

Reinventing the Enemy's Language: Developing Narratives in Native American Children

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Because narratives involve decontextualized language, they can facilitate students' transition from oral to literate language. Narratives, however, vary across cultures in structure, content, and function. These narrative variations may influence academic performance of children from non-mainstream backgrounds. Understanding of children's development of mainstream narratives can be useful in planning educational strategies to facilitate students' literacy success. This investigation documented English narrative development in third through fifth-grade children identified as regular ($n = 18$) and special education ($n = 18$) students who were from a traditional Southwest Native American community in which Keres was the home language. Children told stories in response to a wordless picture-book and book covers and wrote a story in response to a wordless cartoon video. Narratives were evaluated in terms of syntactic complexity, story grammar complexity, and use of landscape of consciousness elements. Results revealed that the both regular and special education students exhibited narratives with increasing syntactic and story grammar complexity and the use of landscape of consciousness elements. However, story grammar levels were lower than reported data on story grammar structures of narratives that were produced by mainstream children. Many stories reflected characteristics of Native American syntactic structures and story structure and content.

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Over the last 15 years, assessment of children's narratives has become an increasingly popular activity. Narrative assessment has been done to document the developmental course of narratives, to predict and identify language delays and disorders, and to investigate narrative variations across cultures. Evaluating narratives of children from culturally/linguistically diverse backgrounds can be a valuable means for gaining an understanding of students' language skills and educational needs. Stories reflect an individual's worldview. They provide insight into persons' values and beliefs and their perception of the temporal and causal relationships among people, objects, and events in the world. An understanding of persons' worldviews can increase awareness of potential miscommunications and educational conflicts. This is essential if educators are to work effectively with students from diverse backgrounds.

Narrative discourse comprises most of the oral and written language of classroom instruction. Specifically, teachers give lectures and read stories. Students are asked to present reports or relate current events. Because of the extensive use of narratives in educational settings, it is important that students be able to comprehend extended narrative texts, as well as produce them.

This article describes the English narrative skills of a group of third through fifth-grade Native American students (identified as regular and special education students) following their participation in Project TALES (Talking about Life Experiences and Stories), a language arts program designed to value and maintain native storytelling while teaching mainstream narrative content and structure. To interpret appropriately what might be happening with the children's narrative development, it is important to contextualize the project in terms of Native American educational needs and a broad understanding of main-stream and Native American narratives. For this reason, a large portion of this article is devoted to the background rationale for the project and a discussion of Native American culture, particularly its influence on narrative function, content, and structure.

PROJECT BACKGROUND

The Children

The children in this project represent a unique group because they come to school speaking their native language. Of the 155 Native American languages found in the United States today, only about 20 are still spoken by people of all ages and thus fully vital (Reyhner & Tenant, 1995). All students in third through fifth grade (approximately 200 children) attending a public school serving children from a traditional Keres-speaking pueblo community in the United States Southwest participated in the project. The children begin school speaking Keres. Once in school, they are taught exclusively in English. Keres-speaking teachers or assistants are employed in kindergarten, to provide translation, but Keres (or Keresan) is not

the language of instruction at the request of the tribe. Keres is viewed as the private language of the tribe, and consequently, is not to be used as a means of instruction in the mainstream world. The project was initiated because tribal members were concerned about the poor reading performance of their students, whose reading scores are among the lowest in the state. Although the students learn to read words, they exhibit marked deficits in comprehension. It was hypothesized that at least part of the students' comprehension difficulty might be due to insufficient narrative skills, not only in mainstream English narratives, but also in Keres narratives. Tribal elders reported that with television, children were hearing fewer of the traditional stories in their homes. In addition, the oral discourse style and the content and structure of Keres narratives the children did hear were likely to differ from the narratives heard and read in school.

Perhaps more than any minority group in the United States today, Native Americans traverse two worlds; one being the community of their tribal members, the other being the mainstream society. [Wolcott \(1987\)](#) suggested that Native American students may perceive the teacher as the enemy. Teachers are not assigned to teach students about their own way of life, but to teach them about the mainstream way of life. Consequently, teachers are viewed as captors charged with instructing the prisoners (students) in the ways of mainstream life. The purpose of instruction is to encourage students to defect from their home culture and to give them the skills to defect successfully.

The majority of Native Americans use the language of the colonizer, "the enemy's language," to express themselves ([Harjo & Bird, 1997](#)). Even in those tribes where the Native language is still spoken at home, English is typically the language of the schools. [Harjo and Bird \(1997\)](#), Native American women writers, suggest that the "enemy" controls the language of real life, and in that process, manipulates how native people perceive themselves in relation to the world. They maintain that their "voice" has been shaped by persons in the mainstream world who have control over their narrative production and who have functioned as editors. Native Americans have been forced to use the language of the enemy for commerce in the mainstream world, a world that is created and evolves through the use of language. [Harjo and Bird \(1997\)](#) propose that natives must reinvent the enemy's language, transforming it into a native voice to tell their truths.

Native American children growing up in traditional communities, such as those who participated in Project TALES, must live between worlds, learning to express their cultural experiences through an enemy language. A large percentage of Native American students enter school without the language skills required for success in the mainstream educational system. By third- to fourth grade, many are experiencing increasing difficulty with academics ([Leap, 1986](#)). In New Mexico, where 12 percent of the population is Native American, Native American students are performing at the lowest academic levels. By sixth grade, native students' reading performance is below the 15th percentile.

Role of Narrative Language

Problems in either narrative comprehension or production may significantly affect students' academic performance and ultimate scholastic achievement (Roth, Spekman, & Fye, 1995). It is often difficult to determine whether the narrative difficulties students exhibit in school are due to cultural/linguistic variations in narratives or to intrinsic language learning disabilities. The reasons for students' difficulties with narratives are not as important, however, as their need to acquire the narrative functions, content, structure, and style that underlie the school curriculum. Without support in developing the types of narratives required in school, students will not succeed. If teachers and language specialists are to facilitate the language and literacy development of these students, they must know the nature of the students' language skills.

Researchers, educators, and speech-language pathologists (SLPs) have been eager to collect narratives from persons from culturally/linguistically diverse cultures. They have had children tell personal stories (Labov & Waletzky, 1967; McCabe, 1996), relate a story from a wordless picture-book (particularly *Frog, Where Are You?*) (Berman & Slobin, 1994), or generate imaginative stories (Hedberg & Westby, 1993; Stein & Albro, 1997). Assessing narratives, however, is not a simple process. It requires consideration of the types of stimuli used to elicit stories, how the stimuli will be presented, who will listen to or read the stories that are produced, and how the collected narratives relate to the narrative demands in students' home culture as well as the mainstream culture. Some of this information is available regarding children from African-American and Hispanic backgrounds (Gee, 1989; Gutierrez-Clellen, 1995; Hester, 1996; Hyter & Westby, 1996; Labov & Waletzky, 1967; Shuman, 1986), but very little is available on children from other cultural/linguistic backgrounds.

In the desert Southwest, linguists have spent considerable time documenting the structure of Navajo. Much less information is available on some of the other Indian languages. Part of this is related to the fact that a number of the languages are spoken by relatively few persons; and part is related to the fact that some tribes prefer not to have their languages studied. For example, there is not a great deal of information on the Keresan or Keres language, which is spoken by seven pueblos in New Mexico. These native groups are among the most traditional groups in North America. The communities consider Keresan to be a private language, it is not a language that is to be learned by outsiders. Because of this, Keresan has not been as extensively studied as Navajo.

It was difficult to obtain information about Keres narratives of children in the project because of tribal members' reluctance to share tribal matters with non-members. One tribal member we sought to interview asked us what our questions were and then indicated that he was not certain what was appropriate for him to share with us, so he would get back to us. Although he did not refuse to

meet with us, he became unavailable. Two women agreed to meet with us on several occasions, but then did not appear for the meetings. Consequently, we needed to rely on what we knew about narratives in other Southwest Native American cultures, being careful not to assume that everything would hold true for these Keres-speaking children.

NATIVE AMERICAN NARRATIVE DISCOURSE

The focus of this literature review is on tribal groups within the United States Southwest and those from similar language backgrounds. “One of the major problems of American-Indians at present is the fact that they are seen as ‘one people with one need,’” (Reeves, 1989, p. 4). The population, however, is comprised of distinct tribal and native groups, and vast differences are obvious regarding governance, customs, language, wealth, religion, and acculturation to the mainstream. This diversity contributes to different world views and varied approaches to problem solving. Thus, “Indian people do not speak with one voice any more than America does” (Tijerina & Biemer, 1987/1988, p. 89).

