A Preliminary Investigation of a Narrative Structure Awareness Task Used with Early Elementary School Children

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ABSTRACT

(Narrative, awareness, children)

The purpose of this study was to examine a task designed to measure narrative structure awareness. Narrative structure awareness is the ability to recognize and organize the components of story grammar. The research question asked was: are first and second grade children able to make judgments about episodic structure, and do children differ in their meta-narrative skills by grade or by gender? To address this question, 32 first grade students and 30 second grade students, all typically-developing, were told six, 42-46 word stories. The stories were composed of a setting, initiating event, attempt, and consequence. Five of the stories were presented out of order (i.e., the episodic structure was reorganized). After each story was told, each participant was asked to judge whether the story “sounded right” and, if it didn’t, to retell the story in its correct order. The results revealed no difference between the grades and no difference between genders. The children seemed to have some awareness of narrative structure as judged by their above chance level in determining whether the story was told in the accurate order. However, narrative structure awareness did not appear to be complete because 41% of the children were unable to retell the misordered stories correctly. In the future, this narrative structure awareness task could show a more clear association between literacy and meta-narrative abilities.
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A PRELIMINARY INVESTIGATION OF A NARRATIVE STRUCTURE AWARENESS TASK USED WITH EARLY ELEMENTARY SCHOOL CHILDREN

By

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An adequate knowledge of narrative structure awareness is important for speaking, listening, writing, and reading. Narratives are defined as a report of “what happened,” and they can be real or make-believe (Lahey, 1988). Imaginary narratives can be referred to as “stories.” An effective speaker uses narrative knowledge to describe a situation temporally and, in many cases, in a logical-causal manner. Listeners use narrative skills to understand and keep hold of narrative information. Narrative structure also is one of many factors that readers and writers use to organize information in written stories.

There are assessment measures for narrative ability, both norm-referenced and criterion-referenced. An example of a norm-referenced assessment is the Test of Narrative Language (Gilliam & Pearson, 2004). Assessments like these assess production and comprehension of narrative discourse. However, when reading and writing, individuals may need to actively think about narrative structure to understand and produce narratives in written form. Typically, narrative assessments do not examine individuals’ conscious awareness of narrative structure. The purpose of this study, then, was to examine a task designed to measure narrative structure awareness. It is unknown when children develop the ability to think about narrative structure, or their metanarrative skills. If measures of narrative awareness could be created, they might provide insights into the relation between narrative structure awareness and literacy skills. If these associations could be evaluated, new assessments and interventions could be created to help improve a child’s reading and writing abilities.

**Narrative Development**

Children begin their journey through narrative development by describing personal experiences (Stadler & Ward, 2005). Around 3 or 4 years of age, children begin storytelling, which requires the use of more complex language than day-to-day conversations. Children acquire these narrative skills in four major stages (Lahey, 1988). These stages occur in the order of least complex to most complex. In general, as a child moves through narrative development, he/she gains temporal order (first to second stage) and then cause and effect relationships (third and fourth stages) in relaying information about happenings.
Narratives representing the first and second stages of development, as described by Lahey (1998), are called additive and temporal chains. Narratives representing the third and fourth stages are labeled as causal or multi-causal chains. In causal narratives, events that occur allow or cause the other events to happen (Lahey, 1988). Causal chains that have a problem and a solution are considered to contain plots or episodes. A multi-causal chain has more than one episode. A single, complete episode has three essential components (initiating event, attempt, and the consequence), and four optional components (setting, internal response, plan, and reaction) (Lahey, 1988). The seven components follow in a logical order from each other. Each one of these components is caused by its preceding part.

