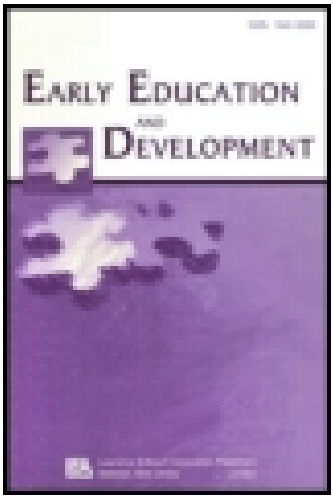

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Artfulness in Young Children's Spoken Narratives

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Artfulness in Young Children's Spoken Narratives

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Research Findings: Artfulness is rarely considered as an indicator of quality in young children's spoken narratives. Although some studies have examined artfulness in the narratives of children 5 and older, no studies to date have focused on the artfulness of preschoolers' oral narratives. This study examined the artfulness of fictional spoken narratives produced by 43 children aged 3 and 4. Each preschooler's narrative was coded using a 15-code system adapted from previous studies of artfulness in school-age children's narratives. These elements of children's narratives were compared to 3 traditional measures of narrative quality: complexity (mean length of T-units), productivity (total number of T-units), and lexical diversity (number of different words). In addition, the relations between children's narrative artfulness and their performance on a standardized measure of general language ability were examined. Results showed a wide range of code use across the sample. Narrative artfulness positively correlated with narrative complexity, productivity, lexical diversity, as well as standardized measures of general language ability. In addition, artfulness captured a significant portion of variability in children's language ability otherwise left unexplained by traditional narrative measures alone. *Practice or Policy:* These findings suggest that artfulness is a relevant factor and a valid indicator of quality in young children's narratives.

Constructing and conveying a sequence of events by way of a spoken narrative is a common event in children's daily lives. Spoken narratives produced by children may be characterized into two main types: personal and fictional. *Personal narratives* refer to descriptions of real-life past events and often occur naturally during conversation.

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Fictional narratives refer to retellings of familiar stories or to self-inspired imaginative stories and tend to occur most frequently within a school setting. Because both types of narratives consist of producing an interrelated string of clauses and sentences, this type of discourse involves a thorough and careful test of many aspects of language content, form, and use (Bruner, 1985; Hughes, McGillivray, & Schmidek, 1997). Researchers have often studied various elements of children's narratives, including vocabulary, grammar, cohesion, and episodic structure, and have shown associations between these aspects of narratives and children's academic skills (Bishop & Edmundson, 1987; Catts, Hogan, & Fey, 2003). One element that is much less studied, however, is the artfulness or creativity with which children tell stories. Therefore, in this study, we examined the extent to which artfulness occurs in young children's narratives. In addition, we explored the relations between elements of artfulness and traditional measures of narrative ability and general language ability.

Artfulness refers to the extent to which the narrator goes beyond simply recounting the events in a story to captivate the attention of the listeners through embellishment. Artfulness encompasses the creative, imaginative, and joyful elements of stories frequently missed in objective measures of narrative quality. Children who tell artful or elaborate narratives use interesting words and expressive devices, such as suspense and humor, to draw others into their stories. Also known in the literature as "sparkle" (Peterson & McCabe, 1983), expressive elaboration (Kernan, 1977; Ukrainetz et al., 2005), and story quality (Gutiérrez-Clellen & DeCurtis, 2001; McFadden & Gillam, 1996), artfulness makes children's narratives interesting, alive, and enjoyable to hear. Artfulness represents the "freshness, the creativity, the unpredictability, the amusement" of stories (Peterson & McCabe, 1983, p. 1). Traditional measures of narrative skill have rarely included analysis of the ingenuity with which children create stories, yet the charm and sparkle of children's narratives may be the most salient and memorable aspect of the story told (Newman & McGregor, 2006).

Some aspects of artfulness (e.g., emphasis) are more readily noticeable during oral storytelling, when one or more people serve as an audience. Good storytellers select words carefully, build suspense, and add personal flavor to affect their listeners. They apply these expressive aspects across different genres of narrative discourse, including both personal accounts of real-life events and imaginative stories or fictional retellings of a book. Given the increased potential for specific, artful elements (e.g., story extension) to occur during fictional retellings of stories, we used this type of narrative here rather than personal stories to examine the construct of artfulness.

IMPLICATIONS FOR SCHOOL READINESS AND CLASSROOM PRACTICE

Empirical research suggests that the study of children's fictional narrative skills is important. For instance, research results demonstrate positive associations be-

tween children's ability to produce fictional narratives and their later literacy achievement (Bishop & Edmundson, 1987; Catts et al., 2003; Feagans & Applebaum, 1986). In particular, studies of young children indicate that those who use more grammatically correct sentences, a wider variety of words, and goal-oriented descriptions perform better on measures of reading than children with more limited fictional narrative productions (Boudreau & Hedberg, 1999; Gillam & Johnston, 1992). Tabors, Snow, and Dickinson (2001), for instance, longitudinally studied the narrative skills of children who participated in Head Start. They found that children who produced more complete and complex narratives in kindergarten performed better on measures of reading comprehension in fourth grade than those children who produced less sophisticated narratives. Furthermore, fictional narrative performance has been used as a diagnostic indicator to differentiate children with and without language disorders at a young age who may demonstrate poor reading skills at a later age (Catts et al., 2003; Kaderavek & Sulzby, 2000; Liles, Duffy, Merritt, & Purcell, 1995; Scott & Windsor, 2000). (For a review of young children's narrative development, see Hughes et al., 1997.)