Native narratives often differ from mainstream stories in terms of who tells stories and why stories are told, their narrative microstructure (words and syntactic structures), and narrative macrostructure (organization and thematic content) (Basso, 1990; Berman & Slobin, 1994; Heath, 1983, 1986; Hymes, 1982; Scollon & Scollon, 1981; Tedlock, 1974). Some of these variations are related to the structure of the original languages and other variations are related to cultural values and the purpose for storytelling.

Mainstream North American culture encourages children to listen to and tell stories. Shortly after children begin to talk, mainstream adults ask children to report on events. By the time many children are 3 years old, adults have read them many stories and are asking them to talk about stories. It is acceptable, and children are even encouraged, to relate events to others. They may be expected to “perform” stories in front of others in community, educational, or religious activities. They relate events, act in plays, and make up their own stories. In Navajo, Apache, and Pueblo groups in the Southwest, young children are rarely the center of attention for storytelling. In some of these groups, public storytelling is reserved for adults, and in some cases, adult males. Historically, children would hear stories told by their elders, particularly between the first frost in the fall and the last frost in the spring. Stories would not be told during warm summer months. With modern communications—television and Nintendos—these native children are less exposed to the stories of their culture.

In all cultures, stories are told for purposes—to entertain, to display knowledge and skills, to teach, to organize and plan, to warn, etc. Each purpose represents a genre. Genres differ in terms of who tells them, how the information in the story is

organized, the content, and the style of the narrative. In the mainstream educational setting, students are frequently expected to give recounts, which involve retelling an experience or reproducing information that is known to the person asking for the recount. In science and art activities students may be asked to event-cast, describing what they are doing as they are doing it. Particularly in elementary school, they are expected to read and produce imaginative stories, usually to entertain. In sharing time and during recess and free time, they give accounts, stories of personal experiences that are unfamiliar to listeners. Recounts, imaginative stories, event-casts, and accounts are highly familiar narratives to children and adults in mainstream, middle-class families. These types of narratives are much less common for some cultural/linguistic groups ([Heath, 1986](#)). Many Native American children in the Southwest have little experience with recounts and event-casts before coming to school; and the imaginative stories they hear are more frequently told to teach or warn than to entertain ([Basso, 1990](#)). Telling stories simply for the sake of telling stories, as requested by researchers and educators, is an unfamiliar task to most Native American children in the United States Southwest. Stories should be told for some purpose ([Basso, 1990](#)). Adults have not scaffolded children in learning to tell stories, and children certainly would not be expected to tell a story to show what they know.

Narrative Macrostructure

Narrative Organization

To persons from the mainstream society, Native American stories may not seem like stories. Indeed, oral narratives of Native Americans are often described by Anglo-Americans as “unorganized” and “rambling” ([Cooley & Lujan, 1982](#)). Story plots in native narratives do not flow in a linear manner with clear temporal-causal relationships. The concept of a non-linear storytelling structure in Native American stories is common. [Benally \(1989, personal communication\)](#), a Navajo educator, described the structure of Navajo narratives as like Indian fry bread (a circular piece of dough fried in oil), “An idea bubbles up here, then another idea over there, and another idea there” The circle is a philosophical and structural concept in Native American narratives ([Lutz, 1989](#)). [Highwater \(1981\)](#) observed that Native American narrative structure is far removed from typical narrative structure and that Native American narratives portray a different view of space, time, and motion than do narratives produced by persons from Western cultures. Native stories are likely to have a spatial-causal episodic organization. Spatial-causal narratives involve selecting, combining, and recombining story chunks (blocks of story information) to relate a story ([Gough, 1990](#)). Narrators have the freedom to choose how to order the story chunks. The story chunks may be in one order in one situation, but in a completely different order or even omitted in another situation.

[Silliman, Diehl, Aurilio, Wilkinson, and Hammargren \(1995\)](#) investigated the structure of narratives produced by two 11-year-old male Alaskan-Athabaskan students who reproduced a story told by a village storyteller. (Note: Navajo and Apache are also Athabaskan languages.) The boys and the storyteller told the story using a spatial-causal organization and their narratives included four sections: an introduction, two scenes, and a closure. In most Navajo stories, plots are de-emphasized, but a good deal of attention is given to describing events such as walking and the landscape ([Worth & Adair, 1972](#)). The emphasis in the storytelling process is on detail, rather than temporal sequence or major points ([Rhodes, 1988](#)). There may be an attempt towards sequencing events in time, but, if details are remembered out of sequence, they are likely to be inserted as they are recalled. Part of the reason for the apparent lack of plot or goal-directed behavior in the Navajo stories may be related to the Indian value of living in harmony with nature. Such a world view does not require that persons try to change their world, but rather that they learn to live in and with their world.

Native American students model the structure of their speeches after exemplars from elders ([Cooley & Lujan, 1982](#)). These speeches tend to be organized according to implicit, and not explicit, relationships between topics, and that lack of across-topic cohesion is evident. From a Native American perspective, there is no need for cohesive ties across topic changes, because there is an implicit commonality across subjects that binds them together. [Lewis \(1992\)](#) observed somewhat similar patterns in the narrative structure and oral storytelling strategies of first through sixth-grade Northern Ute students. When asked to retell a favorite movie, the majority of the Ute students told stories that consisted of a series of events but without an overall story direction. Some stories contained considerable detail, but there were many unconnected events and unexplained details. The students tended to jump directly into the storytelling without providing the listeners with background information or reasons for the story. The nature of the Ute students' narratives called into play a participatory speaker-listener engagement, which is a guiding principle of Ute oral discourse ([Leap, 1986](#)). The Ute storytellers assumed shared knowledge between the speaker and listener and expected that it was the listeners' responsibility to infer the meaning of the story or to question the storyteller.

This variation in cohesive organization is present even in the writing of Native American college students. [Gregory \(1993\)](#) noted that she and other instructors who taught basic English to secondary and beginning college students were able to identify blindly essays written by Navajo students. She observed that the structure and language choice in the Navajo essays was determined by interaction of the topic and audience. In contrast, the structure of the Anglo essays was determined by the genre. The Navajo students did not fictionalize the audience, but rather tried to make connections with the audience more so than the Anglo students. In oral language, Navajo students rely heavily on interaction to maintain clarity; they appeared to assume that readers have the same responsibility in reading their written

language. Navajo writers were more likely to address the audience directly (using I, you, and we in their writings) than the Anglo writers, and they expected the audience to assume responsibility for interpretation. This expectation for listener participation in story comprehension can generate problems for students in classroom environments where teachers expect predictable stories that stand alone. Stories from European and African cultures are often organized around threes. They have beginnings, middles, and ends. There are often three episodes—characters must undertake three challenges before a problem is resolved. We have three pigs who build three houses and have three encounters with a wolf, three billy goats have three encounters with a troll, and even Goldilocks engages in three activities in the home of the three bears—eating cereal, sitting on chairs, and sleeping in beds. Narratives from native tribes in the Southwest often have four episodes and reference to four elements such as the four cardinal directions. Narratives from native tribes in the Pacific Northwest may have five episodes and references to sets of five.

Thematic Content

Several beliefs contribute to how narrative content is presented. Within Athabaskan culture, it is considered inappropriate to predict the future, to speak of one's plans, or to assume one knows the thoughts or feelings of others ([Scollon & Scollon, 1981](#)). With such beliefs, one would not expect to find what is considered a complete episode story in mainstream cultures, that is, a story with explicit goals and plans.

The content of the plots of Native American and Anglo stories are affected by the circular and linear narrative structures and by cultural values. In Western stories, a returning son brings a happy ending with power, honor, respect, and material possessions for the individual (e.g., *The Return of the Prodigal Son* from The Gospel of Luke). In Native American plots, the ensuing happiness and harmony that results from a returning son involves all persons within the circle affected, e.g., bringing rain clouds that affect the total environment rather than money for an individual. The cultural contrast in plots is a contrast between a community, tribal, circular mode and an individualist, materialist, and linear mode. Thus, the son's return strengthens and completes the whole circle and re-establishes harmony for the whole family, village, or tribe, rather than only the individual ([Lutz, 1989](#)).

Anthropologists suggest that a number of narrative themes are culturally universal ([Maranda & Maranda, 1970](#)). Themes of villainy, lack or loss, and trickery have been reported in all cultures. How these themes play out, however, can differ. For example, many cultures have versions of the Cinderella story. In many of these stories, Cinderella, is treated meanly by a stepparent or stepsister. Members of the family or community attend some type of celebration. Because of her status, and often because of her poor clothing, Cinderella is not permitted to attend. In some of these stories, Cinderella is rewarded by a magical person or animal. In a number

of the stories, this magical assistance is not related to something Cinderella has done for the person or animal helping her. In others, she is given assistance by a person or animal she helped. In the majority of stories, Cinderella must promise to return from the celebration at a specified time. She seldom does, and despite her failure to keep her promise, she marries the prince, king, or wealthy landowner.