The setting of a narrative is the introduction to the episode. It establishes who the characters are, where they are, and what they are doing. For example, a setting could be, “Olivia and her friend went to go see a movie.” Lahey (1988) explained how the setting allows for the initiating event to occur, and prevents other circumstances from happening (e.g., Olivia could not be taking a test at school if she went to go see a movie). The next component is the initiating event, also known as the complication. This is where the problem is introduced (e.g., “They could not see the movie because it was sold out”). After the initiating event is the internal response, if the narrator decides to include it. The internal response contains information about the thoughts, goals, and plans that stem from the initiating event (e.g., “Olivia was disappointed that the movie was sold out.”). An individual also may include a plan, which is used to rise above the complication (e.g., “Olivia thought of some other options for her and her friend, since they could not see the movie they wanted to see.”). The internal response and plan lead to the attempt(s) that the character uses to try to solve the problem, or initiating event, that arose. An example of an attempt might be: “The two girls bought tickets for a different movie that they also wanted to see.” The consequence is the sixth component, and it is the positive or negative result of the attempt (e.g., “Olivia and her friend really enjoyed the movie after all.”). Finally, a reaction may be provided, which is the third optional component. A reaction is the thought(s) that occurs because of the consequence (e.g., “Olivia was really happy she saw it.”).
Narrative skill (i.e., episode development) occurs across the preschool and early elementary school years (Lahey, 1988). Several researchers have examined development of narrative skills by examining specific elements of narrative development or methods for eliciting narratives. For example, John, Lui, & Tannock (2003) captured age differences in children’s knowledge of story grammar. This was most evident in the retells of internal responses, because the older children included this component more often. The authors supported this evidence by explaining that memory for the setting, attempts, and consequences develops earlier than it does for internal responses (Griffith et al. 1986; Mandler & Johnson, 1977; Stein & Glenn, 1979). Another finding from this study was that children, no matter what age group, retold more actions, initiating events, and consequences more often than they did the character’s emotions. The results of the study by John et al. (2003) were parallel to other research (Griffith et al. 1986; Mandler & Johnson, 1977; Stein & Glenn, 1979) that showed that children are inclined to focus their retell on initiating events, attempts, and consequences.

Schneider & Dube (2005) conducted an experiment that revealed that the way a story is presented to children matters, and this presentation also affects the content or information children include. The authors used three different story presentation styles in a study of kindergarten and second grade children with typically developing language skills. The styles were oral only, pictures only, and combined oral with pictures. The combined condition proved to elicit the best retells; the children in kindergarten succeeded more in the combined style than in the picture only style, and the children in second grade provided more information in the combined and oral styles than in the picture only style. There was no significant difference in the amount of story grammar units presented between the two age groups in the combined condition. The authors offered an explanation for the results; the oral conditions were better than the picture only condition in that the children had a chance to utilize verbatim recall. Retelling what they heard verbatim may have been easier than story generation as well. These findings fit well with research by Bishop and Donlan (2005) who stated that using a retell to gather narrative information is more representative of a child’s language ability than nonverbal IQ.
The present study focuses on children with typically developing language skills in the early elementary school years (e.g., first and second grade) to capture their level of narrative awareness. The study was motivated by the relation of narrative skills and other language and literacy skills.

Importance of Narrative Skills for Language and Literacy Development

Stadler and Ward (1995) discussed that narratives are a predictor of academic competency, and more specifically, constructive in the development of oral language, literacy, and conceptual ideas. Narratives involve three skills that are vital for literacy development: the use of explicit vocabulary, pronouns, and temporal connectives. The authors stressed the idea that narratives are a “bridge” to literacy. They explained this connection by saying conversational topics are familiar and immediate, whereas literate topics are abstract and usually past tense. Narratives are the middle point between the two. Children’s oral language skills, especially with regard to narrative skills, are extremely important in preschool and then again after the first few years of learning to read (Scarborough, 2001; Sénéchal & LeFevre, 2002; Storch & Whitehurst, 2002; Tabors, Snow, & Dickenson, 2001). Reese, Suggate, Long, & Schaugeney (2010) conducted two correlational studies to further explore the connection between oral narrative skills and reading skills. In the first study, the mean age of the participants was about 6 years old. At this age, the children’s narrative ability did not predict their reading ability for the following year. The opposite was true for the second study, in which the mean age of the children was about 7 years. The results of that study showed that the children’s narrative ability did predict their literacy skills for the following year. This finding demonstrated that the link between oral narrative skills and literacy development becomes increasingly stronger with age.