In addition to the importance of narratives to children's future academic achievement, narrative productions serve as an important assessment device in early childhood settings. Teachers often ask preschool children to retell or summarize stories heard during group time and then use these retellings to determine children's language and literacy skill status (Shepard, 1997). This type of qualitative assessment of narratives has been shown to be reliable in distinguishing children's productions of good- and poor-quality narratives (McFadden & Gillam, 1996; Newman & McGregor, 2006). Furthermore, most early childhood state standards include one or more objectives related to retelling or reenacting a story heard (e.g., Georgia Department of Education, 2006; Nevada Department of Education, 2008; Ohio Department of Education, 2008) or demonstrating progress with increasing sentence length and complexity (e.g., "North Dakota English Language Arts Content," 2005; Texas Education Agency, 2008). Although it is valid and useful, not all teachers capitalize on

> the marriage of storytelling to specific academic achievements … to meet state and federal standards … The fact is the very structure of stories and storytelling makes the experience a vital, fertile opportunity for young children to learn many things directly and indirectly about language, print, and narrative. (Cooper, 2005, p. 237)

Expressive or artful aspects are rarely considered in narrative research, yet teachers' formal or informal assessments of children's language skills may include consideration of the artfulness with which children tell stories. This demonstrates a potentially important research-to-practice gap. In a recent study of twenty 5- to 7-year-old children with and without language impairments, Newman and McGregor (2006) found that teachers and laypersons successfully differentiated

fictional narratives of less quality (e.g., short length, incorrect use of grammar, few story elements) produced by children with specific language impairment from narratives of better quality (e.g., long length, grammatically correct, complete story) produced by typically developing children. Beyond vocabulary and story grammar, however, Newman and McGregor found that laypersons placed significant importance on the creative aspects of children's narratives when rating story quality. Therefore, the assessment of narratives represents an important practice within the early childhood setting, with the expressive elements of a narrative composing an important category of story quality that is noticed and valued by listeners.

PRIOR RESEARCH ON ARTFULNESS IN FICTIONAL NARRATIVES

Artfulness encompasses the creative, imaginative, and joyful elements of stories frequently missed in objective measures of narrative quality. Artfulness makes children's narratives interesting, alive, and enjoyable to hear. It is important to remember that artfulness originates not only from the child but also from his or her environment. Within his or her sociocultural context, the child is influenced by people, environments, and circumstances. As such, creativity is developed through the child's unique and personal perspective (Csikszentmihalyi, 1996; Rinaldi, 2006; Rogoff, 2003). Children's word choice and narrative style are products of their particular worlds, as are their approaches to the narrative task itself and their interactions with the listener(s). As a result, children are "storytellers engaged in social events, with all the complications and complex social goals and dynamics that are involved in any social event" (Bloom, Champion, Katz, Morton, & Muldrow, 2000, p. 48). The assessment of artfulness in children's narratives may provide a more complete picture of the unique, individualistic aspects of children's expressive language skills. However, relatively few studies have examined these elements. The studies that have explored artfulness have largely been confined to children who are school age rather than preschool age (Newman & McGregor, 2006; Ukrainetz et al., 2005). In addition, the research community has yet to consider the relation between artful elements and other aspects of children's fictional narrative skill, including indices of microstructure and general language ability.

Two of the most notable studies exploring artfulness in children's fictional narratives are those conducted by Ukrainetz and colleagues (Ukrainetz & Gillam, 2009; Ukrainetz et al., 2005). Ukrainetz et al. examined the development of artful performance in the fictional narratives of 293 children between the ages of 5 and 12 years. The results revealed that children included many expressive elements in their stories, and that the presence and frequency of these elements significantly increased. In addition, Ukrainetz et al. found that children within and across age groups demonstrated diverse patterns of acquisition of the 13 types of expressive

elaboration explored, leading the authors to conclude that even when controlling for story length, children create increasingly more elaborate and artful stories with age. The authors also stated that accounting for the many ways in which "story art" can be demonstrated allows for a more multifaceted approach to narrative assessment.

In a more recent investigation, Ukrainetz and Gillam (2009) studied artfulness in the fictional narratives of 48 matched pairs of children (total $N = 96$), with each pair including a child with language impairment and a child with typical language. Children identified as having language impairment produced significantly fewer elements of artfulness in their narratives compared to children with typical language. These studies make an essential contribution toward understanding the importance of artfulness as an informative index of narrative skill among school-age children. However, given the relationship between early narrative performance and later academic success, there is a need to extend this work by exploring expressive elaboration in a younger population of children. Previous studies of artfulness have been conducted with children between the ages of 5 and 12 years, and have not examined how artfulness aligns with other measures of language form and content. By exploring artfulness among younger children and examining its relations with other aspects of narrative, we may gain a more complete picture of children's narrative abilities.

MEASURES OF NARRATIVE PERFORMANCE

Because narratives occur as a normal part of social interactions and conversation, they provide an ecologically valid context for examining children's language abilities compared to traditional or norm-referenced assessments of language competence (Paul & Smith, 1993). Moreover, narratives represent a culturally sensitive assessment tool because they capture subtleties of language content, form, and use that potentially biased standardized language measures miss (e.g., Curenton, 2004; Hughes et al., 1997; Justice et al., 2006; Price, Roberts, & Jackson, 2006).

Others (e.g., van Kraayenoord & Paris, 1996) have affirmed the use of such narrative tasks as valuable for encouraging comprehension, prediction, and monitoring skills, all of which are important "self-scaffolding" tools for later reading. Teachers in high-quality preschool classrooms also support the understanding and use of *decontextualized language*, or language that focuses on the past, future, or imaginary rather than the present. The use of decontextualized language requires greater explanation and description and, as a result, helps prepare children to make meaning from printed texts (Copple & Bredekamp, 2009). Consequently, we utilize narratives produced by children in this study to examine not only artfulness as a construct of interest but also the relation between a child's ability to construct an interesting story and his or her performance on commonly used indices of narra-

tive skill. These indices include a standardized measure of language ability and three measures of narrative microstructure.

Measures of macrostructure and microstructure are two common levels of analysis applied to children's oral narratives (Hughes et al., 1997). In some regards, children's artfulness may reflect features of the overarching macrostructure of a narrative, which refers to the general schema to which a narrative adheres. Common aspects of narrative macrostructure include references to story grammar (e.g., setting, time) and character personality features and internal states (Hedberg & Stoel-Gammon, 1986; Stein & Glenn, 1979). On the other hand, microstructure reflects the internal linguistic structure children use when conveying a story. These elements consist of the utilization of cohesive devices (words and clauses that tie sentences together), clauses (groups of words with a subject and predicate), and word choice (richness of vocabulary words used). Both microstructure and macrostructure contribute to a well-crafted narrative; however, some researchers contend that more local (or micro) analyses may be stronger indicators of language and literacy status than global (or macro) analyses (Liles et al., 1995). Recognizing the potential overlap between artfulness and elements of narrative macrostructure, in this study we specifically examined the relations between microstructural indices of children's narrative skills and measures of artfulness.

To summarize, the current study addressed three key aims:

1. To describe the artfulness of fictional narratives produced by young children, including the specific elements of artfulness most frequently seen in these narratives.
2. To examine the relations between artfulness and narrative complexity, productivity, and lexical diversity, as measures of narrative quality.
3. To examine the relations between artfulness and general measures of language, including the unique contribution of artfulness as a correlated and/or unique predictor of language ability above and beyond more typical measures of narrative microstructure.