At least two versions of the Cinderella story are present in New Mexico Indian pueblos. In both of these stories, Cinderella is an orphan called Turkey Girl because she has the responsibility of caring for the Turkeys. Villagers go to a sacred dance or a powwow. Because of her clothes and bad smell, Turkey Girl cannot go. The Turkeys take pity on her, and because she has taken such good care of them, they bathe her and give her a new manta (ceremonial dress) to wear.

In one version ([Velarde, 1989](#)), when the participants at the ceremonial discover that the beautiful young woman is Turkey Girl, they decide she is a witch and chase after her to kill her. The Turkeys protect her, first by hiding her with their wings and then leading her into caves in the mountains, where she and the Turkeys remain to this day. In another version ([Pollock, 1996](#)), the Turkeys tell Turkey Girl that she must be back by sundown to prove to them that she has not forgotten them. If she forgets them, it will show them that she is of mean spirit and deserves a hard life. Turkey Girl readily promises to return. She has so much fun at the dance, however, that she forgets her promise. When she finally returns, the Turkeys are no longer in their pen. Turkey Girl's fine dress has become rags, her shawl tatters, and her sandals worn yucca fibers. The native Cinderella stories may have elements that are familiar to us, but the lessons they teach are quite different. Unlike Cinderella, Turkey Girl is not rewarded for deceit or for not honoring her promise to return at a specified time.

Narrative Microstructures

The syntactic structures of the languages in which narratives are told interact with narrative macrostructure ([Berman & Slobin, 1994](#)). Even when persons are telling stories in English, their native language influences the ways in which stories are told. In some native groups who no longer speak their heritage language, characteristics of the original native language have been stabilized and perpetuated in the variety of English used by group. As a consequence, distinctively indigenous ways of speaking English have been maintained ([Bayles & Harris, 1982; Fletcher, 1983; Weeks, 1975; Wolfram, 1984, 2000](#)). Educators must be sensitive to the ways in which the native language may be influencing speakers' English-language production.

Early studies of Keresan in the first half of the twentieth century described primarily the phonological characteristics of the language. In the late eighties, Valiquette, a Catholic priest with linguistic training at one of the pueblos was asked to assist the community in documenting its language. In proposing a system

for studying the lexicon of the Keresan language, [Valiquette \(1990\)](#) noted that Keresan speakers seldom use indirect speech or reference to thoughts and feelings of others in narratives, but they do make use of direct quotes, which do not require that they infer thoughts and feelings of others.

Keres has an SOV (subject–object–verb) sentence structure. Verbs are highly inflected. There are no gender pronouns or pronouns for “it.” Pronominal prefixes on verbs code arguments (possessor, agent, patient, benefactee) and person (first, second, third, fourth—passive). Number is coded in the verb as one, two, and more than two. Location (coded by prepositions in English) is coded in the verb and is influenced by the characteristics of the objects. Size comparisons are made on the basis of volume and plane in space (vertical or horizontal); hence, there is no generic word for big.

In Keres clausal structure, infinitives are rare. Dependent clauses (which usually begin with temporal and causal connectives) are used but appear to be related to age privilege differences, not to age developmental differences. That is, as one matures and gains stature in the community, one has the privilege to use dependent clauses with increasing frequency and for a wider variety of purposes. [Valiquette \(1990\)](#) noted that a form of *and* is used as the connective in many dependent clauses. He suggests that this is the result of the frequent use of *and* and *y* in English and Spanish. It may, however, also be a reflection of how Native Americans perceive the temporal and causal relationships coded in dependent clauses ([Hall, 1984](#)).

METHODS

Participants

The school the children in Project TALES attended is a public school in a district that is half Hispanic and half Native American. The district serves five separate pueblo reservations. This particular school is on reservation land and all but a few children are from the tribe. The village is located about 6 miles from a major highway and 40 miles from a large city. All children in third, fourth, and fifth grades participated in project activities. For this article, the oral and written narrative skills of 12 children at each grade level (6 regular education, $n = 18$, and 6 special education students, $n = 18$) collected in late spring near the conclusion of the project were analyzed.

Training in Narratives

Before the beginning of the school year, teachers participated in training in which they learned about the content, structure, and style of mainstream narratives and potential cultural variations in narratives. They learned to identify aspects of syntactic complexity (independent and dependent clauses and connective words) and the story grammar elements of stories (setting, initiating event, reaction, goal,

plan, attempts, consequences, resolution), and they practiced analyzing story samples collected from children the previous spring. During the school year, students participated in narrative activities centered around specific topics selected by their teachers (e.g., weather, rain forests, dragons, American tall tales). Once each week, a speech-language pathologist (SLP) led a group lesson. During language arts and science activities the rest of the week, teachers reinforced and extended ideas introduced by the SLP. A variety of children's literature on the selected themes was placed in each classroom. The teachers read some of the stories, and others were available for the students to read for self-selection.

Project TALES staff used the concept of working in the "zone of proximal development" (Englert, Rozendal, & Mariage, 1994) to facilitate narrative development in the students. The project staff integrated information about development of narration in mainstream and culturally diverse populations with the principles of multicultural education (Tharp, 1994) to assist students in developing cognitive academic language proficiency (CALP) (Chamot & O'Malley, 1994; Cummins, 1984). The multicultural educational principles, as defined by Tharp (1994) involve the following elements:

1. *Joint productive activities*: As a group, the students listened to stories read by the SLP or teacher, watched videos and interacted with computer CDs, discussed the stories and videos, and jointly constructed stories or completed related art or science activities.
2. *Contextualized lessons*: The SLP and teachers integrated familiar Native American stories and themes and stories of the Southwest with unfamiliar stories (mainstream stories and stories from other cultures). Students were encouraged to discuss personal experiences around the themes of the stories.
3. *Instructional conversation in lessons* (Goldenberg, 1991): This involved conversation with a thematic focus. Instructors activated students' background knowledge, provided direct teaching of concepts as needed, and promoted the use of complex language and justification of statements. They asked primarily open-ended questions, were responsive to students' contributions, and encouraged students to build on one another's contributions.

In addition, Project TALES reinforced the rich storytelling history of the pueblos by using parents and Native American storytellers in the classroom to model relating personal events and imaginative stories.

Narrative Collection and Analyses

It must be emphasized that Project TALES documented children's development of English narratives, not Keres narratives. Because the tribe views their language as private to the tribe, it would not have been appropriate to collect and transcribe

narratives spoken in Keres by the children. The assessment protocol was a mainstream protocol. The children were asked to tell types of stories for a purpose and in a manner expected in school, but which probably were not characteristic of their culture.

To document the students' English narrative skills at the conclusion of the program in the spring, all students in third through fifth grade watched the wordless video, *Max and the Snail* (Society for Visual Education, 1989), and wrote the story. In addition, at each grade level, six children identified as special education students and six typically developing students matched for gender and age told four oral stories to a peer who served as a listener. (The basis used by school personnel for identifying special education students was not entirely clear. All native students would perform poorly on the typically used assessments. As a consequence, it appeared that teacher judgments weighed heavily in determining students who were identified for special education services.) All narratives were told in English and audiotaped. For the first narrative, the evaluator modeled how to tell a story by using the first six pictures from the wordless picture-book, *One Frog Too Many* (Mayer & Mayer, 1975). The student was then given the wordless picture-book, *A Boy, A Dog, and A Frog* (Mayer, 1967), and asked to tell the story to his or her friend. The student was told not to show the book to the friend. The next three narratives were elicited using three different book covers, the content of which varied in familiarity for the students. One book cover depicted a drooling coyote eyeing a sheep, a second showed a native child riding two seals, and the third showed a southwest desert scene with a women and two men outside an adobe house. Behind the house was a large pile of spoons.

