Abstract

This article discusses a study that explored first-grade students' responses to and interpretations of eight picture books with metafictive devices. The article focuses on children's visual and written responses to the picture books and describes the relationship between the students' visual and verbal texts with respect to storytelling. The two main categories in a categorization scheme that describes text-image relationships in picture books—parallel storytelling and interdependent storytelling—were adapted to analyze the students' visual and written responses. Analysis of data revealed that for seven of the eight picture books, at least one-half of the children's visual and verbal texts were categorized as interdependent storytelling. Thus, to a certain extent, the children's images and text emulated the interdependent storytelling nature of the picture books used in the study. The article concludes with discussions about the value of viewing children's work as miniature ecosystems and the importance of developing children's visual literacy skills.
Text-Image Relationships

Multimodal representation systems permeate our contemporary world. Although images pervade our everyday world of communication, Graham (1990) writes: “visual representations are believed to have been part of human society for almost five thousand years” (p. 7). Many scholars have written about visual representations in children's literature (Doonan, 1993; Graham, 1990; Lewis, 2001; Nikolajeva & Scott, 2000, 2001; Nodelman, 1988; Sipe, 1998; Styles & Arizpe, 2001). Indeed, several schemes have been proposed to describe the perceived interaction of pictures and words in picture books. Agosto (1999) differentiates between parallel storytelling, where the text and illustrations simultaneously tell the same story in a picture storybook, and interdependent storytelling, where “both forms of media [must be considered] concurrently in order to comprehend” the book's story (p. 267). Golden (1990) describes five different types of visual-verbal relationships in picture storybooks: “text and picture are symmetrical; text depends on picture for clarification; illustration enhances, elaborates text; text carries primary narrative, illustration is selective; and illustration carries primary narrative, text is selective” (p. 104). Congruency, elaboration, specification, amplification, extension, complementation, alternation, deviation, and counterpoint are terms used by Schwarcz (1982) to explain the interaction of text and pictures. Doonan (1993) uses some of the same vocabulary as Schwarcz in her description of the possible relationships between the visual and verbal texts in picture books: elaborate, amplify, extend, complement, contradict, and deviate (p. 18). Nikolajeva and Scott (2001), who criticize many of the existing typologies that describe the relationships between words and pictures, use some of the same terms as Schwarcz and Doonan in their spectrum that describes the word-picture dynamic in texts: symmetrical, enhancing, complementary, counterpointing, and contradictory.

Other individuals use a single term/concept when discussing the interaction of illustrations and text in picture books. For example, Sipe (1998) embraces the word “synergy” to describe the text-picture relationship in picture books. Mitchell (1994) uses the term “imagetext” (p. 9) to avoid the use of a binary theory that looks at the relation of pictures and discourse and describes imagetexts as “composite synthetic works (or concepts) that combine image and text” (p. 89). Thus, according to Mitchell's definition, picture books are imagetexts. Lewis (2001) critiques many of the aforementioned categorization schemes and suggests an alternative way of looking at picture books. He discusses the ecology of the picture book, where pictures and words “interact ecologically, [so] that the book acts as a miniature ecosystem” (p. 48). To Lewis, an ecological perspective emphasizes “the interdependence or interanimation of word and image” (p. 48) in picture books. In many contemporary picture books, the relationship between image and text has become even more sophisticated and complex.

Children Reading and Creating Visual Texts

Scholars agree that reading pictures is indeed a multifaceted act. Further, children often look
at illustrations more closely and “see” details in pictures (Kiefer, 1995) that are missed by “skipping and scanning” adults (Meek, 1988, p. 19). Several individuals have explored how children read images in text (Arizpe & Styles, 2003; Kiefer, 1995; Styles & Arizpe, 2001; Walsh, 2003). For example, Arizpe and Styles (2003) used three multilayered picture books to investigate how children ages 4-11 read visual texts. The researchers found that the children, who participated in individual and group interviews about the literature, were sophisticated readers of visual texts. The children “read colours, borders, body language, framing devices, covers, endpapers, visual metaphors and visual jokes” (p. 224). Walsh (2003) also examined children's reading of visual texts and found that the images in picture books evoked a variety of responses in the young children participating in her research. Kiefer's (1995) work also revealed how the illustrations in picture books influenced children's oral, written, visual, and representative responses. She used Halliday's (1969) work on functions of language to assist her in developing a taxonomy that described the children's verbal differences she observed and recorded in the children's responses (p. 25).