In terms of study hypotheses, based on research by Ukrainetz et al. (2005) and Ukrainetz and Gillam (2009) we anticipated that children would include elements of artfulness in their narratives. We proposed, on the basis of their work, that the elements most often observed would be adjectives and adverbs and that those least often observed would be abstracts, personality features, and repetitions. In addition, we expected there to be positive interrelations between measures of artfulness and other indices of narrative skill, including complexity, productivity, and lexical diversity, consistent with prior reports showing positive and significant relations between quantifiable features of narratives (Justice et al., 2006). Finally, based on prior research showing that measures of narrative are positively associated with more general measures of language skill (Pankratz, Plante, Vance, & Insalaco,

2007), we also expected there to be significant relations between children's artfulness and their general language abilities.

METHOD

Participants

Forty-three children were selected from among the participants in the first cohort of a large multi-cohort study examining language development in young children (for a complete description of the participants in the larger study, see Justice, Kaderavek, Fan, Sofka, & Hunt, 2009). These children had completed a spoken narrative task as part of the larger study. The children (19 girls and 24 boys) ranged in age from 3 years, 6 months, to 4 years, 11 months (M = 4 years, 6 months; SD = 4 months). In terms of race and ethnicity, children were White/Caucasian (77% of the sample), multiracial (7%), Black/African American (5%), or Asian (2%). Information on race/ethnicity was unavailable for two children, and an additional two children were identified as "other." All children attended publicly funded targeted-enrollment preschool programs, including Head Start and state-supported pre-kindergarten, within a single state.

Information about the socioeconomic status of the children was available via parental report of annual household income and maternal educational attainment. This information was provided through written questionnaires completed by a parent or guardian at the start of the study. Thirty-five of the 43 families provided income information. Of these, the modal income range was $15,001 to $20,000 ($n$ = 9). The highest income range reported by the families was $85,001 or greater ($n$ = 3), and the lowest was $5,000 or less ($n$ = 3). Among the 37 families that provided data on parental education, the highest level of maternal education achieved was a graduate degree (n = 1). Six mothers had a bachelor's degree, three had received a 2-year degree, three had obtained technical training or a certification, 11 had attended some college but had not graduated, six had a high school diploma, and six had attended some high school but had not received a degree. One mother had attended eight or fewer years of school.

Measures

As part of their involvement in the larger study, the children completed a series of individually administered developmental assessments in the fall of 2005. All assessments were conducted in the children's schools by assessors who had completed multi-step training protocols to establish reliable use of each measure. This training included reviewing test manuals, watching videos of trained examiners

conducting the tests, correctly answering all items on a set of quizzes, and being observed administering the tests.

Two sources of assessment data are relevant to this study. First, a standardized measure of general language ability, the Clinical Evaluation of Language Fundamentals–Preschool:2 (CELF-P:2; Wiig, Secord, & Semel, 2004), was administered to each child. Second, each child completed a narrative task, which was videotaped, transcribed, and coded.

Standardized language assessment. The CELF-P:2 is described as a

> clinical tool for identifying, diagnosing, and performing follow-up evaluations of language deficits in children ages 3–6 years. CELF Preschool-2 … is an individually administered test that can be used by speech-language pathologists, school psychologists, special educators, and diagnosticians who have been trained and are experienced in administration and interpretation of standardized tests. (Wiig et al., 2004, p. 1)

The CELF-P:2 comprises six norm-referenced subtests. Three subtests were used in this study to provide an index of children's skill in three areas of language ability: grammar, morphology, and vocabulary. The Sentence Structure subtest assesses children's grammar, specifically grammatical comprehension. The Word Structure subtest measures children's morphological knowledge via an expressive task. The Expressive Vocabulary subtest assesses children's vocabulary skills in an expressive task. Based on a normalized scale that has a mean of 10 and a standard deviation of 3, children's mean standard score for the Sentence Structure subtest was 9.23 (SD = 2.82). On the Word Structure subtest, the mean standard score was 13.58 (SD = 5.26), and on the Expressive Vocabulary subtest it was 9.37 (SD = 3.31). Children's raw scores were used in all analyses.

Narrative task. In the current study, trained examiners prompted each child to tell a fictional story in response to the wordless picture book *Frog, Where Are You?* (Mayer, 1969). Through pictures alone, the book tells the story of a boy who loses his pet frog and, with his dog, searches for his frog in a forest. This type of fictional storytelling task assesses young children's ability to create a coherent narrative by way of integrating information across pages of pictures, thus resembling typical narrative retellings used to measure reading comprehension abilities in older children who can read in the conventional sense. However, key differences should be noted between narrative assessments for older children and the elicitation method used here. Age differences aside, our task was different than a story recall or comprehension task because the current narrative method required *meaning-making* and *story composition* skills rather than recognition, recall, or comprehension skills alone (see van Kraayenoord & Paris, 1996). These elements

made the task more flexible, which allowed for greater understanding of children's language and artful skills.

Other researchers (e.g., Bishop & Edmundson, 1987; Feagans & Applebaum, 1986; McCabe, Bliss, Barra, & Bennett, 2008) have found similar narrative formats to be reliable and meaningful elicitation methods, and several (e.g., Berman & Slobin, 1994; Greenhalgh & Strong, 2001; Newman & McGregor, 2006; Norbury & Bishop, 2003; van der Lely, 1998) have used *Frog, Where Are You?* as their specific narrative elicitation prompt. Given cultural and individual diversities, this single elicitation device is unlikely to be ideal for all children. However, *Frog, Where Are You?* has been used in narrative research involving low-income children (Curenton & Justice, 2004; Muñoz, Gillam, Peña, & Gulley-Faehnle, 2003), thus making it compatible with the current study. *Frog, Where Are You?* was further selected because it is a common tool in narrative research and therefore makes our findings consistent with the larger body of work to which they contribute.

Narrative elicitation took place in a quiet area in the school away from the child's primary classroom. Prior to participating in the study, all research personnel had considerable experience with young children through their professional work histories (e.g., as teachers, speech–language pathologists, reading specialists, etc.). Examiners were given a scripted elicitation protocol. The examiner first explained the task to the child, and then the examiner and child looked through the book together without discussion or description. Finally, the child told his or her own story based on the pictures in the book. The entire process was video-recorded, and children's narratives were later transcribed and coded. Beyond standard parental consent procedures, all children had the right to refuse to be tested. Children were also free to decline to give a narrative or to stop at any time. Children who were silent or who appeared uncomfortable were asked if they would like to return to their classroom. As a result, four children did not provide a narrative, and one stopped halfway through his narrative. (Children who did not give a narrative at all were removed from analysis, resulting in the sample of 43 children presented here.) All children received a sticker and five storybooks for participating, regardless of their compliance.