Microstructure and macrostructure analyses were conducted on the oral and written narratives of the 18 regular education students and 18 special education students identified in third, fourth, and fifth grades. The elements selected for evaluation were those elements that are known to show developmental changes during the school age years in mainstream students and are elements that are marked differently in Keres and English. Microstructure analysis focused on use of syntactic and morphology structures. Macrostructure analysis included story grammar analysis and use of evaluative words that reflect what has been termed a "landscape of consciousness" (Bruner, 1986). If students are to develop characterization and plot in their narratives, they must be aware of the thoughts, feelings, and intentions of characters. Most narratives unfold simultaneously on two levels, the *landscape of action*, which represents the events within story time, and the *landscape of consciousness* or of human perception of those events (what those involved in the action know, think, or feel, or do not know, think, or feel) (Bruner, 1986). Landscapes of consciousness can be created in a variety of ways. Adjectives and adverbs referring to emotions (e.g., *sad, angry, jealous, relieved, disappointed, anxiously, happily, desperately*) and metacognitive verbs (e.g., *think, guess, plan, remember*) create a landscape of consciousness. Words that modify the action of

a verb to make the event as psychologically in progress rather than as a completed act also contribute to a landscape of consciousness and are referred to as predicate transformations (Todorov, 1977).

There are two types of predicate transformations that convey a landscape of consciousness: simple transformations and complex transformations. Simple transformations have auxiliary verbs that modify the action of the main verb, rendering the action or event as psychologically in progress rather than as a completed act. For example, a pure informational statement about the video *Snail Needs a Shell*, in which Max the Mouse accidentally runs his bicycle over a snail's shell and breaks it, would be, "Max got a new shell for the snail." Simple predicate transformations could include:

- Max *must* get a new shell for the snail.
- Max *wants* to get the snail a new shell.
- Max *is trying* to find the snail a new shell.
- Max *cannot* find the snail a new shell.

Each of these sentences conveys information from Max's point of view, and hence, reflects a landscape of consciousness.

Complex transformations are two clause structures in which a sentence is altered by adding a verb or verb phrase that modifies the original verb. These can include words that signal direct and indirect discourse. The complex verb phrases add an element of mental activity (or landscape of consciousness) to the main verb, e.g.,

- Max *imagines* he is putting on a show for the snail.
- Max *realizes* that he has shattered the snail's shell.
- The snail *said*, "Don't leave me Max."
- The snail *enjoys* crawling along the road with Max.
- Max is *disgusted* that the snail will not stop crying.

The Computerized Language Analysis Program (CLAN) (MacWhinney, 1995) was used to analyze the following micro- and macrostructures in the stories produced from the frog book and book cover stimuli.

Microstructure CLAN analyses included:

- mean length of terminal-unit (MLT, defined as an independent clause and any dependent clauses attached to it),
- clause types and frequency of clause types (independent, dependent—noun, relative, adverbial),
- number of prepositional phrases (adjectival and adverbial),
- number and types of adverbial and conjunctive connectives,
- number and types of cohesion errors (e.g., ambiguous pronouns, tense and number errors, wrong or missing words).

Macrostructure CLAN analyses included:

- Counts of evaluative elements in all stories;
 - number of simple transformations,
 - number of complex transformations,
 - number of other evaluative elements (adjectives and adverbs convening emotions and metacognitive verbs).

In addition to the macrostructure analysis of evaluative elements, story grammar level analysis was conducted on the stories children produced in response to book cover pictures. (Stories were given ratings of from 1 to 8; see [Appendix A](#) for story grammar scoring). MLT and story grammar level analyses were also conducted on the written stories.

RESULTS

Two-way analyses of variance (ANOVA) were used to analyze microstructure differences, as well as differences in story grammar and evaluative macrostructures with grade (third, fourth, fifth) and educational category (regular and special education) as the two independent variables. A one-way ANOVA was used to compare stories with goals produced in response to the book cover pictures to stories without goals. The purpose was to determine if stories with goals included more evaluative macrostructure elements referring to landscape of consciousness than stories without goals. All statistical analyses were performed using GB-STAT V5.30+ ([Friedman, 1998](#)).

Although quantitative analyses were performed on a number of narrative structures to document potential changes across grades and differences between children identified as regular and special education students, significant statistical results should not be viewed as of primary importance. Moreover, effect sizes were, in general, small, indicating considerable overlap of scores across grades and educational category; however, this may also mean that the study was underpowered due to sample size. What is more important for purposes of this project is the documentation of the types and ways that the students employed narrative micro- and macrostructures. Such information provides educators with principles to guide intervention.

Microstructure Variables

[Table 1](#) shows the results of the two-way ANOVA analyses for the frog stories, [Table 2](#) shows the ANOVA analyses for the book cover stories, and [Table 3](#) presents results of the ANOVA analyses from the written stories. On several of the measures, the means for the regular education fourth-grade students were lower

Table 1. Two-Way ANOVA for Stories From Frog Books: Microstructure and Macrostructure

Source	df	MS	F	p	η^2
<i>Microstructure</i>					
<i>MLT</i>					
Grade	2	2.43	3.46	.04	.16
Educational category	1	4.07	5.79	.02	.14
Grade × category	2	0.00	0.01	.99	
Within cell	30	0.70			
<i>Number of dependent clauses</i>					
Grade	2	0.26	2.11	.14	
Educational category	1	0.15	1.26	.27	
Grade × category	2	0.13	1.09	.35	
Within cell	30	0.12			
<i>Number of adjectival prepositional phrases</i>					
Grade	2	0.00	0.92	.41	
Educational category	1	0.00	0.03	.87	
Grade × category	2	0.00	3.58	.04	.20
Within cell	30	0.01			
<i>Number of adverbial prepositional phrases</i>					
Grade	2	0.18	4.79	.01	.19
Educational category	1	0.38	10.08	.003	.20
Grade × category	2	0.05	1.28	.29	
Within cell	30	0.04			
<i>Number of ands connectives</i>					
Grade	2	0.004	0.008	.99	
Educational category	1	0.003	0.07	.79	
Grade × category	2	0.15	3.35	.05	.20
Within cell	30	0.05			
<i>Number of other connectives</i>					
Grade	2	0.08	2.01	.15	
Educational category	1	0.06	1.37	.25	
Grade × category	2	0.07	1.68	.20	
Within cell	30				
<i>Number of cohesive errors</i>					
Grade	2	0.01	0.52	.60	
Educational category	1	0.09	0.19	.08	.03
Grade × category	2	0.00	0.07	.93	
Within cell	30	0.03			
<i>Macrostructure</i>					
<i>Number of simple transformations</i>					
Grade	2	27.08	0.69	.51	
Educational category	1	56.25	1.43	.24	
Grade × category	2	60.58	1.54	.23	
Within cell	30	39.10			

Table 1. (*Continued*)

<i>Source</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
<i>Number of complex transformations</i>					
Grade	2	1.69	0.76	.48	
Educational category	1	1	0.45	.51	
Grade × category	2	4.75	2.13	.14	
Within cell	30	2.23			
<i>Number of other evaluative words</i>					
Grade	2	79.00	1.32	.28	
Educational category	1	113.78	1.90	.18	
Grade × category	2	59.11	0.99	.38	
Within cell	30	59.83			

than the regular education third-grade means and approximated the means for the fourth-grade special education students. Inspection of data from individual children indicated that two regular education fourth-grade students accounted for this pattern. The performance of these two students on a number of the oral language measures was similar to the performance of the special education fourth-grade students. An initial question was if these two students had been misclassified. Their performances on the written language sample, however, were comparable to the other regular education students. Because none of the children were highly verbal in class, it is possible that teachers were making their judgements regarding special education based upon students' reading and writing skills, not their oral language skills.

In an exploratory study such as this one, the α level of .10 was selected to minimize the possibility of rejecting no differences between groups when differences were present. The mean performance of regular education students was always better than the mean performance of the special education students. Regular education students had (a) longer MLTs on frog stories and book cover stories; (b) more adverbial phrases on both frog stories and book cover stories; (c) more adjectival prepositional phrases, *and* connectives, and simple transformations and complex transformations on book covers; and (d) more complex story grammar structures on book cover stories and written stories. Across grades, regular education students exhibited lower mean cohesive errors on frog stories than did special education students. Teachers did appear to be identifying students who were learning English more slowly than other students or who may have been exhibiting greater language-learning difficulties.

