

Production of Narratives by At-Risk American Indian Children in the Midwest

Grace E. McConnell and Diane Loeb

The narratives of two groups of 28 American Indian children attending a Midwestern Bureau of Indian Affairs school (16 with a mean age of 5;10 years, and 12 with a mean age of 7;8 years) were examined in three contexts: retell, fictional with sequence pictures, and fictional with one picture. The narratives were examined in terms of microstructure (e.g., total number of utterances, total number of words, total number of communication units, and mean length of utterance in words and morphemes), macrostructure, and evaluative elements, which are used by speakers to link events, comment on events and characters, and inform the listener on how to interpret the story. Differences among story task contexts also were evaluated. The narratives of American Indian students differed between age groups and across tasks. The older children produced narratives with longer mean length of utterances in morphemes and more evaluative elements. The older children also produced more end-at-high-point stories, whereas the younger children produced more chronological narratives. Both age groups responded with longer and more complex narratives when generating fictional stories with visual support. Clinical implications are provided for adjusting narrative assessment tasks to be more culturally appropriate for children by modifying the task demands, increasing the role of the listener, and adding cultural relevance to stories.

Key words: *American Indian, assessment, macrostructure, microstructure, narratives*

TELLING STORIES PROVIDES a lens to view a person's experiences and a culture's shared values and beliefs. The narratives of American Indians in the United States have been studied to some extent (Bayles &

Harris, 1982; Kay-Raining Bird & Vetter, 1994; Westby et al., 2002), but additional analyses of narrative skills of American Indian children may inform us about their language skills as well as their educational needs (Westby et al., 2002). This is particularly true for American Indian children because narratives are the primary avenue by which they learn about their cultural values and beliefs (Cleary & Peacock, 1998; Garrett et al., 2003) and which may vary greatly depending on tribe, socioeconomic status, and degree of acculturation. Narrative skills reflect skills in conceptualized language, used in the language of the classroom for instruction and participation in both oral and written modes (Suggate et al., 2018). In addition, contemporary studies of narratives in American Indian children are needed to inform historical studies, as acculturation into mainstream society and extent of traditional tribal practices have affected the use of American Indian bilingualism, Indian English dialects, family systems, beliefs, and values (Leap, 1993).

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Furthermore, educational assessment of American Indian children in the United States has not reflected or enhanced the content knowledge or comprehension skills of these students. In fact, the mandates of national educational policies have been found to hamper the implementation of appropriate assessments for these students (Nelson-Barber & Trumbull, 2007). Also, when using standardized tests, the demographics of the normative sample usually include any American Indian participants in the “other” category, and specific instructions are not available for accommodating this population, leaving little guidance for speech-language pathologists (SLPs). These factors have resulted in American Indian children often being placed inappropriately in special education programs (Long & Vining, 2000).

TYPES OF NARRATIVES

There are a variety of oral narratives that can be told by children. Heath (1982) described four types: recounts, accounts, event casts, and fictional stories. Hughes et al. (1997) suggested scripts to be a fifth type. Scripts differ from fictional stories in that they are about routine events. In our study reported in this article, we used the Test of Narrative Language (TNL; Gillam & Pearson, 2004) that has one story that involves a script and two that elicit fictional stories. In the interest of brevity here, for a succinct introduction to the use of narratives in an academic context, see Spencer and Peterson (2020).

With respect to analysis, narratives can be examined both in terms of microstructure (Fiestas & Peña, 2004; Gazella & Stockman, 2003; Justice et al., 2006; Muñoz et al., 2003) and macrostructure (Muñoz et al., 2003; McCabe & Rollins, 1994; Spencer & Petersen, 2020). Microstructure analysis evaluates the syntactic, lexical, and morphological complexity of the story. In contrast, macrostructure analysis evaluates story grammar elements and episodic relations. Macrostructure analysis also may include analysis of evaluative elements within the story, which is the narrator’s method of providing continuity for

the story and indicating the importance or relevance of the events within a story. Some examples of evaluative elements include relating characters’ emotions or cognitive states (“She was so clever to do that”), causal explanations (“They went there because their friends were there”), negatives (“He wouldn’t go”), indirect or direct speech (“The mother said, ‘Go to bed’), and predictions (“I think they’ll find it now”).

NARRATIVE ELICITATION TASKS

Fictional narratives can be elicited by asking a child to either retell or make up a story on their own. Within these two types of storytelling tasks, the child may or may not be provided with visual supports that represent the story elements to be related, such as a varying number of sequenced pictures, a wordless illustrated book, or one picture portraying characters and the theme of the story. These visual supports may provide additional context for story generation tasks.

Peterson, McCabe, and colleagues (McCabe & Rollins, 1994; Peterson & McCabe, 1983, 1994) analyzed the narratives of typically developing mainstream North American, English-speaking children, using the results to describe the sequential development of macrostructure elements. Around the age of $3\frac{1}{2}$, these children began to combine two events in their longest narratives, resulting in a two-event narrative. Children by the age of 4 could combine more than two events, but those events were related out of sequence, resulting in a leap-frog narrative. In some personal narratives, events such as a visit to the zoo did not necessarily require a logical sequence, and thus resulted in a miscellaneous narrative. If events were sequenced logically but with no high point (i.e., a climax to the action was not achieved), a chronological narrative was the result. Children by the age of 5 could generally sequence events correctly, but they tended to end their narratives at a climactic event, resulting in an end-at-high-point narrative. Children by the age of 6 were able to orient the listener to the setting, explain the problem and the events

that led to a climax, and then continue to explain how issues were resolved, resulting in a classic narrative. Peterson and McCabe's hierarchy of macrostructural elements was used in this study to examine the progression of complexity of the children's storytelling skills, in addition to a description of the children's skills.