Narrative Transcription and Coding

Children's oral narratives were transcribed using the Systematic Analysis of Language Transcripts computer software (Miller & Iglesias, 2008). As narratives were transcribed, they were segmented into T-units. Following Hunt (1964), a T-unit was defined as an independent clause and any accompanying dependent clauses. For instance, the following narrative excerpt comprises three T-units (marked by slashes): "and the little boy was asleep / and the froggy jumped out / and when the little boy and the doggy woke up they found out that their froggy was lost."

To establish reliability of the transcription and segmentation process, 10% of transcripts were randomly selected and transcribed in their entirety by a separate transcriber. When these transcripts were compared to the originals, reliability of word-for-word transcription and T-unit segmentation was 90%.

The SALT software was used to calculate three standard measures of narrative microstructure: complexity, productivity, and lexical diversity. These indices have been used widely in previous research to characterize the narrative abilities of young children (e.g., Eisenberg et al., 2008; Justice et al., 2006; Kay-Raining Bird, Cleave, White, Pike, & Helmkay, 2008; Scott & Windsor, 2000). *Grammatical complexity* refers to how children construct sentences in both simple and complex ways to express ideas within stories. The traditional procedure for measuring grammatical complexity involves calculating the mean length of the T-units (MLTU) in a narrative, with a T-unit being one independent clause and all associated dependent clauses (Hunt, 1964). *Productivity* refers to the total length of the story told by the child. Procedures frequently used for calculating productivity involve segmenting the narrative language sample into T-units and then summing the total number of T-units (TTU). *Lexical diversity* refers to the variety and types of words children use in their narratives and is often measured using an index of the number of different words (NDW). Research has demonstrated positive associations between these three units of narrative microstructure and children's general language and literacy abilities (Curenton, 2004; Justice et al., 2006; Miller & Chapman, 1981). In the current study, we followed these same standards for calculating the complexity (MLTU), productivity (TTU), and lexical diversity (NDW) of each narrative.

Each narrative was also analyzed using a coding scheme adapted from the work of Ukrainetz and Gillam (2009) and Ukrainetz et al. (2005) to identify elements of artfulness (e.g., expressive elaboration). The original coding schemes were developed to examine expressive elaboration in the narratives of children ages 5 to 12 years (Ukrainetz et al., 2005) and 6 to 8 years (Ukrainetz & Gillam, 2009). For their use in the present study, which focused on the narratives of 3- and 4-year-old children, the codes were modified to better represent the narrative expression of younger children. For example, Ukrainetz et al. and Ukrainetz and Gillam included *theme* ("summaries of the story provided within the narrative"; Ukrainetz et al., 2005, p. 1368) and *coda* ("general observations that show the effect that the narrative had on the narrator or on characters in the story"; Ukrainetz et al., 2005, p. 1368). These were suspected to be rare in the narratives of the 3- and 4-year-olds in the current study, and indeed neither appeared in any narratives. *Expressions*, or multiword units that have idiomatic usage, were also excluded. Adjectives and adverbs both were coded as *interesting modifiers* in the Ukrainetz studies, but these were separated into two distinct codes in the present study. Four additional codes were added: Interjections, Humor, Beyond the Page, and Stress. Following Ukrainetz et al. and Ukrainetz and Gillam, all artful elements comprised three sep-

arate categories: Appendages, Orientations, and Evaluations. These codes, largely adapted from Ukrainetz and Gillam and Ukrainetz et al., are presented in Appendix A.

To code the 15 aspects of artfulness, each T-unit in each narrative was examined and any relevant codes were applied, such that a single T-unit could receive multiple artful codes. Consequently, the coding scheme as applied to individual T-units was not mutually exclusive. For instance, the T-unit "Doggy trying to get the frog out of the tank" received two codes: Internal States (*trying*) and Adverbs (*out*). Coders worked from the transcript while simultaneously watching the video, pausing as often as needed.

Interrater agreement of the artful coding scheme was calculated for a randomly selected five narratives (approximately 10% of the sample). Transcripts were compared T-unit by T-unit for agreement of individual codes. An agreement percentage for each transcript was calculated by determining the total number of T-units for which codes matched divided by the total number of T-units in the narrative. Agreement scores averaged 87% across the five transcripts (range 77%–93%). To ensure the accuracy of the coding procedure, all the remaining transcripts ($n = 38$) were scored initially by a reliable coder, and then were checked for accuracy by a second coder working autonomously. Any disagreements were resolved.

RESULTS

For this study, the spoken narratives of preschool-age children were coded for inclusion of artful elements. Only one child's narrative did not include any artful elements, and the greatest number of artful codes to appear in a single narrative was 48. Table 1 provides descriptive findings concerning the number of children who included each of the artful elements in their narratives as well as the average occurrence of the artful codes per narrative. The average number of artful codes per narrative was 18.67 ($SD = 12.59$). Examples of high- and low-scoring narratives are found in Appendix B.

The data in Table 1 show that some artful elements occurred more frequently than others. Looking first at the broader categories (Appendages, Orientations, Evaluations), Appendages were used in 51.16% ($n = 22$) of all children's narratives, Orientations were used in 72.09% ($n = 31$) of narratives, and Evaluations were used in 97.67% ($n = 42$) of narratives. The high rate of use for Evaluations is likely related to the larger number of codes within this category.

