assigned to an experimental group (NET) or a control group. They then were given two 30-minute individual treatments or control sessions, two days apart. The children in the experimental group

were given rationale for the use of NET strategies, description and cue cards of the four informational categories, modeling of how to use the cue cards for each category and graduated practice including the child watching a video then practicing use of the informational categories while receiving corrective feedback for entirety and correctness of their narrative accounts of the video. Participants in the control group were given motivating instructions (eg., remember as much as you can) instead of specific strategy instructions. (Nathanson, Crank, Saywitz & Ruegg, 2007).

After the second session, each participant was interviewed about the lesson's content from 2-weeks prior. Students participated in a free recall and a cued recall (using informational category cue cards) session regarding the lesson taught 2-weeks prior regarding Mexican history. A propositional analytic system was analyzed comparing the children's generated narratives of the history lesson with the actual script of the history lesson. Results indicated that participants who received the experimental treatment (NET) could state significantly more correct information during cued recall ($d = 2.87$). Although results weren't statistically significant for free recall ($d = .37$), participants in the experimental group recalled eight times more information than children who did not receive NET. Therefore, this study provides evidence to support that training in one structure (narrative) can transfer to training in another structure (informational). (Nathanson, Crank, Saywitz & Ruegg, 2007).

Some research has shown that training in one text structure does not transfer to another similar structure. For example, Williams, Hall, deCani, Lauer, Stafford and DeSisto (2005) conducted a study to examine whether 2nd graders could be effectively taught to understand compare-contrast expository text structures and to determine whether that knowledge transferred to a similar text structure; Pro-con. Children in the experimental classroom were able to learn the

compare-contrast structure and this knowledge improved their comprehension of compare-contrast passages. However, knowledge of compare-contrast structure did not result in improved comprehension of Pro-con passages. (Williams, Hall, deCani, Lauer, Stafford & DeSisto, 2005)

The purpose of the current study was to determine if an oral language intervention that highlighted knowledge of narrative text structure was associated with improved comprehension of expository passages that contained aspects of narrative text structure.

METHODOLOGY

Participants

Eight children between the ages of 5:3 and 9:7 with language impairments from the no-treatment phase of a separate study were recruited for participation. Children were given informed consent forms and asked to take them home to their parents. Six children returned forms indicating they would like to participate. Three of the children were randomly assigned to the intervention group and three to a comparison group. Participants demonstrated a standard score of 85 or below on the *Clinical Evaluation of Language Fundamentals* (CELF-4; Semel, Wiig, & Secord, 2005) and a standard score of 85 or below on the *Test of Narrative Language* (TNL; Gillam and Pearson, 2004). None of the participants presented with hearing impairment, visual impairment, gross neurological impairment, oral-structural anomalies or emotional social disorders. All children performed within normal limits on a measure of nonverbal reasoning, the *Universal Nonverbal Intelligence Test* (UNIT; Bracken & McCallum, 1998). These measures were given before the study began.

General Procedures

Participants in the intervention group received group instruction 2 times a week for 45-minute sessions for a duration of 12 weeks from the first author who is a graduate student in speech-language pathology with 80% supervision by a certified speech-language pathologist. The intervention took place after school in a intervention room at the participants' elementary school. The children in the experimental and comparison group continued to receive services from special education or speech language pathology over the course of the study. Children in the comparison group did not receive the intervention provided in this study.

The CELF, TNL, and UNIT were given at the outset of the study. Only the TNL was re-administered at post-test, to measure potential changes in narrative skills between groups. The Narrative Comprehension (NC), Oral Narration (ON) and Narrative Language Ability Index (NLAI) scores were computed for these dependent variables. The narrative comprehension and oral narration subtests measure the participant's ability to comprehend and produce passages and narratives with no picture cues, with five sequenced pictures, and with a single picture cue.