Reading picture books to children is a common pedagogical practice in many primary classrooms. Often, children are asked to create visual texts after picture book read-aloud sessions. In the study conducted by Arizpe and Styles (2003), the participants drew pictures in response to the three selections of children's literature. The researchers examined the literal understanding, overall effect, and internal structure of the children's drawings, and concluded that the children's drawings demonstrated “that even the youngest children can interpret, comprehend and communicate the visual—far beyond what they might be assumed to know” (p. 138). Arizpe and Styles believe that the children developed “deeper understandings through their visual explorations” (p. 138).

Like Arizpe and Styles, and other researchers, I am interested in children's visual responses to literature, and how adults, especially teachers, “read” the pictures created by children. Do adults skip and scan as they look at the children's visual texts? Do teachers privilege students' written text over their visual text, therefore creating a binary opposition? Or do teachers consider the ecology of the children's work? One of the purposes of this article is to encourage adults to recognize and respect the interanimation of image and word (Lewis, 2001) in children's work.

The student work described in this article was collected during a study that explored young children's responses to and interpretations of eight picture books with metafictive devices (Pantaleo, 2004, 2005). The article focuses on the first-grade children's visual and written responses to the picture books and describes the relationship between the students' visual and verbal texts with respect to storytelling. The article discusses the value of viewing children's work as miniature ecosystems (Lewis, 2001) and the importance of developing children's visual literacy skills.

**Classroom Context**

The research site was a kindergarten through grade 7 elementary school located in a
predominantly commercial area of a city in western British Columbia, Canada. All but one of
the 9 boys and 11 girls in Mrs. W.'s first-grade class participated in the study. For 2 of the 19
participants, English was not the language spoken at home. Three children, one boy and two
girls, were of First Nations ancestry. One boy was from Romania, one girl was from
Uruguay, one girl was of African Canadian ethnicity, and 13 children were from European
Canadian families. With the exception of two boys, who were functioning significantly below
grade level provincial standards in both reading and writing, Mrs. W. believed that most of
the students' literacy skills were within the average range for beginning first grade. Three
children in the classroom, who demonstrated significant delays in speech and language,
received weekly in-school therapy from a speech and language pathologist.

Over a nine-week time period during the fall of 2002, the first-grade children participated in
both small-group and whole-class interactive read-aloud sessions (Barrentine, 1996). The
eight picture books used in the research were read with the students in the following order:
(1) Willy the Dreamer (Browne, 1997), (2) Something from Nothing (Gilman, 1992), (3)
Tuesday (Wiesner, 1991), (4) The Three Pigs (Wiesner, 2001), (5) The True Story of the
Three Little Pigs (Scieszka, 1989), (6) Shortcut (Macaulay, 1995), (7) Voices in the Park
(Browne, 1998), and (8) A Day at Damp Camp (Lyon, 1996). These particular sophisticated
picture books contain various metafictive devices that draw the attention of readers to how
texts work and to how meaning is created (e.g., multistranded narratives, multiple narrators,
nonlinear and nonsequential plots, obtrusive narrators who address the reader,
intertextualities, and parodic appropriations) (Pantaleo, 2005).

Once a week for approximately 25 minutes, the children were pulled out of regular classroom
activities to participate in the small-group read-aloud sessions that occurred in a vacant room
in the school. The students were encouraged to talk to one another or to me at any point
during the small-group read-aloud sessions. As well as providing expansions on the children's
comments and articulating topic-continuing replies, I asked questions during the sessions that
encouraged student consideration and discussion of unexplored textual and illustrative
aspects. Subsequent to reading the story to every small group, I reread the book to the entire
class, and again, student participation was encouraged. Following each whole-class read-
aloud session, the children were asked to visually represent their responses to each picture
book. Mrs. W. and I reminded the students to think about what they were feeling, thinking,
wondering, questioning, or imagining as they listened to and talked about the story before
they began their pictures. Thus, the children received minimal directions with respect to
completing their drawings, and no whole-class discussion transpired about what the children
“might” draw. Throughout the study, all of the first-grade children immediately began to
draw their visual representations once they returned to their desks from the carpeted area
where the whole-class read-alouds occurred. As the children worked on their pictures, Mrs.
W. and I circulated about the room, talking with the students about their work. Because the
study took place at the beginning of the school year, the children dictated their accompanying
sentences to either Mrs. W. or me. The children informed us when they were ready to dictate
their sentences (i.e., when their drawings were complete or nearly complete), and if
necessary, we verbally prompted the children with “Tell me about your picture” or “What do
you want to say about your picture?”
Analyzing the Children's Visual and Verbal Texts