Looking next at the 15 distinct artful codes, we see that the most common code was Adverbs, which appeared in 90.70% ($n = 39$) of all narratives, followed by Adjectives (74.42%, $n = 32$) and Personality Features (60.47%, $n = 26$). The most infrequently seen element in children's narratives was Abstracts, which appeared

TABLE 1
Frequencies of Artful Elements in Children's Spoken Narratives

Artful Code	*Children Using the Code n (%)*	*Occurrence per Narrative M (SD)*
Appendages	22 (51.16)	0.65 (0.75)
Introducers	4 (9.30)	0.09 (0.29)
Abstracts	2 (4.65)	0.05 (0.21)
Enders	21 (48.84)	0.51 (0.55)
Orientations	31 (72.09)	2.40 (3.10)
Relationships	7 (16.28)	0.28 (0.70)
Personality Features	26 (60.47)	1.63 (2.30)
External Conditions	10 (25.58)	0.49 (1.18)
Evaluations	42 (97.67)	15.60 (10.59)
Adjectives	32 (74.42)	2.53 (2.56)
Adverbs	39 (90.70)	8.63 (7.05)
Interjections	3 (6.98)	0.07 (0.26)
Repetitions	6 (16.28)	0.23 (0.72)
Internal States	24 (58.14)	1.47 (1.72)
Dialogue	18 (44.19)	0.91 (1.44)
Humor	14 (39.53)	0.70 (1.46)
Beyond the Page	14 (34.88)	0.40 (0.62)
Stress	13 (32.56)	0.70 (1.44)
Artful Total	42 (97.67)	18.67 (12.59)

in 4.65% ($n = 2$) of narratives. Interjections (6.98%, $n = 3$) and Introducers (9.30%, $n = 4$) also occurred at very low rates.

As shown in Table 2, a correlational analysis was used to examine the interrelations among the three categories of artful codes (Appendages, Orientations, and Evaluations); the total number of artful codes per narrative (Artful Total); and traditional measures of narration, namely complexity (MLTU), productivity (TTU), and lexical diversity (NDW). Correlations with children's age were also examined. Children's age was significantly and positively associated with lexical diversity ($r = .33$, $p < .05$) but no other narrative measures. The three measures of artfulness (Appendages, Orientations, Evaluations) were significantly intercorrelated. In addition, there were significant and positive relations between children's use of Appendages and two traditional measures of narrative: complexity ($r = .62$, $p < .001$) and lexical diversity ($r = .51$, $p < .001$). Children's use of Orientations and Evaluations was significantly and positively associated with all three traditional measures of narration (see Table 2). Finally, Artful Total was strongly and positively correlated with narrative complexity (MLTU; $r = .68$, $p < .001$), productivity (TTU; $r = .77$, $p < .001$), and lexical diversity (NDW; $r = .84$, $p < .001$). These findings show that children who produced more artful narratives also tended to produce narratives that were more syntactically complex, longer, and more lexically diverse.

TABLE 2
Correlations of Artfulness and Traditional Measures of Narrative Ability

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1. Child age	—	.44**	.11	.22	.24	.27	.24	.33*
2. Appendages total		—	.36*	.40**	.48**	.62**	.23	.51**
3. Orientations total			—	.43**	.63**	.37*	.44**	.48**
4. Evaluations total				—	.97**	.66*	.77**	.82**
5. Artful Total					—	.68**	.77**	.84**
6. Complexity						—	.44**	.80**
7. Productivity							—	.79**
8. Lexical diversity								—

Note. The measures of complexity, productivity, and lexical diversity were derived from the mean length of the T-units, the total number of T-units, and the number of different words, respectively.
*$p < .05$. **$p < .01$.

Of additional interest in this study was examining the relations between measures of narrative artfulness and children's general language performance as estimated on a standardized norm-referenced assessment. Table 3 shows the results of correlational analyses examining these relations. Several interesting findings are of note. First, use of Appendages was positively associated with standardized measures of grammar ($r = .45$, $p < .01$) and morphology ($r = .38$, $p < .05$) but not vocabulary. Second, use of Orientations was positively associated with standardized measures of grammar ($r = .34$, $p < .05$) and vocabulary ($r = .35$, $p < .05$) but not morphology. Third, use of Evaluations was positively associated with measures of grammar ($r = .36$, $p < .05$) but not vocabulary or morphology. Finally, Artful Total was positively associated with standardized measures of grammar ($r = .42$, $p < .01$) and vocabulary ($r = .36$, $p < .05$), but not morphology (correlation coefficients ap-

TABLE 3
Correlations of Artfulness and General Language Ability

	General Language Measure		
Artful Category	*Grammar (n = 40)*	*Morphology (n = 39)*	*Vocabulary (n = 39)*
Appendages	.45**	.38*	.29
Orientations	.34*	.16	.35*
Evaluations	.36*	.13	.30
Artful Total	.42**	.17	.36*

Note. The measures of grammar, morphology, and vocabulary were derived, respectively, from the Sentence Structure, Word Structure, and Expressive Vocabulary subtests of the Clinical Evaluation of Language Fundamentals–Preschool:2.
*$p < .05$. **$p < .01$.

pear in Table 3). In general, the findings suggest that children who produced more artful narratives also received higher scores on measures of general language performance.

Artfulness as a Unique Indicator of Narrative Skill

Our final analysis used hierarchical regression to explore the extent to which artfulness predicted general language performance above and beyond the more traditional measures of narrative skill, given the multicollinearity among the narrative measures in the previously presented correlational analyses. Two steps were used to predict the general language measures (grammar, morphology, and vocabulary) from measures of narrative ability. In the first step, each dependent measure was predicted from the traditional measures of narrative skill (productivity, complexity, and lexical diversity). The second step added artfulness (Artful Total) as a fourth narrative skill measure. The *F*- and *R*-change statistics were used to evaluate whether artfulness uniquely contributed to the prediction of general language performance after accounting for narrative productivity, complexity, and lexical diversity.

The hierarchical regression results for each of the three general language measures are presented in Table 4. After we partialed out the variance accounted for by the traditional measures of narrative skill, the results showed that artfulness uniquely predicted vocabulary abilities, $\Delta F(1, 34) = 8.46$, $p = .006$, accounting for 14.7% of the total variance in this outcome. Results for morphology were marginally significant, $\Delta F(1, 34) = 4.12$, $p = .050$, with artfulness uniquely accounting for 6.5% of the variance. Finally, artfulness did not explain any additional variance in children's grammar scores, $\Delta F(1, 35) = 0.41$, $p = .524$.