Participants were also provided a single-scene picture and asked to produce a story with the picture as a prompt before and after the intervention phase. The picture was placed in front of the child and the child was asked to create a story using this picture. The participant's stories were recorded, transcribed and coded for inclusion of story elements and literate language using the Monitoring Indicators of Scholarly Language (MISL; Gillam & Gillam, 2013) described later.

To examine comprehension performance in expository passages, participants were asked to listen to two expository passages before and after the 12-week intervention period. The

expository passages were descriptive in nature and taken from McGraw-Hill Learning Materials in *Spectrum Reading: Grade 4* (1998). Descriptive passages were chosen as the test of transfer to informational text structure because it is most like narrative structure. Advanced grade level materials were chosen to make it less likely that children would be familiar with the vocabulary and concepts in the passages, highlighting their need to rely on text structure for comprehension and recall.

The passages were administered in a counterbalanced manner. After listening to the passages, participants were asked to answer questions related to the passages and recall as much as possible. The total number of story details possible to recall for each expository passage was 15 (for a total of 30 combined), and there were 8 comprehension questions (4 explicit, 4 implicit) associated with each passage (for a total of 16 combined). An example of an explicit question is as follows, “What was Helen’s teachers name?” This question has an unambiguous answer, it was mentioned directly in the passage. An example of an implicit question may be, “Why did Helen learn sign language?” The answer to this question is implied in the passage but not directly communicated. Therefore, implicit knowledge is required to answer the question. Participants were asked to listen carefully because they would be required to answer questions after listening to the passage and then retell the story remembering all parts. The clinician read the passage at a relaxed rate and asked the child comprehension questions relating to the passage. After the questions were asked the child was then required to retell as much of the story as memory would permit. The answers and recall produced by the participants were audio recorded and later transcribed and scored.

Scoring

The single-scene picture stories produced by the children were scored using the Monitoring Indicators of Scholarly Language rubric (MISL; Gillam and Gillam, 2010). This tool was used to monitor change in macrostructure and microstructure of story production. Macrostructure elements analyzed include: character, setting, initiating event, internal response, plan, action/attempt and consequence. Microstructure of the narrative comprises the literate language produced in the narrative including: coordinating conjunctions, subordinating conjunctions, mental/linguistic verbs, adverbs and elaborated noun phrases. Scores range from 0-3 for each element. An example of the rubric is located in the appendix.

Expository recalls were scored using a list of 15 story details that were considered the most important details of the expository passage by a team of scorers. If the participant included a proposition in their recall they were given a point. Points were added for a total score. The proposition lists and expository passages are located in Appendix A and B.

Explicit and implicit questions were scored as correct or incorrect. For example, children were asked, “Who was the main character?” in the story of Helen Keller. If the child stated Helen Keller or Helen they received one point. If they stated anything else in response to the question about character they were not given credit.

Reliability

Pre- and Posttest assessments were administered and scored by a team of evaluators who were blind to group assignment and to the goals of the study. After tests were scored, they were checked for reliability amongst scorers. The TNL and CELF-4 were scored first by one research assistant and then re-scored and checked for discrepancies by a second research assistant.

Expository recalls, comprehension questions and single-scene narratives were scored by one research assistant, and then a second evaluator scored a random sample of 20% of the recalls and comprehension question sets at pre- and post-intervention. Reliability was determined to be 100% for the comprehension questions and at or above 90% for the expository recalls. The single scene stories were also scored using the MISL rubric first by one research assistant, and then by a second. Reliability for MISL scoring was accomplished by re-scoring another 20% of the data at pre- and post- intervention and was 85% for the point-by-point scores.

Intervention Procedures

Participants who were randomly assigned to the intervention group participated in a literature-based, narrative intervention (Gillam, Gillam & Laing, 2012). Treatment was structured around wordless books and children's literature and provided participants with multiple opportunities to learn about and then share knowledge of story grammar elements, use new vocabulary and grammatical structures from model stories, answer comprehension questions and retell the stories.