Although the focus of the research was the children's oral responses to and interpretations of the metafictive elements in the picture books (Pantaleo, 2005), I believe the children's drawings warrant discussion. The first-grade students' responses could be described in a number of ways. For example, one could adopt the categorization scheme used by Arizpe and Styles (2003) to analyze the children's drawings. As described previously, the researchers investigated how children ages 4-11 read the visual texts in three multilayered picture books. Arizpe and Styles also examined three features of the children's drawings created in response to the literature: literal understanding, overall effect, and internal structure. The literal understanding of the drawings was described as “the child draws people or events from texts to communicate story and events” (p. 118). The overall effect of the drawings considered “qualities such as the aesthetics of the image and a discussion of colour, tone, form and line” (p. 118). Finally, when focusing on the internal structure of the drawings, the researchers examined “the composition for balance and the relationship between objects or characters and their relative scale” (p. 118).

Alternatively, one could examine the precision of replication, or the extension, or the elaboration of the children's pictures when compared to the original illustrations in the book, or one could analyze the characters or plot events represented in the children's work. The text accompanying the children's drawings could also be analyzed separately. However, I wanted to develop or embrace a categorization scheme that would respect the ecology of the students' visual and verbal texts. After multiple viewings and readings of the first-grade children's responses, I decided to adopt and adapt two aspects of Agosto's (1999) categorization scheme that describes text-image relationships in picture books. However, by adopting Agosto's two major categories of storytelling, I am not implying that picture books and children's drawings and texts are analogous. Rather, Agosto's two major categories of storytelling—parallel storytelling and interdependent storytelling—facilitated an analysis of the students' composite texts, focusing specifically on the interaction between the words and the pictures with respect to storytelling. Three subcategories of interdependent storytelling were also generated to describe the children's work: pictures extending text, text extending pictures, and pictures extending text and text extending pictures.

A further explanation about the analysis of the children's dictated sentences will assist readers in understanding the implementation of the categorization scheme described below. Some children identified plot events that they liked (e.g., I thought it was funny when...) or explained why they liked particular events (I liked when ... because ...). Although children's emotive responses are critical when considering their engagement with and understanding and interpretation of literature, and Mrs. W. and I encouraged the children in this study to respond to the picture books from an aesthetic stance (Rosenblatt, 1978), I did not consider the students' reflective texts where they stated an opinion or described an emotion. For example, for *Voices in the Park* (Browne, 1998), a book about four zoomorphic characters and two dogs who go to a park at the same time, Jeffrey dictated the following sentences: “This is Victoria and Albert chasing each other. I thought it was hilarious. This is when they were playing on the slide.” Jeffrey's sentence “I thought it was hilarious” was not considered
when analyzing his work. The children's personal opinions or emotional responses were not included in the analysis of the data because this article focuses on the interaction or relationship between the children's words and their pictures/images with respect to storytelling.

Once I analyzed the children's composite texts, a doctoral student (a research assistant who was familiar with the picture books) independently applied the categorization scheme to the children's visual and verbal texts. We shared our ideas and discussed the few discrepancies to the extent that we were able to come to agreement about the categorization of the children's work.

Parallel Storytelling

Parallel storytelling was used to describe a child's work if the text and the drawings told the same story simultaneously (Agosto, 1999, p. 267). For example, in Andrea's response (all children's names are pseudonyms) to A Day at Damp Camp (Lyon, 1996) and Patty's response to Tuesday (Wiesner, 1991), the girls repeated the same information but “in different forms of communication” (Nikolajeva & Scott, 2000, p. 225) (i.e., visual and verbal).

In A Day at Damp Camp, the author uses 27 pairs of rhyming words such as “damp camp” and “mud flood” to tell the story of a summer camp adventure and the emergent friendship of two girls. The narrative is mainly told through the illustrations. The double-page spreads with text have six words and three rectangles nested inside of one another, evoking the multilayered appearance of hypertext Web links. Andrea (see Fig. 1) drew a picture of two girls, one giving a rock to the other, and dictated the sentence, “This is Sarah giving Megan the rock.”