Further, narrative macrostructure includes evaluative elements that are crucial within the analysis process (McCabe & Rollins, 1994). Evaluative elements are the discourse device that narrators use to tell the importance or relevance of the events within a story. Evaluative comments lend more to narratives than just the speaker's meaning to the story events. They also function as connectors, linking sequential events and providing coherence. In this way, separate events are organized into a global hierarchical perspective, and the meaning of the story at that stage in the discourse is revealed (Bamberg & Damrad-Frye, 1991). In other words, these evaluative elements reveal the child's reasons for telling the narrative and what the listener should think about the person, place, and events within the story. The use of evaluative elements has been referred to as "expressive elaboration," which is a device used by the speaker to engage the listener in the story (Ukrainetz & Gillam, 2009). Typically developing children between the ages of 4 and 9 who are from the mainstream culture evaluate half of their comments in some way in their personal narratives (Peterson & McCabe, 1983), such as adding comments about their characters' emotions and cognitive states, adding causal connectors, including indirect and direct speech to their characters, and making predictions as to how the plot will progress or end.

PREVIOUS STUDIES OF NARRATIVES IN CHILDREN FROM AMERICAN INDIAN TRIBES

Three studies of the narratives told by children from Indigenous tribes were conducted in the 1980s and 1990s (Bayles &

Harris, 1982; Crago et al., 1997; Kay-Raining Bird & Vetter, 1994). Although these studies were conducted many years ago, they provide comparisons that may shed some light on our current investigation and serve as pioneering work in this area. Bayles and Harris (1982) examined the speech and language skills of 583 Papago Nation Indian children in kindergarten through sixth grade from two elementary schools in Arizona, of which 68% lived in homes where English was the predominant language and only 12% lived in homes where the Papago language was dominant. They used the story from the *Goldman-Fristoe Test of Articulation* (Goldman & Fristoe, 1969) to elicit a retell narrative. The retells were analyzed with respect to length, complexity, and logic of utterances. The authors described specific elements of the children's sentence structures, but did not provide information on microstructure or macrostructure. Elements of the children's English that reflected the influence of their native Papago included omission of auxiliary words, nonstandard usage of prepositions, overgeneralization of regular markers on irregular verbs and nouns, omission of gender and case, lack of "do" usage and subject-verb inversion for question formation, and lack of verb tense markers.

Kay-Raining Bird and Vetter (1994) studied the narratives of 40 children from 5 to 11 years of age from the Chippewa-Cree tribe. Children in the older group, who were identified by their parents as being "traditional" in their culture (i.e., identified less with the mainstream culture) produced more complex and longer stories than younger children and the children in the "nontraditional" group. Although limited in the number of children studied in each group, their research illustrated important developmental differences in the lengths of stories in older children and differences in narratives hypothesized to be a result of cultural influences, such as younger children taking an observational role rather than a storyteller role.

Crago et al. (1997) collected and analyzed the personal narratives told by children from

Canadian Inuit and Algonquin communities. The children were in the fourth, fifth, and sixth grades. The children invited a peer to attend the storytelling. The peer was observed to often provide words or other comments about the narratives, leading to collaborative narrative construction. They reported that Algonquin children often told narratives that ended at the high point—the end of the story's action without resolution. For these children, listener collaboration for the development of narratives and support for the speaker to initiate or continue was essential. From a cultural perspective, Crago (1992) reported that Inuit children were told stories by adults; however, adults seldom elicited narratives from young children. This does not mean that the children did not tell stories, but that when and how they did so was consistent with their cultural norms.

Westby et al. (2002) studied the narratives of children from a traditional Southwest Native American community. The children spoke both English and their native Keres language. Thirty-six children, who were in the third, fourth, and fifth grades, participated, with half of the children being enrolled in special education. The children were asked to tell stories using a wordless picture book and illustrated book covers using English and in a "manner expected in school." An example of a story was modeled by the examiner prior to the child telling a different story with a different wordless picture book or book cover. Westby and her colleagues evaluated the story grammar, syntactic complexity, and landscape of consciousness elements in the children's narratives. They found that, when children described a single illustration from a book cover, the task was more sensitive to obtaining developmental differences across outcome measures compared with telling a story using the wordless picture book. It also was reported that the third- and fourth-grade children in special education had significantly lower mean story grammar scores compared with those third and fourth graders not in special education; however, there was no difference between the fifth-

grade groups. Groups and grades differed significantly with respect to story grammar sophistication, cohesion devices (e.g., precise pronouns, correct tense and number markers, no missing or wrong words), complex and simple syntactic structural change rules (i.e., transformations, such as where an auxiliary verb or verb phrase modifies the action of the main verb), number of adjectival and adverbial clauses, and the number of "and" connectives. All of the latter group and age differences yielded large effect sizes. Grade differences, but not group (i.e., special education vs. regular education) differences, were significant with large effect sizes for the number of evaluative words and the number of cohesive errors. Group differences, but not grade differences, were significant with large effect sizes for the mean length of turn and number of dependent clauses. In all group differences, the students in regular education performed better than the children in special education.