DISCUSSION

The purpose of this study was threefold. First, we sought to describe the specific elements of artfulness produced by young children in their fictional oral narratives. Second, we examined the relations between measures of artfulness and traditional measures of narrative microstructure, namely complexity, productivity, and lexical diversity. Finally, we examined the relations between narrative artfulness and general measures of language representing children's performance in grammar, morphology, and vocabulary, including the unique contribution of artfulness as compared to more traditional measures of narrative skill. Overall, the present study makes an important contribution to the theoretical understanding of young children's narrative development and suggests that artful elements of narration are important indices of narrative skill. Specifically, the findings show that although preschool-age children varied widely in the number of artful elements they em-

TABLE 4
Hierarchical Regression Analysis for General Measures of Language Ability With Traditional Measures of Narrative Controlled

	Grammar[a]			*Morphology*[b]			*Vocabulary*[c]		
Variable	*B*	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β
Step 1									
Complexity	0.24	0.07	–0.59*	0.04	0.92	0.10	2.56	1.63	0.42
Productivity	–0.18	0.68	0.08	–0.33	0.09	–0.90*	–0.21	0.16	–0.36
Lexical diversity	0.15	0.05	0.95*	0.17	0.07	0.89*	0.06	0.12	0.20
Step 2									
Complexity	0.09	0.08	–0.68*	–0.68	0.95	–0.18	0.84	1.59	0.14
Productivity	–0.21	0.73	0.03	–0.44	0.10	–1.18*	–0.46	0.17	–0.77
Lexical diversity	0.14	0.05	0.92*	0.16	0.07	0.82*	0.03	0.11	0.09
Artful Total	0.05	0.08	0.16	0.21	0.11	0.52†	0.51	0.18	0.78

Note. The measures of complexity, productivity, and lexical diversity were derived, respectively, from the mean length of the T-units, the total number of T-units, and the number of different words. The measures of grammar, morphology, and vocabulary were derived, respectively, from the Sentence Structure, Word Structure, and Expressive Vocabulary subtests of the Clinical Evaluation of Language Fundamentals–Preschool:2.

[a]Grammar $R^2 = .472$ for Step 1; Grammar $\Delta R^2 = .006$ for Step 2. [b]Morphology $R^2 = .395$ for Step 1; Morphology $\Delta R^2 = .065$ for Step 2. [c]Vocabulary $R^2 = .261$ for Step 1; Vocabulary $\Delta R^2 = .147$ for Step 2.

*$p < .05$. †$p = .05$.

ployed in their narratives, all but one child included at least some artful elements in their narrative productions. The findings also indicate that children who produced more artful narratives also tended to produce narratives that were more syntactically complex, longer, and more lexically diverse. In addition, the results indicate that narrative artfulness is positively and uniquely associated with children's general language performance. Each of these findings is discussed in turn.

Young Children's Inclusion of Artful Elements in Their Narratives

The first major finding from this study involves the frequency of artful codes and the rate of occurrence of certain artful codes over others in children's narratives. Ukrainetz et al. (2005) found that children's use of expressive elements in their stories increased with age; however, age did not correlate with increased use of most artful codes in the present study. This may be a factor of the larger sample size and greater diversity of ages in the Ukrainetz et al. study. (Ukrainetz et al. studied a sample of 293 children between the ages of 5 and 12 years compared with 43 children in the current study ranging in age from 42 to 59 months.) Furthermore, children between the ages of 3 and 5 are typically within the same broad developmental range (Copple & Bredekamp, 2009) and thus are likely to exhibit nar-

rative skills that are more homogeneous. Both the current and Ukrainetz et al. studies, however, note the frequency with which children incorporate expressive or artful elements into their narratives.

The present study also noted the variability of use among the 15 artful codes. This variability has the potential to influence future conceptions of narrative quality with regard to more and less common artful elements. For example, children included Adverbs the most frequently in their narratives. Adverbs appeared in 39 of 43 narratives at an average rate of 8.63 times per narrative. Adverbs are important parts of speech that add interest and description to stories. The high rate of occurrence of Adverbs may be due to the action-oriented nature of the pictures in *Frog, Where Are You?* (Mayer, 1969), which was used in this study to elicit children's narratives. Yet the finding is consistent with evidence indicating that children of this age are increasingly using adverbs within their spontaneous speech (for an overview, see Hughes et al., 1997; see also Curenton, Craig, & Flanigan, 2008; Curenton & Justice, 2004). It is likely that narrowing our definition of an Adverb to include only the most unique or artful cases would result in a lower rate of occurrence. Nonetheless, our results show that even at a very young age, children include adverbs frequently in their fictional oral narratives.

At the opposite extreme, Introducers and Abstracts appeared in only four and two transcripts, respectively. We propose two possible reasons for this low occurrence. It may be that the context in which the narrative was collected did not call for any kind of introductory statement. Introducers and Abstracts are used to alert and prepare the listener for a coming story, but these narratives were prompted by an attentive examiner, and the content of the story (derived from the wordless picture book) had been established; therefore, the children may have felt less of a need to use these preparatory conventions. Alternatively, it is plausible that the use of Introductions and Abstracts may be beyond the range of what is typical for 3- and 4-year-old children. Use of these elements may be more indicative of children's general language development and familiarity with story conventions than of narrative artfulness in general. For example, Introducers such as "Once upon a time …" are commonly considered in narrative analyses (e.g., Price et al., 2006; Ukrainetz et al., 2005), but phrases such as this are questionable in terms of the degree of *artfulness* they represent. Perhaps it is more accurate to suggest that such elements are indicators of familiarity with story structure and language development. This rationale would effectively explain the significant correlation between child age and use of Appendages.

Three codes uniquely added interesting qualitative information to the artful coding system. Humor, Beyond the Page, and Stress were used by approximately 40%, 35%, and 33% of children, respectively. These elements indicate engagement, creativity, and awareness of the listener—important aspects of oral storytelling. These elements are easily missed in typical assessments, but they potentially represent enhanced language and narrative ability. The implications of these three elements are briefly discussed here.

Humor especially demonstrates a child's pleasure in telling the story. This is important to recognize in an oral narrative assessment because it can represent comfort with and enjoyment of language. This disposition prompts the child to further engage in activities involving language, books, and stories. Next, Beyond the Page is unique in that it gives credit to a child who momentarily takes his or her narrative beyond the framework of the story. A child may be wondering aloud or quite purposefully adding an element that he or she feels enhances the story. Rather than seeing them as off topic or irrelevant, recognizing Beyond the Page elements acknowledges that the child has a desire not only to tell the story in the book but to extend it, predict, and speculate as well. This suggests a significant connection to the story that should be recognized and valued. Finally, Stress indicates words that a child has specifically chosen to emphasize, which heightens the meaning of the words themselves. Stress demonstrates thoughtful and creative use of language conventions, which enhances a child's conveyance of the story to his or her listener. Like Ukrainetz and Gillam (2009), we conclude that considering such varied elements of oral narratives allows for a more comprehensive and thus accurate portrayal of children's developing language skills.