The intervention was delivered in three phases. During the first phase (Phase I) participants were taught icons or symbols to represent each of eight story elements (i.e. character, setting, initiating event, internal response, plan, attempt, consequence, and reaction). The story elements were originally introduced with their related icons during a storytelling activity. As the clinician told the story, elements were highlighted through repetition, and by directing the child's attention to the representative icon.

Next, each story element became the focus of a series of individual lessons that followed a similar instructional pattern. Participants were given an explanation or definition of the story

element, examples of how to use it in a story, and asked a series of questions to give them practice in generating exemplars for the element. Then, participants took part in an activity during which they were asked to find the element in the wordless story that was told to introduce the icons initially. Each session was followed by a brief review. For example, an element that was taught was setting. Participants were told that settings are a place or time of day in which that the story occurs. Participants were encouraged to create settings and answer specific questions about what a setting is and identify the settings in the wordless story.

During Phase II and III, participants were exposed to more elaborate and complex stories and were expected to become more independent and proficient in their story telling. Participants were also taught target vocabulary. This vocabulary was defined during discussions surrounding wordless storybooks. Participants learned words specific to books (eg., author, illustrator, dialogue), story elements (eg., setting, initiating event), internal response (eg., frustrated, bored), adverbs (eg., quickly, frantically), verbs and adverbs (eg., discover, stroll, quickly), adjectives (eg., sneaky, beautiful), and words specific to understanding the content of the wordless books (eg., alley cat).

In these phases, the clinician provided a storyboard that served as a graphic organizer to assist in recall of the wordless stories used in the previous lessons. The storyboard was divided into eight squares; each contained a picture of an icon that represents a specific story element. The storyboards assisted in the participants retelling the stories as well as generating their own stories using the icons for support. Participants were asked to tell their story after they generated it. As they became more skilled, they were asked to try and tell their story without looking at icons or their storyboard.

Participants were also presented with single scenes or verbal prompts that represented a

more stringent test of their story telling abilities. Story comprehension was also targeted during instruction in drafting and story telling, and relied on the use of the story grammar component icons and graphic organizers. Sessions were designed so that participants practiced answering questions related to each of the story grammar components after listening to or telling stories. When participants responded incorrectly or did not respond to questions, they were given visual support through the use of story pictures, icons and graphic organizers. The clinician also encouraged students to take storyboards home to write stories with parents and caregivers and to bring them back to share in the next session.

All of the phases ended with a literature unit to help participants generalize what they have learned into an authentic book containing print. During the literature unit, participants listened to a story as it was read to them, and then were asked to name the story grammar components, answer comprehension questions and define vocabulary included in that book.

Fidelity

An intervention observation checklist (IOC) was used to monitor treatment fidelity. Each aspect of the session that was judged to be important was listed on the IOC as part of a bulleted list, followed by a box for the reviewer to check, or to place an “x” in if the instruction was omitted. For example, in order to check off each box associated with constructing a parallel story, the clinician would have had been observed to 1) mention all of the story elements by name, 2) assist the students in creating a part of the story related to that story element, and 3) ensure that each aspect of the story was drafted onto the appropriate storyboard by the student. Eighty percent of the sessions were observed. Implementation of the lessons was 90% or greater for all of the lessons that were judged.

Data Analysis

Difference scores were calculated for each of the dependent variables by subtracting the post-test score from the pre-test score. The difference scores were used in all analyses. Pre-intervention means and standard deviations for the TNLAI and MISL raw scores, the number of questions answered correctly and the number of story details recalled in expository passages are shown in Table A.2 for the experimental and comparison groups. Preliminary t-tests indicated that groups did not differ in terms of their pre-test performance on the measures of interest. Estimates of the effect size of the differences were computed using partial eta squared values in which .14 was considered to be large, .06 was considered to be medium-sized, and .01 was considered to be small (Cohen, 1988).