Together, these extant studies of American Indian children's narrative structure provide valuable information that may be helpful for SLPs when working with specific tribes. Because of the different methods used to elicit and analyze the narratives, it may be difficult to generalize across studies. Also, language and narrative characteristics for members of individual tribes can vary greatly as a result of traditions and underlying influences from the characteristics of the tribe's original language, even if tribal members no longer speak their tribal language (Leap, 1993; Long & Vining, 2000). In our study, we examined the narratives told under three different task conditions by American Indian children who were members of six nations at a Bureau of Indian Education school in the Midwest. Our aim was to evaluate their stories in terms of microstructure and macrostructure, including evaluative comments, to better understand possible task-, age-, gender-related differences in their narratives (see Barbu et al., 2015, for description of impact of sociodemographic variables on narrative production performance). A currently available

standardized test of narrative skills (the TNL) was used because this test is widely available and includes a large normative database. Toward this end, the following questions were posed:

- What are the characteristics of American Indian children’s narratives with respect to both microstructural and macrostructural features and how do they differ from those of children from the mainstream American culture?
- Do the aspects of narrative production tasks (retell, picture series prompt, or single-picture prompt) affect the children’s performance?
- Is American Indian children’s performance on narrative tasks affected by age or gender?
- In what ways could the tasks be modified to best elicit a narrative that is most representative of the child’s language skills?

METHOD

Participants

Narratives were elicited from 28 students, ranging in age from 5;6 to 8;9 years, separated into two age groups to observe any broad age differences (see Table 1 for sample characteristics). The overall sample consisted of 17 girls and 11 boys attending a Bureau of Indian Education school in Kansas. All were American Indian children and were considered at-risk for learning problems based on their qualification for free or reduced price school lunch (a general indicator of socioeconomic status). The children in our study were mostly members of the Kickapoo Nation, but other tribes were represented (i.e., Prairie Band Potawatomie, Cherokee, Lakota, Sac and Fox,

and Sioux). According to school records, all of the children spoke standard American English and none were bilingual. The school had introduced a program to teach the language of the local Kickapoo Nation to all students.

Narrative assessment procedure

The production subtests of the TNL (Gillam & Pearson, 2004) were used to elicit narratives according to the protocols of the test. The TNL was one of a number of pre- and posttests for a larger study of fostering literacy in American Indian children (Loeb & Redbird, 2008; Loeb et al., 2011). The TNL was selected because it was the only available narrative measure for school-aged children that utilized different storytelling formats, was standardized, and had strong reliability and validity properties. The production tasks of the TNL elicit storytelling in three formats: (1) retelling a story with no picture cues, (2) telling a fictional story with five sequenced picture cues, and (3) telling a fictional story with a single-picture cue. These subtests were given in this order, as per test instructions, after the appropriate receptive subtest was given. Children were tested individually in a quiet room by examiners who were either certified SLPs or graduate-level students studying speech-language pathology. For the first task format, the examiner reads a story about a boy and a girl who go to McDonald’s with their mother. The child is then asked to retell the story. In the second format, the child is shown five pictures in chronological order depicting a boy arriving late to school and is asked to tell a story about these pictures. For the third task format, the child is shown a single picture of aliens landing in a park and then asked to tell a story

Table 1. Participant Characteristics

	Male	Female	Age Range	Mean Age
Younger group	5	11	5;6 - 6;10	5;10
Older group	6	6	7;0 - 8;9	7;8
All participants	11	17	5;6 - 8;9	6;7

about it that has a beginning, something that happens, and an ending. All narratives were audio-recorded and transcribed. Although the TNL is based on Western culture story structure for the story retell task, the other story formats are open to different types of story structure, depending on the storyteller.

The narratives were transcribed orthographically by pairs of trained speech-language pathology undergraduate and graduate students. Transcription accuracy was ensured by an iterative process of comparison and discussion until agreement was achieved by both transcribers. The transcripts then were segmented according to the conventions of the Systematic Analysis of Language Transcripts (SALT) computer program (Miller & Chapman, 2006) and organized by narrative task: McDonald's retell, late to school, and aliens. The same undergraduate and graduate students performed the SALT coding, again using an iterative process of comparison and discussion to achieve agreement between both to assure accuracy. As a final step, the second author reviewed all transcriptions and coding for agreement. No further discrepancies were noted.

MICRO- AND MACROSTRUCTURE ANALYSES

Narratives were examined in terms of elements of microstructure and macrostructure. Microstructural analysis included the evaluation of syntactic, lexical, and morphological productivity and complexity, as indicated by the total number of utterances (TNU), the total number of words (TNW), the total number of communication units (TNCU, defined as an independent clause and its modifiers), and mean length of utterance in words (MLU-W) and morphemes (MLU-M). These measures were calculated by the SALT program. Macrostructural analysis included the evaluation of story grammar elements and episodes, including the counting of evaluative elements. Evaluative elements function as connectors, linking sequential events and providing coherence. In this way, separate

events are organized into a global hierarchical perspective and the meaning of the story at that stage in the discourse is revealed (Bamberg & Damrad-Frye, 1991). In other words, these evaluative elements reveal the children's reasons for telling the narrative, interest in the task itself, and what the listener should think about the person, place, and events within the story.