Artful Relationships With Traditional Narrative Measures

The second major finding from this study is the significant relationships between children's use of artful elements and their performance on traditional measures of narrative language. Artful Total, Orientations, and Evaluations each correlated with measures of narrative complexity, productivity, and lexical diversity. This finding suggests that children who produce more syntactically complex narratives, longer narratives, and more lexically diverse narratives are likely to produce narratives that come across to listeners as artful. This is an interesting finding because it suggests that artfulness is related to other more traditional narrative characteristics and that producing longer narratives potentially offers children the opportunity to embed more artful features within their stories. This supports the research conducted by Newman and McGregor (2006) that found that teachers and laypersons alike placed higher value on stories that demonstrated artfulness as well as more common elements of quality, such as length and correct grammar.

It is important to note, however, that the findings presented here do not help one understand the directionality of these relations. For instance, it may be possible that when children produce more complex, longer, and more lexically diverse narratives, the opportunity presents itself to embed more artful features into the narratives. On the other hand, it is also plausible that as children produce more artful narratives, a byproduct is the creation of narratives that are more complex, longer, and lexically diverse. However, Ukrainetz et al. (2005) found that children's increased use of artful codes did not rely on story length. The extent to which the relations between traditional features of narrative (complexity, productivity, and

lexical diversity) and artfulness may be causal or bidirectional is an interesting avenue for future research.

Although Orientations and Evaluations correlated with all three traditional measures of narrative language, Appendages correlated with complexity and lexical diversity but not productivity. This is logical, as Appendages (composed of Introducers, Abstracts, and Enders) typically occur at the very beginning or very end of a child's story and thus do not rely on the number of utterances in between. For the same reason, when used typically, Appendages have fewer opportunities to occur within a narrative. However, the correlations between Appendages and complexity and lexical diversity suggest that children's use of these types of story structures could be markers of more developed language abilities.

Artful Relationships With General Language Measures

Our third major finding suggests that children's performance on measures of narrative artfulness is representative of general language abilities in both grammar ($r = .42$, $p < .01$) and vocabulary ($r = .36$, $p < .05$). This is significant because it demonstrates the validity of artfulness as a component of language ability. For instance, grammar, as reflected in the Sentence Structure subtest of the CELF-P:2, was measured by the child's ability to understand simple, compound, and complex sentence structures as well as verb tense and negation. Children who received higher scores on this grammar component also used significantly more Appendages, Orientations, and Evaluations in their spoken narratives. This suggests that children who are more comfortable with complex sentences and grammatical structures are also more confident in using artful elements in their speech. Morphology, as measured by the Word Structure subtest of the CELF-P:2, only correlated with use of Appendages. Vocabulary, as measured by the CELF-P:2 Expressive Vocabulary subtest, correlated with Orientations and Artful Total. As previously noted, this is the first study of its kind to consider the relations between artful expression and more common measures of language performance. It will be interesting to see if this pattern continues across similar populations with other measures of language ability.

Artfulness as a Unique Narrative Skill

Perhaps the most significant contribution of this work is its demonstration of the unique contribution of artfulness to the prediction of indices of children's general language performance above and beyond more traditional measures of narrative skill. The hierarchical regression results show that the more traditional measures of narrative microstructure do not capture the complete picture of children's language ability with respect to general estimates of vocabulary and morphology. Specifically, when controlling for narrative complexity, productivity, and lexical

diversity, artfulness accounted for a significant amount of additional variance in children's vocabulary and morphological abilities. However, despite significant correlations among artful measures and children's grammar, artfulness was not a unique predictor of this outcome. These results suggest that although traditional measures of narrative microstructure may be sufficient for estimating children's syntactic abilities, artfulness is an additional and unique indicator of narrative skill that ought to be considered when examining other aspects of children's language development.

The fact that artfulness was a unique variable contributing to children's vocabulary and morphological abilities argues for greater attention to such qualitative aspects of children's narrative and general language development. As Newman and McGregor (2006) found, artful elements of children's stories are recognized and appreciated by interested adults. Still, commonly used measures of language and narrative skills do not capture these artful components, and children's skill in this area is often dismissed. Artfulness is a valuable element of quality that lies outside the realm of the traditional standardized measures of quality considered here. This research suggests that teachers, researchers, parents, and others should encourage the artful use of language with children and look for artfulness when assessing children's narrative ability.

Limitations

Several limitations of this work warrant mention. First, the artful coding scheme used here was not an exhaustive coding system; consequently, it may not represent the complete range of children's creative devices when engaged in narration. There may be features of children's artfulness that were not coded in the system used.

Second, the scoring system in the present study may have unduly influenced the representation of different artful codes in that there were not necessarily equal opportunities for certain codes to occur in children's narratives. For instance, Appendages have proportionally fewer opportunities to occur within a narrative than do Adverbs. As an example, the Appendage "Once there was …" would generally appear only one time in a narrative, to indicate the start of the story. Similarly, "The end" is typically used only when the child has completed the story. The low use of Appendages demonstrated here may be misleading for this reason. Perhaps future studies may devise a more accurate scaled system so that codes with fewer opportunities to occur could be weighted appropriately.

Third, the approach used to collect children's narratives was relatively constrained in that children were asked to produce a spoken narrative in response to looking at the pages of a wordless storybook. It may be that children's narrative artfulness would have varied with a different task (e.g., a more open-ended narrative task) or a different type of stimulus. In addition, there would likely have been

variation if the children's parents or teachers had elicited the narratives rather than the study examiners.

Fourth, we must comment on the generalizability of the findings, as all children who participated in this study attended preschool programs that targeted children from economically disadvantaged homes. Although this is a particularly important population to study given the academic disadvantage that many low-income children face (e.g., Brooks-Gunn & Duncan, 1997), it may be that our findings would have differed had our sample been more diverse socioeconomically. Likewise, the results of this work might have differed if we had collected data from children who were more diverse with respect to race/ethnicity, geographic location, and language background. Replicating this work will be important for ensuring the validity of our findings.

Implications and Suggestions for Future Research

Children have many stories and many narrative styles in which to tell them. Evaluating narratives using only traditional measures may mean that certain valuable components are not recognized (Katz & Champion, 2008). Recognizing artfulness as a significant and important element of children's narratives reveals a new aspect of language in which children may excel. Therefore, this study provides teachers, researchers, and other education professionals another way to notice and value children's narratives and oral language skills beyond grammar and syntax alone.