RESULTS

Means and standard deviations for the pre-test scores for all measures: the UNIT, the TNLAI and CELF are shown in Table A.1. Preliminary t-tests revealed no significant differences between the two groups (experimental, comparison) in their scores on these measures; UNIT ($t = -.189, p = .859$); CELF-4 ($t = -.092, p = .931$), the TNL); TNLAI standard score ($t = -.918, p = .411$). Independent t tests calculated for pre-test performance on narrative and expository outcome measures also revealed no group differences and included TNLAI raw scores ($t = -.918, p = .411$), MISL performance for producing single scene story production ($t = -.645, p = .554$), or in their ability to answer questions ($t = -.186, p = .862$) and recall information ($t = .197, p = .853$) from the expository passages at pre-test. The pre-test means and standard deviations for these outcome measures are shown in Table A.2.

In order to show that performance on expository outcome measures may be related to training in narrative, it was important to first determine whether gains were made in narrative comprehension and production. Therefore, a series of one-way analysis of variance tests were conducted to evaluate whether children who received narrative instruction differed from children who did not receive instruction on the narrative dependent variables. The independent variable was group (experimental, comparison). The dependent variables for narrative outcomes were the difference scores (post-test - pre-test) calculated for the TNLAI raw scores and the MISL score for the single scene narratives.

Means and standard deviations for the post-test difference scores for the narrative and expository outcomes are shown in Table A.3. The difference scores for all variables are also included in the Table A.3. The ANOVAs conducted to test the relationship between group and narrative outcomes were significant favoring the experimental group for the TNLAI, $F(1, 4) = 11.766, p = .036, p\eta^2 = .746$, and the MISL scores, $F(1, 4) = 11.458, p = .028, p\eta^2 = .741$.

One-way analysis of variance tests were conducted to evaluate whether children who received narrative instruction differed from children who did not receive instruction on the expository dependent variables. The independent variable was group (experimental, comparison). The dependent variables for expository outcomes were the difference scores calculated for the number of comprehension questions answered correctly and the number of story details accurately recalled (post-pre). The ANOVAs conducted to test the relationship between group and expository outcomes were also significantly favoring the experimental group for the number of comprehension questions answered correctly, $F(1, 4) = 10.0, p = .034, p\eta^2 = .714$, but not for the number of story details recalled $F(1, 4) = .053, p = .830, p\eta^2 = .013$.

DISCUSSION

The purpose of the current study was to determine if an intervention designed to improve oral language and knowledge of narrative text structure improved comprehension of expository passages that were descriptive in nature and contained aspects of narrative structure. It was hypothesized that knowledge of narrative structure would serve to improve comprehension of informational passages that contained similar structures (eg., character, setting, actions, feelings, plans).

In order to reason that increased knowledge of narrative structure was associated with comprehension of expository information, children first had to demonstrate significant gains in narrative language and structure when compared to children who did not receive the instruction. We utilized two tasks to measure narrative performance including the TNL raw scores and a criterion referenced measure of narrative production (MISL).

The children who received instruction in oral language and narrative structures in the intervention ($M = 73$, $SD = 6$) and comparison groups ($M = 77$, $SD = 4.6$) scored similarly on the TNLAI prior to instruction. However, after the children in the experimental group received instruction, their raw scores were substantially higher than those of the comparison group resulting in significantly higher standard scores (Experimental $M = 90$, $SD = 4.6$; Comparison $M = 74$, $SD = 9.6$). Individually, the children in the experimental group earned standard scores of 79, 73 and 67 prior to instruction and 91, 85, and 94 after instruction respectively. These scores represented substantial improvement when compared to the children in the comparison group. The children in the comparison group earned standard scores of 76, 82 and 73 prior to the experimental group receiving intervention and scores of 70, 85 and 67 after intervention. This pattern of findings suggests that children in the experimental group made gains ranging from 11

– 27 standard score points after instruction, while scores for children who did not receive this instruction remained stable or declined slightly after the intervention period.