Statement of Purpose

Although a substantial literature base exists regarding children’s developing narrative skills, this research has examined only children’s developing knowledge and use of narratives and the relation of narrative skills to other language and literacy skills. What is unknown is when children develop an ability to actively think about or consider
narrative (episodic) structure, which may help explain this later relation. Because other metalinguistic skills have been shown to be important contributors and predictors of early literacy abilities (Apel & Masterson, 2001; Bear & Templeton, 1998; Ehri & McCormick, 1998; Moats, 2000; Schlagal, 2001; Siegler, 1996), it seems likely that children’s ability to consciously consider narrative structure also may be a crucial contributor and predictor of children’s reading and writing skills. To date, however, there has not been an investigation of children’s meta-narrative skills.

Thus, the purpose of this study was to test the feasibility of a narrative structure awareness task, and evaluate early elementary students’ meta-narrative skills. Specifically, the research questions asked were:

1) Are first and second grade children able to make judgments about episodic structure, and
2) Do meta-narrative skills improve across grades, and/or differ between genders?

I predicted that early elementary students would be able to make judgments about episodic structure, and that this skill would improve with grade. I also hypothesized that the females would be more successful than the males.

METHOD

Participants

There were 62 participants: 32 first grade students and 30 second grade students. They attended an elementary school in a southeastern city in the United States. Parental consent was obtained for each participating student as approved by the local institutional review board. The school-wide percentage of students eligible for free and reduced lunch was 93%.

The mean age for the children in first grade was 8 years and 4 months, and the standard deviation was 6 months. The school reported the participants’ ethnicities in this group as 6% white, 88% African American, and 6% Hispanic. The amount of males and females were equal in this group; there were 16 each.
The mean age for the children in second grade was 9 years and 2 months, and the standard deviation was 7 months. The second grade children’s ethnicities were reported as 3% white, 93% African American, and 3% Native American. There were 18 males and 12 females.

An independent T-Test was conducted to determine whether the two groups based on grade differed by age, and results were significant, $t = -6.17, df = 60, p < .001$. Thus, the second graders were significantly older than the first graders.

**Measures**

The narrative awareness task was designed as a two-level measure of linguistic awareness (Apel, 2011). For the purposes of this study, it consisted of 6 stories; half were about more familiar topics (e.g., riding the bus home from school), and the other half were not (e.g., playing outside in the snow; see Appendix A for a list of the stories). Each story was about 42-46 words, and comprised of a setting (S), initiating event (IE), an attempt (A), and a conclusion (C). Except for stories 3, 5, and 6, each component was one sentence long. For number 3, the initiating event was two sentences. For numbers 5 and 6, the conclusions were two sentences. Each story had four cards with cartoon pictures on them. These depicted what each component of the story was telling. For each participant, the tester told five stories out of order, and one story in order. The story that was told in order was counterbalanced across participants.

When a story was told in the correct episodic sequence, its components were in the order of setting, initiating event, attempt, and conclusion. All of the stories in this study were always told beginning with the setting. Other than that, the order of the initiating event, attempt, and conclusion was reordered in every way possible.

**Procedures**

For the narrative structure awareness task, each child was seen one-on-one with a tester who had received training by project personnel. The tester set up an audiorecorder so that the entire session was documented. The tester was instructed to start the session by giving the child’s name, teacher, and the activity they were doing.
The tester began by putting the pictures down in front of the participant, and then telling the story. The order of the presented stories was randomized. After the tester told a story, whether it was in the correct sequence or not, he or she asked the child, “Does this story sound right?” If the child answered yes, the tester moved on to the next story. On the other hand, if the child said that he or she did not think the story was told in the correct order, two subsequent steps were followed. First, the tester told the child to retell the story to “make it sound right.” When adhering to the story grammar model, children should use story grammar knowledge to retell stories, no matter how the story is presented to them (Schneider & Dubé, 2005). After the child produced the retell, he/she was told to move the pictures so that they were placed in the correct sequence. The tester then documented the way that child ordered the pictures.