Syntactic Structures

As mainstream students progress through elementary school, sentence length increases and syntax becomes more complex (Scott & Stokes, 1995). Sentence

Table 2. Two-Way ANOVA for Stories From Book Cover Pictures: Microstructure and Macrostructure

Source	df	MS	F	p	η^2
<i>Microstructure</i>					
<i>MLT</i>					
Grade	2	1.09	1.70	.20	
Educational category	1	6.17	9.65	.004	.20
Grade × category	2	1.53	2.40	.11	
Within cell	30	0.64			
<i>Number of dependent clauses</i>					
Grade	2	296.03	2.49	.10	.12
Educational category	1	529	4.46	.04	.11
Grade × category	2	99.75	0.84	.44	
Within cell	30	118.72			
<i>Number of adjectival prepositional phrases</i>					
Grade	2	66.08	2.50	.10	.11
Educational category	1	182.25	6.90	.01	.15
Grade × category	2	34.75	1.31	.28	
Within cell	30	26.43			
<i>Number of adverbial prepositional phrases</i>					
Grade	2	614.08	5.03	.01	.22
Educational category	1	455.11	3.73	.06	.08
Grade × category	2	169.36	1.39	.26	
Within cell	30	121.97			
<i>Number of ands connectives</i>					
Grade	2	774.25	3.44	.01	.22
Educational category	1	1045.44	1.07	.01	.15
Grade × category	2	54.86	1.27	.68	
Within cell	30	143.24			
<i>Number of other connectives</i>					
Grade	2	1216	3.76	.03	.25
Educational category	1	386.78	1.20	.28	
Grade × category	2	403.44	1.25	.30	
Within cell	30	323.04			
<i>Number of cohesive errors</i>					
Grade	2	400.86	5.64	.01	.26
Educational category	1	21.78	0.31	.58	
Grade × category	2	36.86	0.52	.60	
Within cell	30	71.05			

Table 2. (*Continued*)

<i>Source</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
<i>Macrostructure</i>					
<i>Number of simple transformations</i>					
Grade	2	1314.78	3.86	.03	.18
Educational category	1	1613.36	4.74	.04	.11
Grade × category	2	179.11	0.53	.60	
Within cell	30	340.31			
<i>Number of complex transformations</i>					
Grade	2	261.69	2.80	.08	.14
Educational category	1	266.78	2.86	.10	.07
Grade × category	2	74.36	0.79	.46	
Within cell	30	93.36			
<i>Number of other evaluative words</i>					
Grade	2	1094.11	3.48	.04	.17
Educational category	1	756.25	2.40	.13	
Grade × category	2	196	0.62	.54	
Within cell	30	314.37			
<i>Story grammar levels for book covers</i>					
Grade	2	28.51	7.2	.001	.11
Educational category	1	19.59	4.9	.03	.03
Grade × category	2	14.56	3.7	.03	.05
Within cell	102	3.95			

Table 3. Two-Way ANOVA for Written Stories From Max Video: Microstructure and Macrostructure

<i>Source</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
<i>Microstructure</i>					
<i>MLT</i>					
Grade	2	1.63	1.27	.29	
Educational category	1	1.75	1.36	.25	
Grade × category	2	0.80	0.62	.54	
Within cell	30	1.28			
<i>Macrostructure</i>					
<i>Story grammar levels</i>					
Grade	2	26.83	8.40	.001	.26
Educational category	1	39.00	12.21	.001	.19
Grade × category	2	2.61	0.81	.45	
Within cell	30	1.28			

length, or MLT, is most commonly increased through the addition of dependent clauses and a variety of prepositional phrases. With the exception of dependent noun clauses, the addition of dependent clauses requires the use of at least one of the following types of connectives: temporal, causal, or pronominal.

As shown in [Table 1](#), there was a significant grade and educational level interaction for mean number of adjectival prepositional phrases on the frog stories ($F = 3.6$, $df = 2, 30$, $p < .05$). The η^2 values indicated that 20 percent of the variability in the number of adjectival prepositional phrases was accounted for by the relationship between grade and education category. Inspection of data indicated that adjectival prepositional phrases showed increases between third and fifth grades, but at fourth grade, regular education students used fewer adjectival phrases and special education students used more than they had at third grade.

For the frog stories, the MLT was significant for grade ($F = 3.5$, $df = 2, 30$, $p < .04$) and educational category ($F = 5.8$, $df = 1, 30$, $p < .04$). The η^2 statistic indicated that 16 percent of the variability in MLT was explained by grade and 14 percent of variability was explained by educational category. The MLT for book cover stories was significant for educational category ($F = 9.7$, $df = 1, 30$, $p < .01$) but not for grade. Twenty percent of the variability in MLT for book cover stories was explained by educational category. It should be emphasized that, although there were some significant differences in MLT, the actual differences between third through fifth grades and between regular and special education students was less than one word per T-unit (see [Figures 1 and 2](#)). Hence, MLT provides minimal information regarding the nature of syntactic differences across grades or between regular and special education students.

Increases in MLT for frog stories appeared to be related primarily to increases in the use of adverbial prepositional phrases, not to increases in dependent clauses

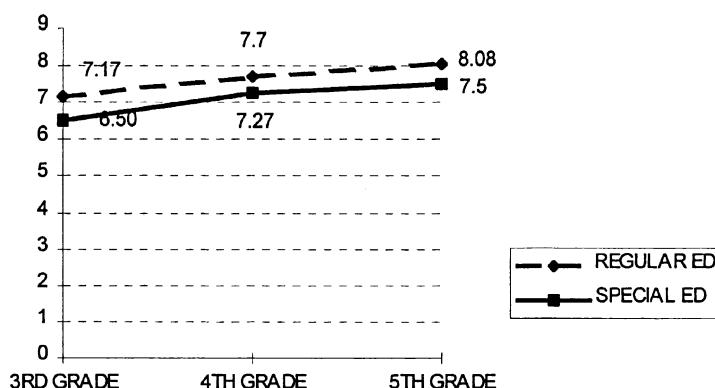


Figure 1. MLT for frog stories.

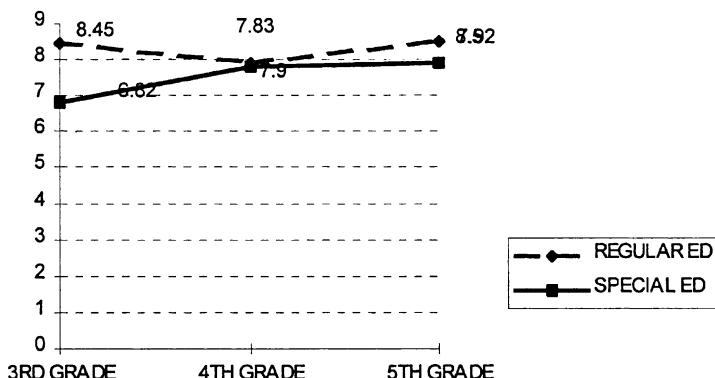


Figure 2. MLT for book cover stories.

or adjectival prepositional phrases. Dependent clauses were neither significant for grade nor educational category. Adverbial prepositional phrases for the frog stories were significant for both grade ($F = 4.8, df = 2, 30, p < .01$) and educational category ($F = 10.1, df = 1, 30, p < .003$). The η^2 statistic indicated that 19 percent of variability was explained by grade level and 20 percent by educational category.

For book cover stories, dependent clauses were significant for educational category ($F = 4.5, df = 1, 30, p < .04$) and for grade ($F = 2.5, df = 2, 30, p < .10$). The η^2 showed that 11 percent of variability in the number of dependent clauses was accounted for by educational category and 12 percent for grade. Adjectival prepositional phrases were significant for grade ($F = 2.5, df = 2, 30, p < .10$) and educational category ($F = 6.9, df = 1, 30, p < .01$). The η^2 value indicated that 11 percent of the variability was accounted for by grade and 15 percent was accounted for by educational category. Adverbial prepositional phrases were also significant for grade ($F = 5.0, df = 2, 30, p < .01$) and for educational category ($F = 3.7, df = 1, 30, p < .06$). Based on the η^2 statistic, 22 percent of the variability was accounted for by grade and 8 percent by educational category.

Cohesion

Cohesion is established through use of connectives, referencing, and correct grammatical markers. For the frog stories, there was a significant interaction between grade and educational level for the use of *and* connectives ($F = 3.4, df = 2, 30, p < .05, \eta^2 = .20$). Regular education students increased their use of and across grades and special education students decreased their use across grades. For the frog stories, the mean number of other connectives and mean number of cohesive errors were not significant for either grade or educational category.

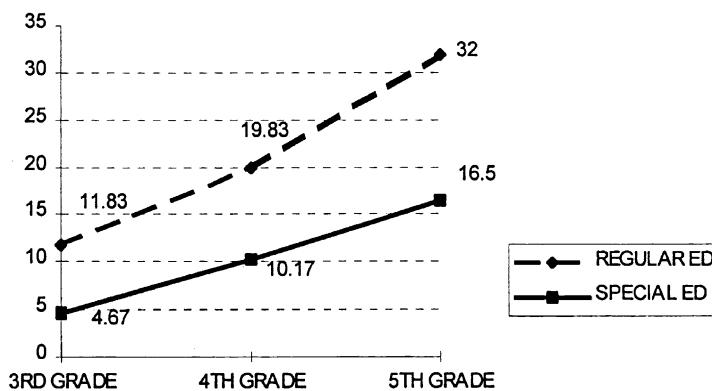


Figure 3. Number of *and* connectives for book cover stories.