Because some research has shown that training in one text structure does not transfer to another similar structure, as in Williams, Hall, deCani, Lauer, Stafford and DeSisto (2005) it was possible that children in the current study would make gains in narration, but not in comprehension of informational text. Recall that the 2nd graders who participated in Williams et al., (2005) learned the compare-contrast structure resulting in improved comprehension of compare-contrast passages but did not transfer these skills to a similar informational text structure; Pro-Con.

In the current study, children in the experimental group demonstrated significantly better comprehension performance as measured by their ability to answer questions about the descriptive material. This finding is particularly compelling given the fact that the content in the informational passages may have been unfamiliar to younger elementary children, especially the kindergarten and second graders. Further, all of the children had been identified as having language impairment, so it is a compelling finding that they were able to improve their performance in answering comprehension questions about the descriptive passages.

There are a number of methodological explanations as to why children in this study showed improved comprehension for descriptive informational text, a structure that was not taught to children, and children in Williams et al., did not. First, the children in our study participated in 24, 45-minute sessions in a small group (n = 3) over the course of 12 weeks, focused almost exclusively on narrative text structure. The students in Williams et al., were taught a total of 9 lessons during 15, 45 minute sessions in a classroom setting. It is possible that the instruction provided in Williams et al., while “explicit, structured, scaffolded and intensive”,

did not include sufficient opportunities for student practice necessary for transfer to another similar structure.

Contrary to findings by Nathanson et al., the narrative instruction in this study was not associated with gains in recall of facts from the descriptive passages. It was expected that knowledge of narrative structure would provide children with an organizational framework for use in organization and recall of factual information. However, the results of this small pilot study did not support this hypothesis. There are a number of possible explanations for the finding of no improvement for recall. First, one of the participants in the experimental group (001) did not produce a retell at pre or post-testing, which may have significantly skewed the findings. However, even with 001 removed from the analysis, the groups produced a similar number of words at pre and post- test during the recalls.

While there was no measure of memory obtained for children in this study, it is well known that children with language impairment often have poorer working memory than children developing typically. Working memory limitations contribute to difficulty in a range of comprehension tasks, including recall of passages. As previously stated, the content in the passages was potentially unfamiliar to the children, particularly for those in kindergarten and second grade. It is possible that children experienced working memory constraints that were too great for the knowledge of text structure to override for successful recall of passages containing unfamiliar information.

The most reasonable explanation for the results related to recall is that unlike Nathanson et al., it was not asked of the children to participate in a cued recall condition. Students in Nathanson et al., participated in free and cued recall conditions, with statistically significant findings only for the cued recall. Further, children had been taught the history lesson they were

asked to recall. The children in the present study were not given any instruction related to the descriptive informational topics and were not given cues to aid them in recall. In a future study, with a larger sample size, it would be important to include both cued and free recall conditions, to determine whether differences emerge in recall performance between participants receiving treatment in narrative structure and those who do not.

Limitations

The greatest limitation in the current study is related to sample size. Any time a sample contains fewer than 25 measurements there is the potential for over or underestimation of the error. Accordingly, our results should be interpreted with cautious optimism (Springate, 2011). This is an early efficacy study, which will be used to provide evidence for further studies at a low cost. Another factor that limits the interpretation of our findings is related to the make-up of the sample. The participants ranged widely in age and there is a broad range of skills that are acquired between K, 2nd, and 4th grades that may have impacted our ability to show transfer to a recall task involving a similar but different text structure. Further complicating this issue was the fact that one of the participants in the experimental group (K) did not do well during pre- post-testing. Intervention sessions were held after school increasing the participant's level of fatigue. Because this participant was the youngest in the group, she required increasingly more cueing to retain narrative recall and comprehension skills being taught during intervention. She also required more redirection than other participants. Despite the additional assistance, this participant did extremely well during intervention and did show progress in knowledge and comprehension of narrative- text structure based on improved scores of the TNL. Her lack of advancement in pre- and post- testing of expository text structure may be due to her inexperience

with testing procedures, unfamiliarity with text structure, as well as her limited attention span and fatigue level due to age.