The research presented here suggests that artfulness and general language development grow together. Therefore, we encourage teachers to make use of this information in their daily classroom practice by emphasizing and employing artful aspects when sharing stories. First and foremost, we suggest that teachers read and/or tell stories to children every day and that they do so with passion. Regularly introducing new books into the classroom library and selecting a variety of fiction, "singing books," wordless books, and other genres can help generate enthusiasm in both the teacher and children. Teachers can model the use of artful language by emphasizing descriptive words and adding stress (e.g., "We're going to catch a *big* one" and "*We're* not scared"; Rosen & Oxenbury, 2003).

To conclude, thoughtful consideration of children's narratives can be gainful and constructive. It can lead to better practice, more precise research, and renewed vigor for understanding how children learn and use language. We have tried to focus our questions, research, and analysis from a base that acknowledges and accepts the many ways in which children demonstrate their intellect and interests. We have explored a few of these here, namely artfulness. It is our hope that others will use and benefit from the new information this research provides and will further pursue the questions this work makes available.

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APPENDIX A

TABLE A1
Artful Codes

Element [Code]	*Explanation*	*Example*
	Appendage codes	
	Appendages are cues that a story is being told. These "bracket" the story, letting the listener know when the story starts and when it ends.	
Introducers [Intro]	Words or phrases that tell the listener that a story is beginning	*"Once upon a time …"* *"Once there was …"*
Abstracts [Abst]	A description or brief summary that occurs early in the story	*"I think that it is about a boy that finds some nice animals."* *"The boy and his dog had a frog."*
Enders [Ender]	An indication that the story is complete; a closing	*"The end."* *"Done."*
	Orientation codes	
	Orientations define the relationships between and among the people and things in the story. They "orient" the listener to the characters and where the story takes place.	
Relationships [Rela]	Words or phrases that define a character's role through his or her connection to other characters	"He was with his *mommy*." "It was a *family* of frogs."
Personality Features [Pers]	Character attributes that describe emotional or physical states, whether temporary or permanent	"He was so *mad* at him." "He fell down with his *poor little* puppy."
External Conditions [EC]	Where and when the story takes place; the physical conditions, time, and overall location of the story	"The *next day* …" "He was sneaking out of the *bedroom*."

(continued)

TABLE A1 (*Continued*)

Element [Code]	*Explanation*	*Example*
	Evaluation codes	
	Evaluations are applied to words or phrases to which the speaker has added special or unique emphasis. These codes help further the story in interesting and creative ways.	
Adjectives [Adjec]	Descriptive words that modify things, settings, and objects[a]	"The jar is *empty*."
		"He fell in the *cold* lake."
Adverbs [Adverb]	Descriptive words that modify actions or manners of actions[b]	"That water is *too* low."
		"The bumblebees are chasing the dog *again*."
Interjections [InterJ]	Expressions that stand alone, expressing surprise, empathy, or other emotion	*"What a deer!"*
		"Silly him."
Repetitions [Rep]	Words or phrases that are repeated more than once in the same utterance to add emphasis[c]	"He *hollered and hollered*."
		"The frog is *gone, gone*."
Internal States [InterS]	The characters' motivations, thoughts, and intentions	"He's *trying* to look for him in there."
		"They *found out* that their froggy was lost."
Dialogue [Dial]	A character's words spoken by the child[d]	"They yelled, '*Froggy, where are you?*'"
		"Ah, my doggy's gone!"
Humor [Humor]	The child's recognition of or created humor in the story, as shown through words, laughter, vocal tone, etc.	*"That's a silly dog."*
		"The dog had the glass on his head!"
Beyond the Page [BTP]	Unexpected story turns, description, or actions that are not explicit or implied in the story; these may be the child's speculation, assumption, or extension of the story	*"Maybe he ate his froggy."*
		"He looked to see if there were any sparrows and there were and they bited him."
Stress [Str]	A word or phrase that is elongated, spoken with a specific vocal tone, or otherwise emphasized	[whispered] "*He was sneaking out of the bedroom*."
		[elongation] "And then they saw some *more* frogs."

Note. Adapted from "The Expressive Elaboration of Imaginative Narratives by Children with Specific Language Impairment," by T. A. Ukrainetz & R. B. Gillam, 2009, *Journal of Speech, Language, and Hearing Research.* Adapted with permission.

[a]Adjectival descriptors of characters would be Personality Features, not Adjectives. Interrogative, demonstrative, and possessive adjectives were not coded. [b]Conjunctive adverbs and prepositional phrases acting as adverbs were not coded. [c]Repeated words were only coded once for repetition and once for any other applicable codes. For example, "The dog fell *down*, *down*" would have one repetition code and one adverb code (*down*). [d]Indirect dialogue was not coded (e.g., "Then the boy said goodbye to the frogs").

APPENDIX B
Examples of Narratives With High and Low Totals of Artful Codes

Average High-Scoring Narrative (Artful Total = 26)

He got a frog, he's got a frog[Rep]. He, the dog wants to eat it, eat it[Rep]. Then the frog is gone, gone[Rep][Str]. And then he hops right[Adverb], his foot's out[Adverb], he says, "Flop flop flop[Dial]." Mhm, and the little[Pers] boy looks in his boots and he says, "Froggy froggy[Dial][Str]!" And the little[Pers] boy was jumping out[Adverb], jumping out[Rep]. And he hollered, "Holler Holler! Ah, my doggy's gone [Str][Dial][Humor]!" Ah ah ah ah ah. Then the bees came out[Adverb] and wanted[InterS] to eat the doggy[Str]. Then he saw the bird. Then he climbed down the rock and he sawed a deer. And they jumped, they jumped over the hill. Then the deer came splashing[Str] *(unintelligible)* and they fell[Str] through the water. Then they climbed out[Adverb] of the water and got on the *(unintelligible)*. Then he saw a little[Pers] froggy. Then the froggy was safe[Pers]. Then they went home[EC]. The end[Ender].

Average Low-Scoring Narrative (Artful Total = 5)

Mmm, good night. Good night sleep tight. Tight. Wake up[Adverb]. Good morning[Str]! Holler! Stinks. Climbing the tree[Str]! Fell down[Adverb]. Climbing the rock. Catching the deer. Mmm, falling. In the water. Water. Water. Catching a frog. The end[Ender].

Note. Rep = Repetitions; Str = Stress; Adverb = Adverbs; Dial = Dialogue; Pers = Personality Features; Humor = Humor; InterS = Internal States; EC = External Conditions; Ender = Enders.