In contrast, for the book cover stories, use of *and* connectives was significant for both grade ($F = 3.44, df = 2, 30, p < .01$) and educational category ($F = 1.07, df = 1, 30, p < .01$). Both regular and special education students increased their use of *and* across grades, and regular education students used more *ands* than special education students (see Figure 3). Grade accounted for 22 percent of the variability and educational category accounted for 15 percent. The number of other connectives was significant for grade ($F = 3.76, df = 2, 30, p < .03$) but not for educational category. Students' grades accounted for 25 percent of this variability (see Figure 4). The number of cohesive errors was also significant for grade ($F = 5.64, df = 2, 30, p < .01$) but not educational category (see Figure 4). The η^2 value indicated that 26 percent of the variability was accounted for by grade. Mean number of errors increased across grades.

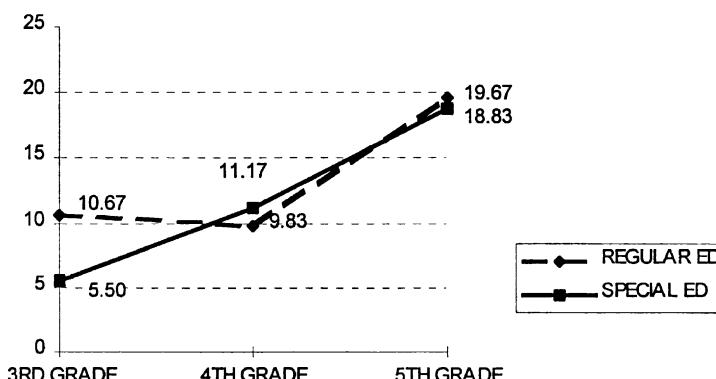


Figure 4. Number of cohesion errors for book covers.

Macrostructure Variables

Macrostructure variables included story grammar levels and evaluative landscape of consciousness elements. It was hypothesized that the oral storytelling from the more familiar book cover pictures would result in higher story grammar levels because the children would have experiences and scripts from which to draw ideas. Review of the data, however, showed that there was no consistent pattern of performance on the book cover stories. Some children told their most complex story about the most familiar stimulus (the coyote and the sheep), whereas other children told their most complex story in response to the unfamiliar stimulus (the boy riding the two seals). The story grammar levels obtained by each child on the three stories they told were highly correlated (median $r = .73$, $p < .01$). For this reason, the stories from the three stimulus covers were not analyzed separately when comparing performance by grade and educational category.

As shown in [Table 2](#), there was a significant interaction between grade and educational category for the oral story grammar levels ($F = 3.7$, $df = 2, 102$, $p < .03$, $\eta^2 = .05$). Third- and fourth-grade special education students had lower mean story grammar scores than regular education students, but at fifth grade, mean story grammar scores for regular and special education students were equivalent. Story grammar levels for the oral book cover stories were significant for both grade ($F = 7.2$, $df = 2, 30$, $p < .001$) and educational category ($F = 4.9$, $df = 1, 30$, $p < .03$) (see [Figure 5](#)). The η^2 value indicated that 11 percent of the variability was accounted for by grade, 3 percent by educational level, and 5 percent by the interaction of grade and educational level. Although story grammar levels increased across grades, they remained lower than levels found for mainstream students ([Hedberg & Westby, 1993](#)).

A two-way ANOVA for story grammar levels was conducted on the students' writing of the story for the wordless video, *Max and the Snail*. As shown in [Table 3](#),

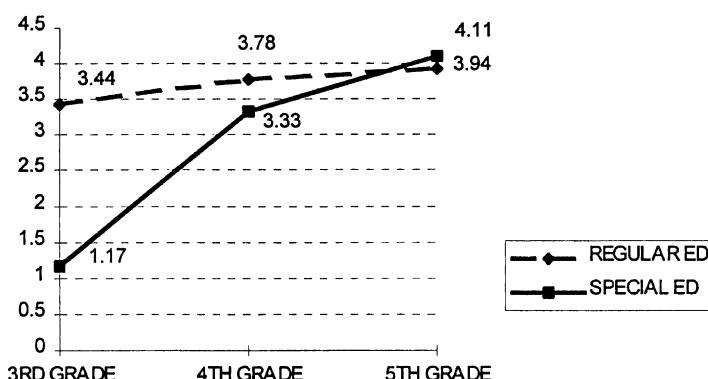


Figure 5. Story grammar levels for book cover stories.

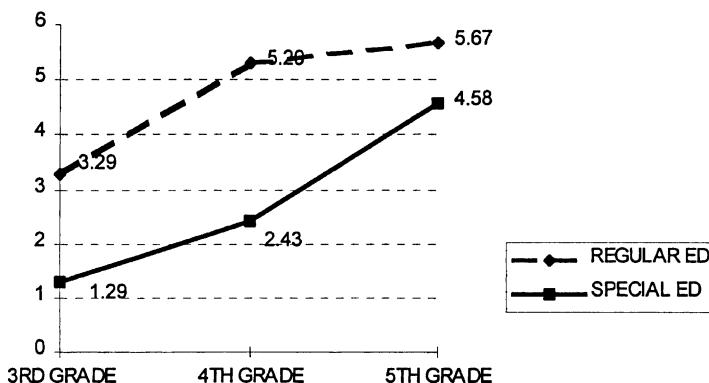


Figure 6. Story grammar level for written stories.

findings were significant for both grade ($F = 8.4, df = 2, p < .001$) and educational category ($F = 12.2, df = 1, 30, p < .001$) (see Figure 6). Then η^2 statistic indicated that 26 percent of the variability was accounted for by grade and 19 percent by educational category.

Low story grammar levels were anticipated on both oral and written stories because traditional pueblo stories focus on descriptions and actions, but not sequential, cause–effect relationships, or character intention essential for higher story grammar levels. Complete episode stories in mainstream culture require character goals and attempts or plans to reach these goals. This requires that students project into thoughts, emotions, or intentions of others (elements of landscape of consciousness), a behavior that is not characteristic of narrating in the children's tribe. For the frog stories, none of the landscape of consciousness measures (evaluative words, simple and complex transformations) were significant for either grade or educational level. For the book cover stories, grade ($F = 3.8, df = 2, 30, p < .05$) and educational category ($F = 4.7, df = 1, 30, p < .04$) were both significant for number of simple transformations (see Figure 6). The η^2 indicated that 18 and 11 percent of the variability was explained by grade and educational category, respectively. The number of complex transformations for the book cover stories was also significant for both grade ($F = 2.8, df = 2, 30, p < .10, \eta^2 = .14$) and educational category ($F = 2.9, df = 1, 30, p < .10, \eta^2 = .07$). For other evaluative words, grade was significant ($F = 3.5, df = 2, 30, p < .05$), but not educational category ($F = 2.4, df = 1, 30, p < .13$). Grade accounted for 17 percent of the variability.

The relationship between story grammar level and use of the evaluative macro-structure elements (emotion words, simple and complex transformations) reflecting a landscape of consciousness was investigated in the students' book cover

Table 4. Percentage of Book Cover Stories With Goals

	<i>Percentage of stories with goals</i>			
	<i>Special education</i>		<i>Regular education</i>	
	<i>Oral</i>	<i>Written</i>	<i>Oral</i>	<i>Written</i>
Third grade	0	0	22	28
Fourth grade	28	14	28	71
Fifth grade	28	66	39	83

stories. The percent of stories containing a goal (stories at or above the abbreviated episode level) was calculated for regular and special education students at each grade level, as shown in Table 4. In a study of narratives from middle class suburban students in response to story starters (such as “Once there was a gray fox who lived in a cave near a forest . . .”), Stein and Albro (1997) reported the percentage of goal-based stories produced by kindergarten, third-, and fifth graders. Their percentages were 52 percent for kindergartners, 67 percent for third graders, and 78 percent for fifth graders. In comparison, a total of 22 percent of the oral stories told by regular education third-grade Native American students contained goals, less than half the goal-based stories of mainstream kindergartens. Only 39 percent of the stories of the regular education fifth-grade Native American students contained goals, which was less than the frequency of goal-based stories produced by mainstream kindergartens. As shown in Table 5, a one-way ANOVA performed for the students’ goal-directed narratives indicated significantly more landscape of consciousness elements than stories not containing goals ($F = 29.2$, $df = 1, 106$, $p < .0001$). Based on η^2 , 22 percent of the variability in number of evaluative words and transformations was accounted for by whether or not a story had a goal. The mean number of landscape of consciousness elements for stories without goals was 5.7; the mean number of landscape of consciousness elements for stories with goals was 17.4. If students included a goal, they were likely to include much more evaluative information, such as specific reference to characters’ emotions, thoughts, or intentions.