The measurement of macrostructure was conducted using the narrative development rubric utilized by McCabe and Rollins (1994) for high-point analysis of children's personal narratives. The rubric was chosen for because it is descriptive, follows a developmental progression, and is potentially amenable for reliable field-based use by clinicians. The rubric categories included one event, two events, miscellaneous, leap-frog, chronological, end-at-high-point, and classic narratives. The rubric was slightly modified because all of the narratives from the TNL required developed story episodes with logically sequenced events. Thus, the miscellaneous narrative category was removed. Also, some children in the study chose not to respond to certain production subtests, so a "no response" category was added. See Figure 1 for the flowchart used for rating the children's narratives. Reliability was conducted by randomly choosing 24% of the narratives (i.e., 20 of the 84 narratives produced across the three task conditions). All narratives were independently scored using the flowchart by two doctoral-level graduate students who were both SLPs with several years of clinical experience. Interrater agreement was 100%.

Narrative macrostructure also was examined in terms of evaluative elements, following the guidelines in McCabe and Rollins (1994). Some evaluative elements include exclamation, similes and metaphors, subjective judgments, objective judgments, and internal emotional states. See Figure 2 for a complete list with examples of the evaluative elements from the children's narratives. Reliability for coding evaluative elements was conducted with a random selection of 29% of the narratives (24 of the 84). Two doctoral-level

Flowchart for scoring narrative structure (modified from McCabe & Rollins, 1994)

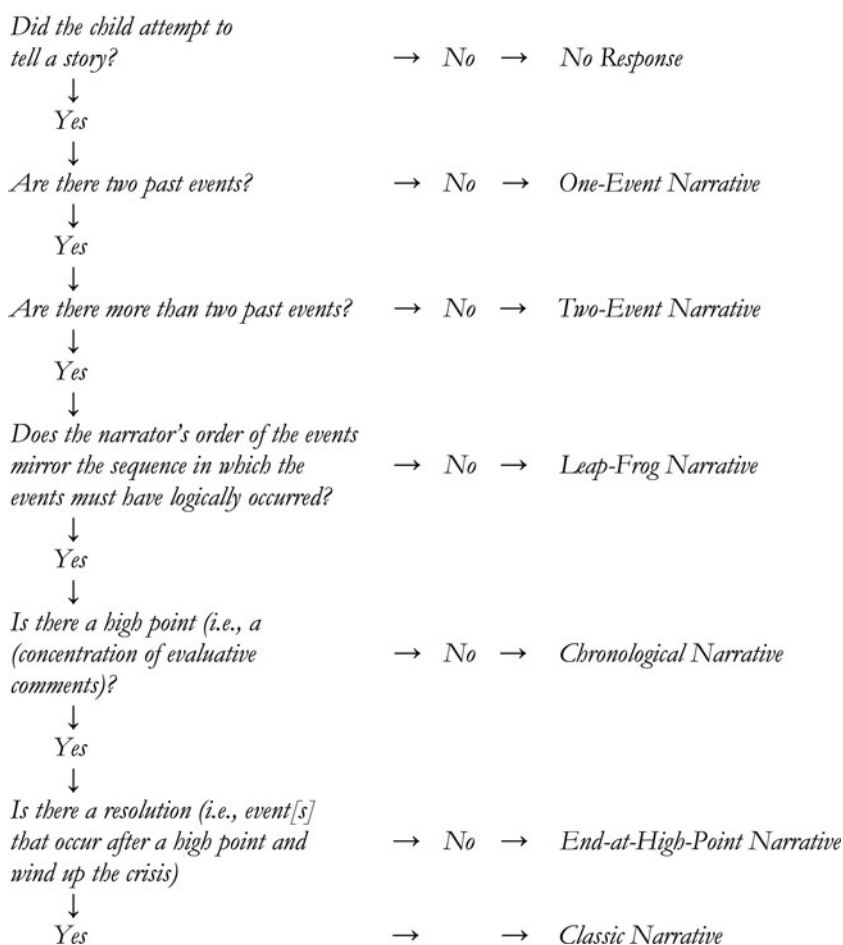


Figure 1. Flowchart for scoring narrative structure (modified from McCabe & Rollins, 1994).

graduate students independently scored the narratives with 100% agreement for the types of evaluative elements and 95.8% accuracy for the number of evaluative elements and then discussed to reach final consensus.

RESULTS

To explore our first research question of describing the characteristics of American Indian children's narratives and exploring how they differ from those of children from the mainstream American culture, the children's narratives were examined in terms of both microstructure and macrostructure.

Microstructure

Descriptive data for the five measures of microstructural elements (TNU, TNW, TNC-U, MLU-W, and MLU-M) were compared with the data in the TNL Narrative Sample Database (Gillam & Pearson, 2004), a reference by which results of narratives elicited using the TNL can be compared with 500 samples elicited when norming the test. Narratives can be compared by age and by story format using the SALT software program. Table 2 indicates the percentage of participants scoring above, below, and within 1 *SD* of the TNL mean for each measure for each

Evaluation types found in the narratives of 5- to 8-year old participants (with exemplar element underlined if only part of the utterance).