Summary and Implications

This study examined whether training in narrative text structure was associated with improved comprehension for expository passages that contained aspects of narrative structure. The findings indicate that literature-based narrative training has a positive impact on comprehension of expository text recall. Participants, despite age differences, made statistically and clinically significant changes in their comprehension of expository text and knowledge of narrative text structure. These findings have educational implications. Children with language impairments have increased difficulty identifying important ideas, constructing meaning, acquiring new content knowledge, predicting future events, summarizing, and monitoring comprehension when reading or writing narrative and informational texts (Gajria, Jitendra, Sood, & Sacks, 2007). The narrative intervention utilized in this study did show the transfer of comprehension from narrative to expository text structure. This indicates that training in one structure can provide improvement in another. This is important because an intervention that can transfer to multiple situations is preferred. It will be more feasible and efficient to find an intervention that will aid students with language impairments in all aspects of text structure to ensure success in the classroom. To find a more productive way to improve recall of text as well as comprehension, further study of narrative-based intervention is warranted.

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APPENDICES

APPENDIX A. Demographic Variables and Findings

Table A.1. Demographic Variables

Participants	Age	Grade	Gender	UNIT	TNLAI	CELF CLS
<i>Intervention Group</i>						
001	5;1	K	Female	88	79	79
002	9;3	4	Female	91	73	67
009	6;11	2	Female	115	67	54
Group				95 (9.64)	73 (6)	66.67
M (SD)						(12.50)
<i>Comparison Group</i>						
004	7;0	2	Male	88	76	52
005	9;11	4	Female	88	82	72
007	5;11	K	Male	106	73	79
Group M (SD)				97 (15.58)	77 (4.58)	67.67
						(14.01)

Kindergarten (K); Universal Nonverbal Intelligence Test Overall Score (UNIT); Test of Narrative Language Narrative Language Ability Index Score (TNLAI); Clinical Evaluation

Table A.2. Pre-Performance for Narrative and Expository Outcome Variables for Intervention and Comparison Groups

Group	Intervention (n=3)	Comparison (n=3)
Narrative Outcome Variables		
TNLAI raw scores	11 (2)	12.33 (1.53)
M (SD)		
MISL Total Score	10 (6.55)	12.66 (2.88)
M (SD)		
Expository Outcome Variables		
Comprehension Questions	1.33 (2.30)	1.67 (2.08)
M (SD)		
Story Details Recalled	3.67 (4.72)	3 (3.46)
M (SD)		

Test of Narrative Language Ability Index (TNLAI); Monitoring Indicators in Scholarly Language (MISL).

Table A.3. Difference Scores for Narrative and Expository Outcome Variables for Intervention and Comparison groups.

	Intervention Group (n=3)	Comparison Group (n=3)	p-value
Narrative Outcome Variables			
TNLAI Raw M (SD)	5.66 (2.88)	-1.0 (1.7)	.036*
MISL M (SD)	4.33 (4.16)	-4.33 (1.53)	.028*
Expository Outcome Variables			
Comprehension Questions M (SD)	3.33 (1.52)	0 (1.0)	.034*
Story Details Recalled M (SD)	2.67 (3.05)	2.0 (4.0)	.830*

Test of Narrative Language Ability Index (TNLAI); Monitoring Indicators in Scholarly Language (MISL).

APPENDIX B. Expository Passage Measurements and MISL Rubric

Helen Keller Expository Passage, Comprehension Questions & Story Details

Helen Keller Expository Passage

The story of Helen Keller has given courage to many people. Helen lived in Tuscumbia, Alabama. Helen was born with normal hearing and sight, but this changed when she was one year old. She had a serious illness with a very high fever. After that, Helen was never able to see or hear again. Helen was blind and deaf. They brought a young woman named Ann Sullivan to stay at their house and teach Helen. After much hard work, Helen began to learn sign language. She learned how to read Braille. Braille is the method that blind people use to read. She even learned how to speak. When she was 20 years old, she went to college. She decided to earn money by writing and giving speeches. She worked to get special schools and libraries for the blind and deaf. She wrote many books, including one about her teacher, Anne Sullivan. Ann Sullivan made a big difference in Helen Keller's life.