Table 5. One-Way ANOVA for Simple and Complex Transformations in Stories With and Without Goals

<i>Source</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	1	2767.05	29.24	.0001	.22
Within groups	106	10032.94	94.65		

DISCUSSION

Cautions in Interpretation of Data

Caution is warranted in interpreting just what the pueblo students in this project were able to do with narratives. The narratives they told may not have fully reflected their true narrative abilities. The children may not have attempted to perform to the best of their abilities because of not seeing the relevance of the tasks or because of feelings of alienation with school ([Sarris, 1993; Wolcott, 1987](#)). [Peshkin \(1997, p. 106\)](#), in interviewing Pueblo children about their school performance, quoted one student as saying, “With school, basically all you have to do is try. You don’t have to feel it in your heart.” He reported that Native American students have a strong emotional bond with their families and with their Pueblo. Peshkin suggested that this strong sense of wanting to belong to the group may not exist in the school because this setting is part of a world that Pueblo people judge as rejecting them. Another Pueblo student stated, “It’s like they (teachers) can only tell you so much. At home you have to do it. You can’t say, ‘OK, maybe I will’” (p. 109). Without an emotional bond to school, Native American children may not have felt the need to perform well.

Another reason that the narratives of this study may not adequately reflect Native American children’s true narrative abilities is that Native American children are taught not to share certain information with outsiders, such as information about religious ritual, ceremonies, aspects of hunting, and certain traditions. Children know they are not supposed to reveal certain aspects of their lives with non-Native American people; however, they may not be sure what information is permissible to share. Thus, when children are in doubt, they may say nothing. In this project, students told their stories to a peer, however, at least one non-Native American adult was also present. At times, during data collection, it was observed that the students would stop the narrating task and talk to each other in Keres. After the conversation, the storyteller occasionally switched the direction of the story or abruptly ended the story.

Influence of Stimuli

It is interesting to note that performance on book cover stories were more variable across grades and educational levels than performance on the frog stories. It appears that stories generated from the frog books are not as sensitive to developmental differences as stories generated from less structured stimuli, such as book covers or single pictures. The frog books are used internationally across all ages for documenting cultural/linguistic differences in storytelling and narrative delays and disorders. These stories may not be the best to use, however, particularly after early elementary school because they are less likely to capture developmental differences.

The nature of the stimulus may account for the differing results for the frog and book cover stories. The frog stories were told using a wordless picture-book, a structured stimulus, whereas the book covers were less structured stimuli. Because the wordless picture-book was a structured stimulus, students could tell a fairly complete story merely by describing the pictures. Because the story was already predetermined, it was not imperative for students to state explicitly the relationships among events in the story and, hence, it was not essential that they use complex linguistic structures. They were able to rely on the pictures in the book to tell a relatively coherent story. Also, because the story was predetermined, the students had limited flexibility in what they could include in their stories.

Coherence was not as easy to establish using the book covers because there was only one picture. The book cover stories required the students to use more decontextualized language because they had to describe and explain events that may have occurred before and after the event illustrated in the book cover. To describe the unseen event adequately, the students needed to use more adjectival and adverbial prepositional phrases. To explain the relationships among the unseen events, students needed to use more temporal and causal connectives. The increase in temporal and causal connectives leads to the addition of dependent clauses that, in turn, increases syntactic complexity. Increases in syntactic and macrostructure complexity in the book cover stories may have contributed to the increases in cohesion errors across grades for both regular and special education students. Increasing syntactic complexity put additional demands on working memory and could result in a reduced performance in other aspects of language ([Lahey & Bloom, 1994](#)). For example, as students attend to organizing more involved stories and structuring more complex sentences, they may make more cohesive errors.

Influences of Culture on Structure and Content

To appreciate the nature of the students' narratives, it is necessary to look beyond counts of microstructure and macrostructure elements. Some of the children's narratives reflected integration of elements from both their native and the mainstream culture. The students were reinventing the enemy's language.

Microstructure Influences

The number of *ands* and the number of cohesion errors were expected to decrease with increasing grade, while the number of different connectives was expected to rise. The results for the book cover narratives, however, indicated that use of *and* increased, even as use of other connectives increased. Because the book cover stories increased the demand for cohesion, the number of *ands* may have increased across the grades because it is a quick and easy method of establishing cohesion between sentences. In addition, *and* may have been a way for students to maintain cohesion while at the same time allowing them to plan out what they were

going to say next ([Ochs, 1979](#)). Or, the frequent use of and may have been related to Indian-influenced English. [Valiquette \(1990\)](#) suggested that *and*, and a Keres equivalent, was the most frequent connective used by adult Keres speakers. It may be that the students perceived the relationships as additive rather than temporal or causal; or, at least, that they perceived the relationships differently than mainstream Westerners. Causality in Native American philosophy and science goes beyond the physical world to include spiritual and ceremonial elements ([Cajete, 2000](#)).

Many of the cohesion errors were the result of ambiguous referencing. Some of the errors could be attributed to the fact, that in the students' first language, there are no gender pronouns. Even adults in the community are heard to interchange gender pronouns, e.g., saying "Mr. Garcia . . . she brought in the library books;" or, "Maria, the speech therapist, he gave me some ideas." Students were also likely to refer to characters with a pronoun without initially introducing the character with a noun or name. This became problematic when several characters were all referred to by the same pronoun.

Macrostructure Influences

Reference to the number four was noted in a number of stories, even through four objects, animals, or people were not present in the pictures. For example, "four lambs were playing" and "there were four people in front of the house" (although the picture showed only three), and the man "got four pairs of spoons and started making music." One student stated, in response to the book cover with the adobe house, that two men and two women had built a home for themselves, although the book cover showed only one woman and two men. Another student said that a man came to a couple's door with four spoons in his hands. Later in the story, the couple discovered the man trying to sell a whole pile of spoons. The couple tell the man that they will only buy four spoons.

The content of the pictures affected the children's story production, but not exactly in the ways expected. It was anticipated that the students would tell their best story in response to the picture of the coyote eyeing the sheep because it depicted characters and a setting that was familiar to them. We hypothesized that students would produce the poorest stories about the picture of the boy riding two seals. The students lived in the middle of a desert. Many did not know what kind of animals were in the picture, and they certainly did not know about the characteristics of seals.

The story grammar complexity of the stories children told was highly correlated across the three pictures. The majority of the children's stories involved description or simple action sequences of behavior that focused on describing behaviors that were fairly explicit in the pictures. When students produced longer stories, the influence of culture was more likely to be seen. As expected, the children had a variety of scripts for interactions between coyotes and sheep. They knew that the coyote would attempt to chase the sheep and that the sheep would

attempt to get away. A few students suggested tricks the animals might play on one another.

Although the content of the boy riding seals picture was unfamiliar, the picture appeared to trigger a common native theme of man living in harmony with nature. If children did more than describe the picture, they were likely to suggest friendly, helpful interactions between the boy and seals. In none of the stories did the students have any violent interactions between the boy and seals. In the majority of the stories, the boy and animals interacted to help one another.

The desert scene would have been familiar to the children, but the picture did not suggest any particular theme. The pile of spoons behind the house would not trigger any familiar script. The stories children produced in response to this picture did not reflect any particular theme; however, the children tended to produce their longest stories in response to this picture and stories that had the most native-like structure. For example, in the following story there are four episodes.

One day this family had riches and gold but then they spent it. And they had little left. They had built a place to eat but no one came. So they had to shut down.

And then this guy heard about their place to eat but it had already closed down. And he brought all these different kinds of spoons to give to them. He gave them a whole stack of spoons. And they were made out of silver. And they didn't want to take them because they didn't know what to do with these spoons. And then the man said, "I'll give them for you for free." And so they had to just take them cause the man had bothered them a long time.

They had to move, but they didn't want to live in this place. One day they put stuff in their other house. The mother left a spoon on top of the stove and it melted and it turned into a circle of silver and then stopped. And then the mother thought if she could use this in town to buy some stuff. And then she went to town. She bought a loaf of bread and she got. So her and her husband started putting some spoons on the stove.