Evaluation Type	Examples from Participants
Exclamation	They <u>shouted</u> McDonald's!
Compulsion words	Then he <u>had</u> to tie the shoe.
Negatives	And he <u>didn't</u> come.
Gratuitous terms	And he closed the door and got off <u>real</u> fast.
Similes and metaphors	And they looked like octopuses.
Words per se	The Dad was <u>scared</u> .
Intentions, purposes, desires, or hopes	And Vanessa wanted to go near to go see the aliens.
Hypotheses, guesses, inferences, predictions	Then he didn't feel good.
Subjective judgments	He look funny.
Objective judgments	He was late for school.
Facts per se	And then she forgot it.
Internal emotional states	They hate octopus.
Tangential information	I think they were going on a vacation.
Causal explanation	The boy is late for the bus school because hetake too, too long.

Figure 2. Evaluation types found in the narratives of 5- to 8-year-old participants (with exemplar element underlined if only part of the utterance).

of the three production task formats and all task formats combined.

Examination of the descriptive data presented in Table 2 reveals different patterns of responses under each of the narrative task formats than would be expected had the children been from the American mainstream culture. Although distributions for combined task performance appear fairly stable across microstructural elements, with 50% of the children scoring within ± 1 *SD* for the categories of TNW, MLU-W, and MLU-M, slightly fewer scoring below that for TNC-U, and slightly more scoring above that for TNU, patterns differed according to narrative format (see Table 2). Performance was suppressed for all elements during the McDonald's story retell, with only half of the students scoring within ± 1 *SD* for TNU and MLU-W, only slightly more than half of the students scoring within ± 1 *SD* for MLU-M, and over half of the students scoring below 1 *SD* for TNC-U and TNW. Conversely, the late for school format and the aliens format resulted in narratives in which over half of the students scored within ± 1 *SD* for all microstructural elements. The late to school format resulted in over 70% of the students scoring within ± 1 *SD* for TNU and TNC-U, and the aliens format resulted in over 70% of the students scoring within ± 1 *SD* for TNC-U and TNW.

In other words, the children were more successful when provided prompts for narrative generation than when asked to retell a story. This difference was noted for all measures of syntactic and lexical productivity, though children's morphological complexity was consistent across tasks. This indicates that performance on the longer narratives, likely more representative of true language skills, was related and was elicited when the children were prompted to tell their own stories but not retell the story of the examiner.

Microstructural elements were compared between narrative task formats using repeated-measures analysis of variance (ANOVA) with gender and age group used as between-subjects factors. For TNU, no statistically significant differences were revealed among the three narrative formats, $F(2, 27) = 0.798$, $p = .461$, and there were no significant interactions between format type and gender or age group but pairwise comparisons did reveal a significant difference in TNU between the McDonald's retell and the late for school picture- sequence narrative ($p = .043$), but not between the McDonald's retell and the aliens single-picture narrative ($p = .149$) or between the late for school picture- sequence narrative and the aliens single-picture narrative ($p = .651$). Thus, the late to school picture- sequence

Table 2. Percentage (and Frequency) of Students ($n = 28$) with Microstructure Elements 1 *SD* Below Mean, Within + 1 *SD* of the Mean, and 1 *SD* Above the Mean Compared With Data From the TNL Narrative Sample Database for Each Narrative Task and for All Three Narrative Tasks Combined

	TNU	TNC-U	TNW	MLU-W	MLU-M
McDonalds	50.0 (14)	60.7 (17)	53.6 (15)	50.0 (14)	46.4 (13)
% < 1 <i>SD</i>					
% ± 1 <i>SD</i>	50.0 (14)	35.7 (10)	46.4 (13)	50.0 (14)	53.6 (15)
% > 1 <i>SD</i>	0 (0)	3.6 (1)	0 (0)	0 (0)	0 (0)
Late for School	21.4 (6)	25.0 (7)	35.7 (10)	39.3 (11)	32.1 (9)
% < 1 <i>SD</i>					
% ± 1 <i>SD</i>	75.0 (21)	75.0 (21)	60.7 (17)	57.1 (16)	67.9 (19)
% > 1 <i>SD</i>	3.6 (1)	0 (0)	3.6 (1)	3.6 (1)	0 (0)
Aliens	32.1 (9)	28.6 (8)	28.6 (8)	35.7 (10)	32.1 (9)
% < 1 <i>SD</i>					
% ± 1 <i>SD</i>	64.3 (18)	71.4 (20)	78.6 (22)	53.6 (15)	57.1 (16)
% > 1 <i>SD</i>	3.6 (1)	0 (0)	0 (0)	10.7 (3)	10.7 (3)
Combined	46.4 (13)	53.6 (15)	50.0 (14)	46.4 (13)	42.9 (12)
% < 1 <i>SD</i>					
% ± 1 <i>SD</i>	53.6 (15)	46.4 (13)	50.0 (14)	50.0 (14)	50.0 (14)
% > 1 <i>SD</i>	0 (0)	0 (0)	0 (0)	3.6 (1)	7.1 (2)

Note. MLU-M = mean length of utterance in morphemes; MLU-W = mean length of utterance in words; TNC-U = total number of independent clauses plus any modifiers; TNU = total number of utterances; TNW = total number of words.