Data Analysis

Each story for each participant received three scores: the yes/no score, the retell score, and the picture order score. Recall that the participant was asked, “Does this story make sense?” The answer to this question was given a raw score (the yes/no score). Participants received a 0 if they were incorrect (e.g., said the story was in correct order when it was not). They received a score of 1 if they were correct. Following this scoring, each child’s retells were transcribed. The retell then was given a score. The retell was given a score of 2 when the participant retold the story with complete episodic structure, a score of 1 when the episodic structure was intact but one component involved a different topic/content than the original story, and a score of 0 if one or more components were missing.

When scoring the retell, points were not deducted if a child omitted the setting. Instead, the focus was on inclusion of an episodic structure (i.e., initiating event, attempt, and consequence; Liles, Duffy, Merritt, & Purcell, 1995; Merritt and Liles, 1987; Schneider & Dubé, 2005; Stein & Glenn, 1979).

The last step in the retell task was to put the pictures of the story in order. Unfortunately, not all testers indicated the order on the recording. This information had to be removed, because not all the data were available.
Reliability

All data were transcribed and scored by the primary author. Twenty percent of the total sample was rescored by a second scorer trained in the scoring procedures. Inter-rater reliability was 92%.

RESULTS

The purpose of this study was to examine whether children with typical language development have the ability to make judgments about episode structure. It also sought to determine whether these meta-narrative skills improved from first to second grade, and differed between males and females. After a story was read to the participant, he/she was asked if it was told in the correct story grammar sequence. This was called a yes/no score, and was recorded as a raw score, rather than a percent. The children in first grade had a mean yes/no score of 4, with a standard deviation of 2. The second grade group also had a mean yes/no score of 4, but with a standard deviation of 1. If the participant believed the story was not in the correct order, he/she was told to retell it in the correct order. For the children in first grade, the mean score of the retell portion was 17%, and the standard deviation was 21%. The children in second grade had a mean score for the retell that was 22%, with a standard deviation that was also 22%.

An independent T-Test was conducted to examine whether the children from the two grade groups differed on the yes/no scores and on the retell scores. There was no significant difference on the yes/no scores, \( t = .00, df = 60, p > .05 \). The same was true for the retell scores; there was not a significant difference, \( t = -.77, df = 60, p > .05 \).

Next, an independent T-Test was performed to observe any differences between gender on performance. Because there were no differences between grades, the data were collapsed across grades. There was no significant difference between genders found for the yes/no, \( t = -.16, df = 60, p > .05 \), and the retell score, \( t = .214, df = 60, p > .05 \).

Please see Figures 1 and 2 that show the distribution of scores for the yes/no and the retell tasks. Because the grades did not differ significantly, their scores are combined for those figures.
DISCUSSION

The main question in the study was whether children in first and second grade had at least some awareness of narrative structure. When looking at the distribution of scores, it was observed that for the most part, the participants were able to identify whether the story was in the correct order. The opposite was true for their ability to verbally correct the story. This discrepancy could be due to the fact that the participants had a 50/50 chance to get the yes/no score correct. Thus, they would need a score above three. Twenty-seven percent of the children scored at chance level, which leaves 72% to be above chance level. Because 72% of the participants were above chance level, it does seem that they were making some judgments based on some awareness of narrative structure. For the retell score, 41% of the children did not get the answer correct at all. This finding reveals that those participants were able to determine whether the story sounded right or not, but they were not able to verbally put it in the correct order. Thus, it may be that in first and second grade, children have some level of awareness that stories do not fit the typical and expected episodic structure, but have not completely developed the ability to explicitly correct the misordered information.