![Figure 1. Andrea's response to A Day at Damp Camp (Lyon, 1996).](image)

A second example of parallel storytelling was Patty's response to Tuesday. In Wiesner's wordless picture book, frogs at a pond become airborne when the lily pads on which they are sitting mysteriously become miniature flying carpets. The airborne creatures experience a night of adventure, but as dawn approaches, the lily pads lose their ability to fly and the frogs tumble to earth. The grounded amphibians hop back to the pond. In the morning, perplexed police officers and detectives investigate the evidence of the previous night's events. On the
following Tuesday evening, the sky is inhabited by a different creature. Patty drew one of the detectives (dressed in blue) at the end of the story and a lily pad on the ground. Her sentences were “I am drawing the mystery guy, the police investigator, picking up the lily pad. It was kind of funny.”

**Interdependent Storytelling**

In picture books with interdependent storytelling, there are clear differences between the information conveyed in the text and the illustrations (Agosto, 1999). According to Agosto, picture books that employ interdependent storytelling require the reader to “consider both forms of media concurrently in order to comprehend the books' stories” (p. 267). Although Lewis (2001) criticizes Agosto's categorization scheme, his discussion of the interanimation of word and image in picture books is very similar to Agosto's category of interdependent storytelling. Lewis defines interanimation as “the process by which, in composite texts ... the words and images mutually influence one another so that the meaning of the words is understood in light of what the pictures show, and vice versa” (p. 169). Overall, the relationship between the text and images in each of the eight picture books used in the study was interdependent storytelling.

As described above, when examining the children's visual responses that were interdependent storytelling, three subcategories emerged: pictures extending text, text extending pictures, and pictures extending text and text extending pictures.

*Pictures Extending Text.* An example of interdependent storytelling where the children's pictures extended their text was Cassandra's response (see Fig. 2) to *Something from Nothing* (Gilman, 1992). Gilman's book, an adaptation of a traditional Jewish tale, includes multiple perspectives and multiple stories. When Joseph is a baby, his grandfather makes him a blanket, and as Joseph grows up, the blanket becomes worn. Joseph's mother decides it is time to throw it out, but Joseph refuses to part with the blue blanket and takes it to his grandfather, who makes the remaining fabric into a jacket. A second narrative about a mouse family living below the floor of the grandfather's house is told entirely through illustrations. Each time the grandfather creates a new item for Joseph, blue material falls through the floorboards into the world of the mice. The mice use the pieces of blue fabric for many domestic purposes. Cassandra's dictated sentence was “The mice have found the button.” Her pictures included a large blue button, approximately 7 cm in diameter, centered in the top two-thirds of the legal-sized paper. Cassandra drew a black line across her page depicting the floorboards of the grandfather's house that separated the worlds of the humans and rodents. In the bottom one-third of her paper (i.e., under the floorboards), she included six mice characters, all dressed in blue, and two chairs. The chair on the left-hand side of the page was covered in blue material, and the chair on the right-hand side of the page was the chair that the mice made with Joseph's button (the button was used for the chair seat). She drew a mouse on each chair. Cassandra used the same blue color for the button above the line, the clothes of the mice, the material covering the chair on the left, and the chair seat (button) of the other chair. Further, the hue of blue she used in her work resembled the color of blue in Gilman's illustrations. Thus, Cassandra's rich and detailed illustrations provided much more
information than was conveyed by her words.

![Cassandra's response to Something from Nothing (Gilman, 1992).](image)