format resulted in the highest TNU, followed by the aliens single-illustration format, and then by the McDonald's retell. Total number of words, TNW, revealed no significant main effects, $F(2, 27) = 4.081$, $p = .054$, or interactions, but pairwise comparisons approached a significant mean difference between the older and younger age groups ($p = .054$), with the older age group producing a slightly higher number of total words on average. Total number of communication (C) units, TNC-U, revealed a main effect for narrative task format, $F(2, 27) = 41.585$, $p = .021$, partial $\eta^2 = .285$, indicating subjects responded significantly differently to each narrative format. No significant interactions with gender or age group were observed. Pairwise comparisons revealed a significant difference between the McDonald's retell and the late for school picture- sequence narrative ($p = .005$), but not between the McDonald's retell and the aliens single-picture narrative ($p = .073$) or between the late for school picture- sequence narrative and the aliens single-picture narrative ($p = .646$). The pattern for TNC-U follows the pattern for TNU: the late to school format resulted in the highest number of C units, followed by the aliens format, and lastly the McDonald's retell. Mean length of utterance in words, MLU-W, revealed no significant main effect for task format, $F(2, 27) = 1.893$, $p = .173$, nor any significant interactions with gender or age group. However, pairwise comparisons revealed a significant mean difference between the older and younger age groups ($p = .024$), with the older age group producing a higher MLU-W across tasks and genders. Mean length of utterance in morphemes, MLU-M, also revealed no significant main effect for task format, $F(2, 27) = 1.728$, $p = .201$, but a significant interaction with age group was observed, $F(2, 27) = 3.497$, $p = .048$, with the older age group producing narratives with a greater number of morphemes in their utterances on average. No other significant interactions were noted. Pairwise comparisons, as expected, revealed a significant difference between the older

and younger age groups ($p = .028$), with the older age group producing a higher MLU-M.

Macrostructure

Descriptive data (percentage, and for the combined tasks, frequency) for the different levels of narrative discourse development (i.e., no response, one event, two events, leap-frog, chronological, end-at-high-point, and classic) distributed by task format (i.e., McDonald's retell, late for school, and aliens) and age group are presented in Table 3. Examination of the data reveals different patterns of response across the narrative task formats, as was seen in examination of microstructural elements. The McDonald's retell format resulted overall in the highest percentage of no responses and one-event narratives. The aliens format resulted in a higher percentage of two-event narratives, whereas the late for school format resulted in a higher percentage of leap-frog narratives. The McDonald's retell format resulted in a somewhat higher percentage of chronological narratives (35.7% as compared with 28.6% for the late for school format and 32.1% for the aliens format). The late for school format resulted in the highest percentage of end-at-high-point narratives and the only classic narrative generated was for the aliens single-picture format.

To further analyze the types of narratives produced by the students, an ordinal scale score was assigned to each narrative type, which corresponded to the hierarchy of development, with no response assigned a score of 1 and a classic narrative assigned a score of 7. To determine whether the three narrative formats yielded significantly different narrative types and to evaluate the influence of age and gender, a $3 \times 2 \times 2$ (format by age group by gender) repeated-measures ANOVA was executed. A significant within-subjects main effect for format was found, $F(2, 27) = 9.061$, $p = .001$, partial $\eta^2 = .441$, indicating subjects responded significantly differently to each narrative format. However, interactions between format and gender, $F(2, 27) = 0.932$, $p = .408$, format and age, $F(2, 23) = 0.667$, $p = .523$, and format and gender

Table 3. Percentage (and Frequency for All Participants) of Narrative Types by Task Format and Age Group

	McDonalds			Late for School			Aliens		
	5-6	7-8	All	5-6	7-8	All	5-6	7-8	All
	No response	17.9	10.7	28.6 (8)	3.6	0	3.6 (1)	14.3	0
One event	10.7	3.6	14.3 (4)	0	3.6	3.6 (1)	3.6	0	3.6 (1)
Two events	10.7	0	10.7 (3)	3.6	0	3.6 (1)	7.1	14.3	21.4 (6)
Leap-frog	0	7.1	7.1 (2)	19.7	7.1	17.9 (5)	3.6	0	3.6 (1)
Chronological	14.3	21.4	35.7 (10)	25.0	3.6	28.6 (8)	21.4	10.7	32.1 (9)
End-at-high-point	3.6	0	3.6 (1)	14.3	28.6	42.9 (12)	7.1	14.3	21.4 (6)
Classic	0	0	0 (0)	0	0	0 (0)	0	3.6	3.6 (1)

and age, $F(2, 27) = 0.165, p = .849$, were all found to be nonsignificant. Follow-up tests were conducted to evaluate the three pairwise differences among the means for the three formats, and all were found to be significant. The pairwise comparison between the McDonald's retell narrative and the late for school picture- sequence narrative resulted in $p = .000$, between the McDonald's retell narrative and the aliens single-picture narrative resulted in $p = .047$, and between the late for school picture- sequence narrative and the aliens single-picture narrative resulted in $p = .020$. In effect, the late for school picture- sequence task resulted in more complex narratives than the aliens single-picture narrative, and the McDonald's retell narrative resulted in the fewest structured narratives.

Analysis of evaluative elements

Evaluative elements were identified following the guidelines utilized by McCabe and Rollins (1994) and tallied for all of the narratives. Evaluation types and examples taken from the three TNL narrative production subtests are shown in Figure 2. The number of evaluative elements was divided by the TNU for each narrative format and for all narratives combined to arrive at percent usage. For the McDonald's retell narrative, 30% of the children's utterances were evaluations. For the late for school picture- sequence narrative, 33% of the utterances were evaluations, and for the aliens single-picture narrative, 32% of the children's utterances were evaluations. Thus, the proportion of utterances in the children's narratives that were considered evaluative elements were roughly equivalent across the three production task formats.