Helen Keller Comprehension Questions

1. Who was the main character? *Helen*
2. What caused Helen to be blind and deaf? *Serious illness/ high fever*
3. What was her teacher's name? *Anne Sullivan*
4. How did Helen learn sign language? *Her teacher/Anne Sullivan taught her*
5. How did Helen earn money? *Wrote/gave speeches*
6. Why did Helen learn sign language? *So she could communicate/ because she was deaf and blind.*
7. How did Helen read? *Braille*

8. Can you remember some of the places that were mentioned in the story? Tuscumbia, Al.,
home/house, special schools, college, libraries
9. In what city or state did the story take place? Tuscumbia, Al.,
10. How does this story end? She makes a big impact on the world, brought courage to
others.

Helen Keller Story Details

1. Helen Keller
2. Anne Sullivan
3. Teacher
4. Blind people
5. Tuscumbia, Alabama
6. Went to College
7. Built special schools and/or Built Libraries
8. Never able to see/hear OR Was blind/deaf
9. Illness made her blind
10. Brought Anne to teach Helen
11. Learned to read OR Braille OR speak OR sign language
12. Communicate
13. Writing, giving speeches
14. Anne made big difference
15. Helen gave courage

Neil Armstrong Expository Passage, Comprehension Questions & Story Details

Neil Armstrong Expository Passage

Neil Armstrong is one of the great pioneers of space. He was the first person to walk on the moon. Armstrong was born in Ohio in 1930. He took his first airplane ride when he was six years old. Then, on his 16th birthday, he received his student pilot's license. Armstrong served as a Navy fighter pilot during the Korean War and received three medals for bravery. He was known as one of the best pilots in the world. In 1962, he was accepted into an astronaut training program. Armstrong had a lot of experience when he was named to be the one to fly to the moon. It took four days to get to the moon. One of the greatest events in history was when Neil Armstrong made it to the moon.

Neil Armstrong Passage Comprehension Questions

1. Who was the main character in the story? *Neil Armstrong*
2. Why is Neil Armstrong famous? *Because he was the first person to walk on the moon*
3. What did Armstrong get on his 16th birthday? *Student pilot's license/pilot's license*
4. What war did Armstrong fight in? *Korean*
5. Why was Armstrong known as one of the best pilots in the world? *Because he won three medals (medals)*
6. How many days did it take to fly to the moon? *4 days*
7. Why was Armstrong named to command the flight to the moon? *Because he had experience/ he had the most experience*
8. Where was Neil Armstrong born? *Ohio*
9. Can you remember some of the places mentioned in the story? *Ohio, the moon,*

10. Why do you think Neil Armstrong was the astronaut that got to go to the moon? Why did they pick him and not someone else? Because he was experienced, knew what he was doing, he was one of the best pilots in the world
11. How does this story end? Neil Armstrong made history

Neil Armstrong Story Details

1. Neil Armstrong
2. Space
3. Ohio
4. Took 4 days to get to the moon
5. Korean War
6. Walked on the moon
7. Took airplane ride (being 6 at the time)
8. Got pilots license
9. Served as Navy fighter
10. Got 3 medals for bravery
11. Got accepted to astronaut training program/was astronaut
12. Was named to fly to the moon
13. Because of his experience
14. Great pioneer of space
15. Greatest event in history was being first man on moon

Table B.1. Monitoring Indicators of Scholarly Language Rubric Example

Story Grammar Elements	0 Points	1 Point	2 Point	3 Point
Character	No character is included, or only ambiguous pronouns are used	Includes at least one character using non-specific labels (pronouns, nouns) WITH a determiner (“the” or “a”)	Includes at least 1 character using a “name” for the character	Includes more than 1 character using specific name