Ideas for the Future

In the future, this narrative structure awareness task can be used to test a wider range of ages (e.g., kindergarten to fourth grade). This wider range may better point out the advancements in the narrative structure awareness. That is, younger children may perform more at chance level and older children may be able to correct misordered information at a higher percentage level than children in the first and second grade.

Although narratives are important because they relate to literacy, it remains unknown whether narrative structure awareness is related to literacy skills (i.e., is the relationship between narrative abilities and literacy skills due to the ability to produce narratives or the awareness of their structure?). Because the present task focused only on narrative awareness and did not assess the students’ literacy abilities, it is unknown whether their performance on the narrative structure awareness task relates to their literacy skills. In the future, researchers could assess children’s skills in both literacy and
narrative structure awareness to determine whether a significant relation exists. This would show a more clear association between literacy and meta-narrative abilities.

When providing the retell, some of the children produced ambiguous phrases that would not make any sense to a listener who had not yet heard the story. An example of this would be, “It was backwards.” There are a few possible reasons for this outcome. Liles (1985a) discussed that children will explain a story in a more cohesive manner if they think they are telling it to someone who has never heard the story. When telling a story to a listener who has not yet heard the story, it is necessary for the narrator to use explicit vocabulary, comprehensible pronouns, and temporal connectives (Stadler & Ward, 2005). In the present study, the children retold the narrative to the person who told them the story in the first place. If this aspect of the retell was changed, some of the children may have produced the necessary words needed for the story to make sense and thus, achieve a higher score.

Removing the pictures during the initial story telling also could be something to consider in the future. Research has indicated that during story elicitation tasks, the use of pictures for guiding the child actually has a negative effect: the production of fewer internal responses and intentions, and overall less information provided (John, Lui, & Tannock, 2003).

Limitations

There were a few limitations to the present study. The third picture task was not administered correctly, so these data were lost. Some participants received six stories, while others received 12; if all children had been administered 12 stories, perhaps different findings would have been obtained. Further, an entire group of participants’ data were discarded. This group was composed of children in kindergarten, who were only told stories three and four out of the first six. This did not allow for the kindergarten children’s data to be compared to the two older groups.

This narrative structure awareness task was performed with about 30 first and second grade children in a low SES school. Therefore, it cannot be generalized to all children as an indicator of how they would perform on the same task. In the future, this task should be carried out with children from other SES levels.
In summary, the typically developing children in first and second grade had some development of narrative awareness structure, but they could not always put the story grammar components in order. In the future, this task should be done with children across a wider age range. This narrative structure awareness task could potentially be useful for predicting literacy abilities.
Figure 1. The distribution of scores for the first and second grade children on the yes/no task.
Figure 2. The distribution of scores for the first and second grade children on the retell task.
Appendix A

List of Stories
1. S: Today I went to the pet shop to get a new pet.
IE: I wanted a snake but they didn’t have one.
A: So I looked at other animals until I found a cute dog.
C: Now I have a cool dog named Max.

2. S: Susan was making chicken and rice for the family.
IE: Some friends came over and there was not enough food for everyone.
A: She quickly made some extra rice, rolls, and a salad.
C: Everyone had enough to eat. They enjoyed the dinner.

3. S: Keith was on the bus going home from school.
IE: On the way home, the school bus got a flat tire. Keith worried that he would not get home.
A: Someone came and changed the tire.
C: Keith got home just fine.

4. S: One day, it started to snow really hard.
IE: My brother and I wanted to build a snowman but we needed out gloves.
A: Mom got our gloves and we put them on.
C: We made really big snowmen that everyone had fun.

5. S: Jordan was a little boy who wanted to get dressed all by himself.
IE: He put his shirt on backwards.
A: He told mom that he needed just a little help.
C: Mom turned his shirt around. He was good to go!

6. S: A storm was blowing in at the beach.
IE: Lightning began to flash in the distance.
A: The lifeguards yelled for everyone to get out of the water.
C: All the people obeyed the lifeguards and got out. They were safe!
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