To determine whether the three narrative formats were significantly different in the frequency of use of evaluative elements in each story and to evaluate the effects of age group and gender, a $3 \times 2 \times 2$ repeated-measures ANOVA was executed. No significant within-subjects main effect was found, $F(2, 27) = 1.760, p = .195$, partial $\eta^2 = .138$, indicating subjects did not respond differently depending on narrative task format. No interaction

between format and gender, $F(2, 27) = 1.635$, $p = .218$, format and age, $F(2, 27) = 0.6570$, $p = .574$, and format and gender and age, $F(2, 27) = 0.585$, $p = .565$, was found to be significant. Follow-up tests were conducted to evaluate the pairwise differences among the means for evaluative elements across the three task formats, and only the mean difference between the McDonald's retell and the late for school picture- sequence narratives was found to be significant ($p = .043$), but the comparison between evaluative elements produced on the McDonald's retell narrative and the aliens single-picture narrative was not significant ($p = .199$), as was the comparison between the late for school picture- sequence narrative and the aliens single-picture narrative ($p = .800$).

DISCUSSION AND CLINICAL IMPLICATIONS

There are no other known studies on the developmental sequence of narratives in the children from the tribes of the Midwest who participated in this study. Our goal in conducting this research is to inform SLPs of the possible outcomes when using different narrative tasks with American Indian children and to provide recommendations for those serving American Indian children. The overall results from our study suggest American Indian children respond differently from typically developing mainstream North American English-speaking children, both in terms of microstructure and macrostructure, when asked to tell a narrative.

The analysis of microstructural elements did not reveal any significant differences in TNU, TNW, MLU in words, or MLU in morphemes across the three narrative task formats used for the narrative production tasks on the TNL (Gillam & Pearson, 2004). The lack of significant main effects for narrative task format suggests that these microstructural elements were not constrained or facilitated by the use of a retell approach, single-illustration prompt, or picture-sequence prompt. A main effect for for-

mat was noted for the number of C units, reflecting the depressed responses for the McDonald's retell task, which may be culturally influenced, as will be discussed. No age or gender effects were noted for the TNU or the number of C units, but a higher average TNW for the older group versus the younger group approached significance, and average MLUs measured in both words and morphemes for the older group were significantly higher than those for the younger group. This higher mean average MLU-W and MLU-M for the older age group without an accompanying increase in average number of utterances or C units reflects more complexity in their sentences, expected as children grow older and develop their language skills. Pairwise comparisons both for the number of utterances and the number of C units produced showed that the different formats resulted in different quantities of language, with longer stories told for the late for school picture- sequence task and shorter stories for the aliens single-picture task and the shortest stories for the McDonald's retell task. Conversely, nonsignificant pairwise comparisons for the TNW, MLU-W, and MLU-M suggested that the tasks do not differ in terms of the quality of language produced.

The analysis of macrostructural elements provides further insights. For children from the mainstream culture, story generation tasks, even with pictorial support, is more challenging than a story retelling task (Merritt & Liles, 1987; Swanson et al., 2005), so the story retell task would be expected to yield a longer, more complete narrative (Gazella & Stockman, 2003; Greenhalgh & Strong, 2001). Also, the single-picture stimulus for elicitation of a fictional narrative is considered to be a more difficult narrative production task than a series of picture cues (Hughes et al., 1997). For our sample, the type of task requested of the child resulted in different patterns than for children from the mainstream culture. The McDonald's retell task resulted in more suppressed responses in terms of the complexity of story elements than the pictorially supported narrative tasks

did. Moreover, the picture- sequence task format in the late for school narrative resulted in the greatest percentage of leap-frog narratives, even though the picture sequence remained in view of the child during the entire task administration. The late for school picture- sequence task also resulted in the greatest percentage of end-at-high-point narratives and no classic narratives, even though the last picture in the sequence indicated an appropriate resolution to the climax of the story. Furthermore, the single-picture task format in the aliens narrative, generally considered the most difficult stimulus, resulted in high percentages of chronological narratives and end-at-high-point narratives, as well as the sole classic narrative. Also, the lack of differences in terms of the types of narratives and complexity due to gender is consistent with the narratives of children from mainstream culture. However, the lack of differences due to age group is not consistent. Children in the mainstream culture exhibit a qualitative shift in the complexity of narrative types as they grow older (Peterson & McCabe, 1983), whereas the narratives of these American Indian children reflected development in the complexity of their language but not their narrative types. These results suggest that the children's language is developing and becoming more complex, but their narrative types are culturally determined and differ from the mainstream culture. The question, which comes to mind, is whether the patterns of response are solely a function of the type of task format or cultural influence. Context and task-related factors need to be considered when contrasting language tasks, such as narratives, from children of different cultural backgrounds (Shiro, 2003). Perhaps the open-ended single-picture format did not constrain our students' creativity, allowing them to include as much information as they wanted along with information that they thought was most pertinent. Also, the order of subtest presentation, which was consistent across students following the protocol of the TNL, may have impacted the results. Students may have gained confidence over the course of

the TNL test administration, allowing them to speak more freely and resulting in a longer narrative during the third subtest. The TNL was part of a larger battery of tests that were randomly administered to the children, so whether the effect would be seen during the administration of a single test within the battery is unknown and requires future research.