As stated above, Agosto's category of interdependent storytelling describes the overall relationship between the text and illustrations in the books used in the study. Some of the children's replications of the illustrations in the picture books were categorized as interdependent storytelling because the children's “reillustrations” captured the interdependent nature (i.e., synergy) of the text and images in the original work. For example, Pender's visual response (see Fig. 3) to *Willy the Dreamer* (Browne, 1997) was categorized as interdependent storytelling because he replicated an illustration from Browne's book that was itself an example of interdependent storytelling. In Browne's picture book, Willy, a zoomorphic character, dreams of many things, including fame, adventure, heroism, destitution, the past, and the future. The book is filled with visual intertextual links to cultural products and texts. The bananas on the cover and endpapers suggest that readers will discover bananas throughout the book, and indeed Browne does not disappoint. Pender chose to replicate the illustration that depicts Willy dreaming that he is out at sea in a boat. Pender did a remarkable job of reproducing the detail in Browne's illustration (and Pender did not look at the picture book when he created his visual response). Like the original, Pender depicted Willy in a boat with the stern resembling the pink chair that Willy is sitting in on the cover and in several pictures in the book. Pender replicated Browne's use of color for the boat: the stern (the chair part) was pink, the bow of the boat was orange, and the boat's sail was yellow, as it was made out of a banana. As in the original, Pender's mermaid in the water had a yellow banana fishtail and Willy had a long hook in his hand, attempting to “catch” the sea creature. Pender colored the background of his page blue, depicting water. He dictated the following sentence: “Willy catching a mermaid out at the sea.” Like Browne's original illustration in the picture book, Pender's images were rich with information and significantly extended the message communicated by his words.
Text Extending Pictures. An example of interdependent storytelling where a student's text extended her pictures was Kirstin's response to *The True Story of the Three Little Pigs* (Scieszka, 1989). In Scieszka's parody of the traditional tale of the three porkers, A. Wolf narrates the tale from his point of view and explains how the events that unfolded were due to a "misunderstanding." Indeed, he was framed! A. Wolf was simply trying to borrow a cup of sugar, the pigs' houses collapsed due to his uncontrollable sneezes, and he consumed two of the little porkers because of his aversion to wasting food. Kirstin drew a red brick house, a pink pig outside the house, and clouds and a sun in the sky. Kirstin's dictated sentences were "The pig was building his brick house. He was the smart pig of the family—the bright one." Kirstin expanded on her drawings by commenting on the pig's intellectual capabilities and his position in his family's cognitive hierarchy.

Sue's response to the *The Three Pigs* (Wiesner, 2001) was also an example of interdependent storytelling where her text extended her pictures. In Wiesner's version of the traditional tale of *The Three Little Pigs*, the wolf blows the first pig right out of the story! The text continues, but there is no pig "in the story" for the wolf to devour. Once the second and third pigs exit the "original" story, the adventure really begins. New narratives are created as the pigs explore other stories and when characters leave their original stories (and consequently change those stories) to join the three pigs. A dragon and the cat from *Hey Diddle Diddle* accompany the pigs when they return to their original tale. Sue drew a dragon on her page—a beautiful long dragon with green and yellow scales. Her sentences were "This is the dragon and the pigs eating food at the end of the story. I liked when the dragon came out of the frame." Sue's words provided additional information than conveyed in her picture.

Pictures Extending Text and Text Extending Pictures. Finally, an example of interdependent storytelling where a student's pictures extended the text and the text extended the pictures was Teresa's response (see Fig. 4) to *A Day at Damp Camp* (Lyon, 1996). Teresa appropriated the illustrator's unique illustrative framing device and created three frames. In the outer frame, Teresa drew birds (depicted as V's) and lines to represent water. In the middle frame, Teresa drew the heads of nine girls—each girl had hair, eyes, and a circle for a mouth. The inside frame had four girls, again with open mouths, but these girls had complete bodies. Teresa included spots (i.e., mud) on the girls' clothing and faces. She did not color her picture. She dictated several sentences when she talked about her picture: "It was funny. The middle frame was funny because they had a funny song. Centre was funny because they had mud."
The outside was serious because it was beautiful and I liked it. This [second frame] is the one where they were singing. The outside one is from the cover.” Thus, Teresa conveyed different information through the two modes of communication producing a “complex dynamic” (Nikolajeva & Scott, 2000, p. 225).

In Katie's visual response (see Fig. 5) to Shortcut (Macaulay, 1995), the pictures extended the text and the text extended the pictures. The frontispiece in Shortcut provides readers with an introduction to the book's cast of characters: June, Albert, Patty, Pearl, Professor Tweet, Sybil, Clarinda, Clarinda's cockatoo, and Bob. The book is organized into nine chapters and an epilogue. Actions by Albert and his horse June in Chapter 1 activate a dramatic chain of events (e.g., a hot air balloon sailing out of control, a missing pig, a train on an abandoned railway line, a speeding driver, a sinking boat) that ultimately involves the other characters on the frontispiece. However, the characters in Shortcut go about their lives unaware of the actions of the other characters in the book. Katie drew Albert and June and their cart of watermelons. She drew the bridge, made out of bricks, that Albert and June crossed weekly on their journey to town to sell their watermelons. Katie depicted water under the bridge with wavy lines, and she included the crest on the bridge. She drew three of the four symbols that appear in the sections of the bridge's crest (and that symbolize events in the book). Katie did not color her pictures. She dictated the following sentences to Mrs. W.: “Albert crossed the bridge. He throws money into the water ‘cause he wants his wish to come true.” In Katie's visual response, text and pictures conveyed independent and interdependent information.