And they started heating them up for silver. And they tried to locate this man. He still had a few acres of spoons filled up eighteen feet high. And the man said, "I'll give them to you also for free." And they started melting the spoons for silver to use in the town to buy stuff. And they were never poor again.

The Native American culture appeared to influence how goals were achieved in many of the students' stories. Characters in the students' stories sometimes had desires and intentions but they seldom individually produced plans to achieve those goals. The characters rarely achieved their goals through their own actions. The goals, instead, were actually achieved by some outside force or event. This attitude toward how goals were achieved may have explained why many of the students'

stories consisted of a series of events that were not clearly related causally and why landscape of consciousness were relatively limited.

An example of a goal being achieved by some outside force or event occurred in the story in which there was a man who had a pile of spoons that he used to play music. He was always trying to sell his spoons but he was unsuccessful. One day, there was a fiesta and a musical band was without their drummer because the drum broke. As a result, the band asked the spoon man to play his spoons. The spoon man played all day and “everyone liked him and everyone bought his spoons.” In this story, an external event (the drum breaking) allowed the spoon man to play his spoons, and he was able to sell his spoons because people liked him, another external factor. The spoon man did not actively design a plan to achieve his goal of selling his spoons; instead he sold his spoons as a result of external events or forces.

In some instances, stories reflected influences of both the native and main-stream cultures. For example, as part of Project TALES, several classrooms did a unit on rainforests. They had read several versions of *The Three Little Pigs* (traditional version, [Galdone, 1970](#)), *The Three Little Pigs and the Hawaiian Shark* ([Laird, 1981](#)), and *The Three Little Javelinas* ([Lowell, 1992](#)). The students talked about how the environment affected the kinds of pigs, what they built their houses from, and who their predator was. After doing a unit on rainforests, they were asked to write a version of the three little pigs in the rain forest. Before beginning their stories, they discussed what animals in the rainforest would take the place of the pigs and wolf. After the students decided that peccaries are pig-like and their predator is a jaguar, they were asked to write their versions of the Three Little Pigs. The beginning of the child’s story shows the influence of his native culture and the ending shows his exposure to mainstream culture.

The first boy peccary went north then the second peccary went south and then the third peccary went west, and the fourth went east. The first peccary saw a lady Kuna that had a bucket full of flowers. Then he said, “Can I have flowers to build a house for me?” The Kuna Indian said: “yes” then the peccary went to build his house. After he finished his house he went to bed and slept and slept. When he got up he hear something. He look out the window, he saw a jaguar. Then he started to panic. Then he heard the jaguar say: “little peccary, little peccary let me come in.”

Jaguar found them. The jaguar decided to ring the doorbell. They let him in even though they knew who he was. Right when he was about to attacked, the oldest peccary pulled out a paper in front of him. It was a restraining order against him. The jaguar was shocked. He started to cry and decided to leave but the peccaries decided to hug him good bye. After that they went on the trail for their long journey.

Although the title of the child’s story was “The Three Little Peccaries” his story had four peccaries going in the four cardinal directions, reflecting a common

characteristic of native stories. He ended his story with the jaguar being served a restraining order, which was probably a reflection of mainstream culture, not a part of traditional pueblo culture.

Reinventing the Enemy's Language

The Keres-speaking children in this project were reinventing English, the enemy's language to tell stories. Children were exhibiting development of the micro- and macrostructures of mainstream narratives, while at the same time incorporating their native understanding of the world. It is important for teachers to understand the children's specific linguistic skills and how they can support them in acquiring higher levels of English. The children conversed easily in English, making teachers assume that they were fluent in English. Yet, the children lacked many of the higher English language structures. Although their MLTs were within the range found in mainstream English speakers, the native children increased utterance length largely through the addition of adverbial phrases, which represented earlier developing structures. They were not exhibiting the frequency and variety of adjectival preposition phrases, dependent clauses, and the variety of connectives necessary to comprehend academic content in later elementary school. Teachers need to be alert to the specific linguistic structures that should be explicitly taught and how those structures relate to cognitive conceptualizations.

Anthropologists have discussed the ways in which the conceptualization of time and cause in Indian groups in the United States Southwest differs from that of mainstream culture (Hall, 1984; Whorf, 1956; Worth & Adair, 1972). These differences in conceptualization of time and causality likely contribute to some of the difficulties that traditional native children in the Southwest exhibit in academic language and literacy. A primary step in scaffolding Native American children to achieve higher literacy skills in mainstream culture may be increasing their understanding of mainstream time relationships and physical and psychological causality and the ways these concepts are coded through the use of temporal and causal connectives and clausal structures.

Native American students must develop narrative flexibility. They need to develop the stories of their culture to participate in the activities of their pueblo, and they need to acquire the abilities to understand and use mainstream narratives to succeed in the academic setting. By third through fifth grades, mainstream curricula require that students be able to comprehend and to produce goal-directed stories. Such stories rely on thoughts and feelings of characters to drive the plot that is expressed in syntactic structures that make explicit the temporal and causal effect relationships underlying the plot.

To develop understanding of psychological causality, children first need to be able to identify the thoughts, feelings, and emotions within themselves and in other people; and they must learn that these same thoughts, emotions, and feelings

can be attributed to characters within stories. Although some emotions, such as happiness, sadness, fear, disgust, anger, and surprise are universal, what triggers the emotions in each culture varies, and the expected response to the emotions varies (Heelas, 1986). Linguistic terms for emotions in different languages often cannot easily be translated and understood across cultures (Shweder, 1993). Native children must become bicultural in their understanding of time and causality if they are to succeed in mainstream curricula. As children understand temporal and psychological causal behaviors, they must use necessary linguistic markers (e.g., when, while, before, after, since, because, so, therefore, until, before, if) to express the relationships among characters' thoughts and feelings and events in the story. Development of a landscape of consciousness, which involves development of psychological understanding, enables children to produce goal-directed stories because the establishment of a goal is strongly dependent on recognizing how characters think and feel. It must be recognized, however, that some of the temporal and causal relationships assumed in academic literature are not the same types of relationships assumed in the children's home culture. Teachers may need to teach explicitly the mainstream linguistic code, while at the same time valuing their students' culture and linguistic code and assisting them in recognizing the differences between the two cultures and codes (Delpit, 1988). To accomplish this, educators must increase their own understanding of native narrative traditions and well as their knowledge of their students' linguistic skills.

In facilitating development of mainstream narratives, consideration should be given to the materials used. Students did not show as much change across grades and educational categories for their stories told in response to the highly structured wordless picture-books as they did for their stories told in response to the less structure book covers. The wordless picture-books may have provided so much contextual support that students did not have to use explicit, detailed language to tell the story. In contrast, with less structured book cover stimuli, students were just given an idea or theme about the story, and they had to generate the rest of the story without the use of contextual cues. In this context, they were required to use detailed, explicit language to relate the story clearly to listeners. If educators seek to develop more complex language and narratives, they need to select stimuli that will challenge students to produce more complex discourse.

One must be careful, however, that the challenge is not too great. Students cannot be expected simultaneously to produce complex syntax while organizing a complex narrative on an unfamiliar theme. Such multitasking compromises the functioning of working memory. When facilitating students' development of landscape of consciousness, more complex syntactic structures, or higher story grammar levels, use familiar story themes and content. Many narrative themes occur across cultures. Although students in the study were unfamiliar with the book cover scene of two seals swimming in an ocean, a number of the children were able to formulate stories because the theme (man living in harmony with nature) was familiar. Thus, by

using literature with familiar themes, children have a framework for understanding relationships in new content. Consequently, they can focus on reinventing the enemy language to express that content. Such an approach can assist both students and teachers in becoming “chameleon readers” who can comprehend and produce narratives in more than one culture (McCabe, 1996).

Appendix A

A.1. Narrative Development: Story Grammar Scoring Components

1. *Description*: Unconnected sentences that describe; order not important.
2. *Action sequence*: Characters engage in a series of actions; generally a temporal sequence.
3. *Reactive sequence*: Characters engage in a temporal sequence of actions with one cause–effect relationship.
4. *Reactive sequence plus*: Characters engage in a temporal sequence of actions with more than one cause–effect relationship.
5. *Abbreviated episode*: Story has a goal, but there is no plan for achieving the goal.
6. *Complete episode*: Story has a goal and character has a plan to achieve the goal; character undertakes attempts to achieve goal.
7. *Complex episodes*: There are obstacles to the story goal; character engages in multiple attempts to reach goal.
8. *Multiple episodes*: The story has a sequence of episodes at abbreviated and/or complete levels.
9. *Embedded episodes*: Story has a story embedded within the story.

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