Evaluative comments were consistent across all three narrative formats. The number of evaluative elements within a narrative does not appear to be affected by the format of narrative elicitation. Older children exhibited a higher number of evaluative elements, consistent with Bamberg and Damrad-Frye's (1991) findings of an increase in evaluative events with increased age, which they interpreted as reflecting the growth in the child's ability to organize story events hierarchically. This also may reflect the increased complexity of the sentences of older children, as seen in the results of microstructural elements earlier.

We infer that the increased number in the "no response" category for the McDonald's retell task was a cultural function more than just a lack of interest in the task or an inability to relate to the experience in the story. The closest town with a restaurant for our children had a McDonald's, and all of the children had responded "yes" to the question of whether they had ever eaten at McDonald's (the standard opening question for the narrative comprehension subsection of the TNL). In this study, the McDonald's retell task resulted in the most refusals to respond and one-event responses. Some children also told only a chronological account, even though they had heard a model of a classic narrative. Robinson-Zañartu (1996) reported that Native American students, when asked to respond to the surface content in immediate recall of a story, may produce a narrative with a paucity of content or with an irrelevant, circumlocutory response due to the request appearing inappropriate because there is no consistency with cultural wisdom, resulting in a task that is hard to understand for the child. The children from this Nation school may have perceived this retell task to be

inappropriate. In contrast, for both of the picture-stimulated narrative production tasks, even though a model of the tasks had been presented within the preceding comprehension subtests, the pictures presented for the expressive subtests were different. Therefore, these latter tasks may not have been perceived as culturally inappropriate, resulting in greater participation. Also, as discussed earlier, one other potential explanation for the lower participation in response to the McDonald's retell task is that this was the first subtest, so the children may have been more reticent to speak, especially because this may have been an atypical experience.

Another cultural consideration for the SLP working with American Indians and relevant to this study is the role of the listener (Kay Raining-Bird & Vetter, 1994). The directions of the TNL allow only minimal prompts ("What happened to the boy and the girl in the story?" for the McDonald's retell and "How does this story start?" for the late to school and aliens oral narrations). At the end of the children's stories, when we asked whether the children were done, the answer was consistently "yes." We hypothesize that cultural factors of expected audience participation might have played a part in our outcomes. A lack of listener response from the examiner may have indicated a lack of listener interest or a cue from the listener for the child not to continue. Modified directions, neutral comments such as "uh-huh," or repeating the last sentence said by the child might have resulted in expanded narratives from our American Indian children in this study. Along this line, encouraging peer collaboration in storytelling, as used in Crago et al. (1997), may be an approach that benefits SLPs' elicitation of narratives from their American Indian students.

Furthermore, American Indian children from our sample may have produced longer and more complex narratives had the stories been culturally relevant for them. Several researchers recommend using authentic and culturally sensitive stimuli for generating stories and increasing language and literacy

skills in American Indian children (Gillespie, 2016, this issue; Inglebret et al., 2008; Loeb & Redbird, 2008; Loeb et al., 2011; Long & Vining, 2000). Future studies might compare types of stories and narrative production using authentic American Indian materials to determine their potential impact on assessment.

A final clinical implication comes from research of using dynamic narrative assessment for American Indian children. Dynamic assessment has been used by some researchers to examine and to facilitate narrative production in American Indian and Canadian Indigenous children (Henderson et al., 2018, this issue; Kramer et al., 2009; Ukrainetz et al., 2000). Studies support the use of dynamic assessment diagnostic tools (e.g., the Dynamic Assessment and Intervention Tool and the Predictive Early Assessment of Reading and Language) when working with indigenous children from specific Nations in Canada (i.e., Samson Cree Reserve) and in the United States (i.e., Navajo). Dynamic assessment often provides opportunities to observe and practice a given task. Because observation is valued in many tribes, it may be especially helpful for children to be asked to observe a number of stories being told before being asked to tell a story of their own.

Key to providing the most appropriate and culturally sensitive services to American Indian children is to understand that they will behave and speak differently due to the influences of their native languages and cultures (Long & Vining, 2000). We can do this by honoring their culture and integrating their tribe's heritage and traditions into all aspects of storytelling. If it is not culturally appropriate for a child to take the storyteller role, then the SLP may need to help the child to fulfill school-based narrative expectations by teaching code-switching in narratives. In this way, the child can be successful in school and also be knowledgeable and respectful of their cultural norms. SLPs can do their part in honoring the culture of American Indians by adopting a differential instructional approach (Inglebret et al., 2016) when

working with American Indian children and their teachers. Doing so will support biculturalism and cultural family views to support academic and home success. Future studies need to address the types of stories and cultural elements specific to individual Nations to provide optimally engaging learning experiences for children.

One major limitation in our research is the small sample size due to the small enrollment in the Bureau of Indian Education school in which we were conducting this study; the results of omnibus statistical analyses in particular may have been impacted

by the sample size. In this small sample, six Nations were represented. These limited data do not provide sufficient insight into the cultural influences and abilities of any one group to make specific recommendations. Future research should focus on narratives of a greater number of American Indian children from more Nations. These narratives could then be examined to determine the optimal elicitation methods with a focus on variations specific to children's Nations. The inclusion of cultural informants from specific Nations would be crucial to aid in developing local protocols and materials.

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