Findings

Table 1 presents a quantitative analysis of the first-grade students' work. The number of responses varies for each book because of student absences. As is evident from Table 1,
approximately 40% of the children's work was parallel storytelling where the pictures and text told the same story. However, it is important to note that the children's visual images varied in complexity in the parallel storytelling category. For example, for Shortcut, Dom's dictated sentence was “My favourite part was when the train hit Pearl because it was funny.” He included minimal detail in his picture; he drew a train with smoke coming out of its stack on railroad tracks and a pink pig on the front of the train. In contrast, Patty's illustrations for Willy the Dreamer were more complex with respect to detail. Her sentence was “I'm drawing about Willy the Dreamer being the king.” As in Browne's illustration of Willy as a king, Patty's King Willy had a crown, a purple robe, a colorful vest, and a throne. Interestingly, Patty colored one of Willy's shoes red and the other one green. In the illustration in the book, Willy is wearing shoes with buckles. However, on the cover and on the first recto, Willy is portrayed with his trademark one green sock and one red sock.

Table 1
Analysis of Children's Visual and Verbal Texts

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<th>Number of Students</th>
<th>Parallel Storytelling</th>
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Approximately 60% of the work completed by the first-grade students reflected interdependent storytelling as the text and the pictures communicated alternative information. Overall, approximately 30% of the children's responses were examples of interdependent storytelling where the text extended the pictures. The children's dictated sentences provided additional information than represented in their pictures. In several students' work (approximately 16%), the pictures extended the text. Finally, in some children's responses (approximately 14%), the text extended the pictures and the pictures extended the text.
Variation occurred across children and across texts with respect to the number of examples of parallel and interdependent storytelling. Although each first-grade student had at least one example of parallel storytelling, all the responses of only one child, who was absent for two books, were classified as parallel storytelling. *Willy the Dreamer* (Browne, 1997), the first book I read aloud to the children, had the most examples of parallel storytelling, perhaps because its narrative style is vignette in nature as each page tells a “story” about one of Willy's dreams. *Tuesday* (Wiesner, 1991), *The Three Pigs* (Wiesner, 2001), and *The True Story of the Three Little Pigs* (Scieszka, 1989) had the most examples of interdependent storytelling.

**Cautions about Categorization Schemes**

Analyzing children's visual and verbal texts quantitatively using general categories fails to capture the richness and complexity of the children's work. The categorization scheme used in this study is not the quintessential method for examining relationships between young children's visual and verbal texts. Further, my descriptive classification system is not to be interpreted as hierarchical or qualitative in nature. Rather, the categorization scheme provides one way to talk about the dynamic and complex relationship between two modes of expression and emphasizes the advantages of looking at children's work as a gestalt, honoring both text and pictures. Similar to the various typologies that have been developed to describe the text-image relationships in picture books, several schemes could be generated to examine the text and visual relationships in the children's work. Alternative methods of analysis would reveal additional information. Regardless of the categorization scheme used to examine students' work, it is essential for teachers to “read” children's visual images, as well as their text, and to consider the multifaceted nature of the responses. Young children's oral and written language abilities influence the quality and quantity of their “words,” and representational responses provide another medium for children to express themselves. Graham (1990), writing about illustrations in picture books, states that many “layers of meaning are only accessible through the illustrations” (p. 41). I believe Graham’s statement is applicable to children's visual representations as well. Indeed, in their study, Arizpe and Styles (2003) found that the drawings of the younger children “often showed understandings they were unable to articulate” (p. 225).

**Discussion**

Margaret Meek (1988) criticizes those reading experts who are “casual about texts” when describing the reading process (p. 6). She writes about the private lessons readers give themselves as they interact with texts and states that “if we want to see what lessons have been learned from the texts children read, we have to look for them in what they write” (p. 38). As stated previously, the relationship between the text and images in each of the eight picture books used in this study was interdependent storytelling. For seven of the eight picture books, at least one-half of the children's visual and verbal texts were categorized as interdependent storytelling. Thus, to a certain extent, the children's images and text emulated the interdependent storytelling nature of the picture books.
Although the students were encouraged to take a very active role in the construction of meaning during the interactive read-aloud sessions, we did not engage in an analysis of the illustrative techniques and styles in the picture books. However, teachers can certainly take advantage of outstanding-quality picture books to not only provide pleasurable reading experiences but to teach children about artistic styles and the grammars of visual images and visual design in picture books (Lewis, 2001). Arizpe and Styles (2003) write about the influence of two educators in their study: “Both teachers had clearly influenced the children in the receptive and productive modes, as artists ... but also as skilled observers of visual texts” (p. 226). Students need to be taught how to read illustrations, and to be given time to think and talk about the art in picture books (e.g., multiple readings of books). “Analyzing visual text, and the relationship between word and image, makes demands on what are often called ‘higher order reading skills’ (inference, viewpoint, style and so on) and involves deep thinking” (Arizpe & Styles, 2003, p. 238). Students' developing visual literacy skills may then be reflected in their work. Further, I believe it is fundamental for children to have opportunities to discuss their own work. Because of time restrictions, as well as the focus of the research, the first-grade children participating in this study did not share their drawings with their peers. Discussing the students' drawings in a whole-class context would have provided a further opportunity to talk about the children's work and the relationships between their visual representations and their written text.

Because “artistic expression seems to enable children in the creation of oral and written texts” (Pappas, Kiefer, & Levstik, 1999, p. 216), having children respond to literature by drawing pictures will help them articulate their ideas. The children's drawings in the study by Arizpe and Styles (2003) communicated the children's knowledge and emotional responses to the picture books and revealed understandings that the children were unable to express verbally (p. 225). One visual reading response activity, sketch-to-stretch (Leland & Harste, 2001; Short & Harste, 1996; Whitin, 2002), is considered “particularly effective because students transmediate between language and art, as they create a sketch of the meaning of the book” (Short & Harste, 1996, p. 207). After reading a book or listening to a read-aloud, students are asked to express their thinking about the a story by “sketching lines, colors, shapes, symbols or pictures…. The sketches are metaphorical by nature, so it is impossible to have literal retellings” or favorite parts (Whitin, 2002, p. 444). Whitin found that the sketch-to-stretch strategy promoted a deeper understanding of books, encouraged a variety of perspectives, nurtured a collaborative and respective community, and was used successfully by students of varying abilities.

Gardner’s (1993, 1995) multiple intelligences framework reminds us of the importance of developing children's abilities to comprehend and interpret various sign systems, and to communicate using various modes of expression (i.e., multiple literacies). As Hughey and Slack (2001) note, “When children use a combination of drawing and narrating, the linguistic and spatial multiple intelligences reinforce each other” (p. 172). The first-grade children's responses represented “two languages” (Schwarcz & Schwarcz, 1991, p. 4), word and picture, joining forces. As in picture books, the verbal text of the students' work is read linearly, but the picture “with all its parts and details” appears “in front of our eyes simultaneously” and we “perceive contents and meanings at our discretion” (p. 4). We need to recognize the information that is conveyed by children's visual representations about their reading
experiences and their literary development. Graham (1990) believes that we have overlooked or taken for granted the “part that illustrations in a picture-book play in the literary development of a reader” (p. 7). Thus, just as illustrations in picture books can teach narrative conventions (Graham, 1990; Meek, 1988), children's pictures can reveal their understanding of narrative codes and conventions. As Sipe (2000) notes, a comprehensive description of children's literary understanding includes an examination of their art and writing (p. 35). Similarly, Schwarcz and Schwarcz (1991) write that “we should strive to develop the whole range of the child's personality; verbal, abstract, spatial, visual and other sensory capabilities have to be stimulated, provided for, and guided” (p. 4).

Although some studies have focused specifically on primary-grade children's responses to literature (e.g., Barone, 1990; Commeyras & Sumner, 1996; Hickman, 1981; Labbo, 1996; Many & Wiseman, 1992; Pantaleo, 2002; Sipe & Bauer, 2001), little research has examined the visual responses of young children. Thus, additional research is needed to explore and to understand how children “take what they understand through language as they read and talk about literature and transform those understandings by expressing their ideas in art” (Short, Kauffman, & Kahn, 2000, p. 160). Further, as emphasized in this paper, we also have much to learn about “reading” and interpreting young children's visual texts.

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Books.


Children's Literature Cited


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