

Researching Intertextuality Within Collaborative Classroom Learning Environments

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As more and more researchers focus on the process of intertextuality, the issue of where this research occurs needs to be given greater consideration. The majority of research studies on intertextuality have either involved students in research tasks outside the classroom setting or examined the process within hierarchical classroom environments. The lack of authenticity in these research tasks for learners and the restrictions on the intertextual connections that can be advanced within a hierarchical learning environment have limited our understandings about intertextuality. Researching intertextuality within collaborative learning environments will open up a broader range of connections and meaning-making among learners and allow researchers to understand more about student learning and effective learning environments. More importantly, research in these powerful classroom contexts will support researchers in building an educational theory of intertextuality and broader understandings about the nature of intertextuality. One particular research context, literature circles, is examined to identify the characteristics of generative research environments for the study of intertextuality.

A small group of first graders are meeting in a literature circle to discuss the folktale *Hansel and Gretel*. As they share their favorite parts, Pat suddenly bursts into the discussion, "You know, I think that the witch was really the stepmother in disguise." The rest of the group look at him in surprise. Finally the teacher asks, "Why do you think that, Pat? None of the rest of us understand what you are saying." Pat quickly opens the book and points out that the witch and the stepmother never appear at the same time and that after the children kill the witch, they return home to find out that the stepmother has died. "The stepmother could have been disguised as a witch," he points out. Sherry joins in, "We've read other stories like that." "Oh, like the "Snow White" story I read last week," says the teacher excitedly, realizing that Pat has provided a new possible interpretation for the story. The group continues their discussion, examining the book and talking about different interpretations for the events. (Short, 1986, pp. 316-317)

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The learners in this classroom construct stories and make sense of their world through embedding evolving stories into other stories, by letting "stories lean on stories" (Yolen, 1981, p. 15). "Stories are as they are *only* because others exist. they are 'intertextual'" (Rosen, 1984, p. 15).

The children and teacher involved in this literature circle are part of a collaborative community in which all learners' connections are shared, challenged, and valued. The teacher is part of that community as a learner rather than as the "chief storyteller" whose voice dominates classroom meaning-making. These learners value the diversity of voices in their classroom because it gives them access to many new perspectives. Instead of silencing voices, they listen to each other and push their own thinking and, as they experience being heard, they come to know and value their own voices as well as those of their classmates. They examine their understandings and consider other ways of thinking and so are able to make a wider range of intertextual connections across their lives and the stories they are constructing to make sense of the world.

Although the search for connections across texts and life is a natural part of learning, students' school experiences have led many to *expect* fragmentation in their learning. Traditional approaches to reading and writing instruction, evaluation, and research treat these processes as the act of constructing or understanding a single, individual passage. Research indicates that although students can and do understand texts encountered in school through making intertextual links, this linking is not pervasive in schools or encouraged by instructional practices (Hartman, 1990; Rogers, 1988; Wolf, 1988). In observing literature circles, I found that when children first begin these discussions they often do not discuss connections to other pieces of literature and make only superficial connections to their own lives (Short, 1986). This lack of connection indicates a need for learning environments that highlight intertextuality so that readers come to *expect* connections within the school context and in making meaning from learning engagements (Cairney, 1990).

Intertextuality has been defined in many different ways by theorists who have located it in the text (O'Donnell & Davis, 1989), the reader (Beaugrande, 1980; Kristeva, 1977), or the social interaction between people (Bloome, 1989). In this article, I will describe the understandings of intertextuality which form the basis for my research and raise issues related to researching intertextuality in elementary classroom settings. In particular, I want to argue that researching intertextuality within collaborative learning environments will open up a broader range of connections and meaning-making among learners and allow researchers to understand more about student learning and effective learning environments. More importantly, research in these powerful classroom contexts will support researchers in building an educational theory of intertextuality and broader understandings about the nature of intertextuality. A specific context, literature circles, will be examined to identify the characteristics of generative research environments for the study of intertextuality.

INTERTEXTUALITY: A SOCIAL PROCESS OF MEANING-MAKING

Intertextuality is most commonly defined as the process of making connections between current and past texts; of interpreting one text by means of previously composed texts. This view focuses on the "ways in which the production and reception of a given text depends upon the participants' knowledge of other texts" (Beaugrande & Dressler, 1981, p. 182) and defines texts as meaningful configurations of *language* intended to communicate.

My experiences with children have led me to agree with Siegel (1984) who argues that texts should be defined as meaningful configurations of signs intended to communicate. A text, therefore, is any chunk of meaning that has unity and can be shared with others (Short, 1986). A song, dance, poem, oral story, mathematical equation, or sculpture are all texts from which learners can draw connections as they construct their understandings about a current evolving text. This broader definition of text extends intertextuality to a central process of making meaning through connections across present and past texts constructed from a wide variety of life experiences. In fact, one could argue that intertextuality is a metaphor for learning. This metaphor allows us to see learning as a process of making connections, of searching for patterns that connect to make sense of our world (Harste, Woodward, & Burke, 1984).

Intertextuality as a Metaphor for Learning

Rosen's (1984) work on narrative is powerful in extending the metaphor of intertextuality as a central process of meaning-making. He argues that narrative, creating a story from our experiences, is a basic thinking process which provides us with a way to organize these experiences so that they do not remain fragmentary, unconnected, and meaningless. From the endless stream of daily events in which we are constantly involved, we select, organize, and bring meaning to those experiences through establishing arbitrary boundaries in this stream. We invent beginnings and endings for our stories by searching for connections among our past stories to create a meaningful sequence, a story. The interpretive framework that we construct to give meaning to our experiences is thus made of texts formed on other occasions and set within a particular sociocultural history and context.

As we read, draw, or dance, we search for unity both within an evolving text and between the evolving text and the texts we constructed earlier to make sense of the world. In our search for unity, we create tensions that propel learning forward and discover suspected and unsuspected connections between current and past texts. These constructions result in new understandings of past and present texts and our views of reality.

Inventing a story is not enough, the story must be told to become a narrative (Rosen, 1984). In telling a story to others by expressing it in some public form,

we not only bring the story to life, we make new connections and create new meanings. Once we share the story, that text becomes a source of further dialogue. Everyone involved in that dialogue can use their constructions of the story as they approach new experiences and evolving texts, and these new evolving texts allow them to reconsider old stories—a process of endless intertextuality.

Rosen (1984) argues that one's world view is thus comprised of interconnected stories where each exists only by virtue of other stories. Because learners' connections and stories are determined by their sociopolitical and cultural histories as well as the particular social context within which the connections occur (Eco, 1976), intertextuality is always socially constructed. The knowledge that a learner brings to any experience is based in a particular culture and history and so intertextuality can never be viewed simply as a cognitive process. Even the definition of "story" used by learners to invent beginnings and endings and construct interpretive frameworks is culturally determined. Every culture has its own definition of what constitutes a story and the circumstances and style of the telling, and each of these understandings are further impacted by divisions in that society such as class, sex, and ethnicity (Rosen, 1984).

Not only does the learner bring a particular sociocultural history to an experience, but that experience takes place within a specific social environment. The nature of the social relationships within that environment will have a major impact on the kinds of connections available for consideration and recognition (Bloome, 1989). Another aspect of intertextuality as a social process is that, by definition, a story becomes a narrative only through the "telling" (Rosen, 1984). Intertextuality thus is situated in the dialogue between participants, even if one of the participants is not physically present (such as when one reads a book).

Intertextuality as a Process of Abduction

As learners engage in dialogue, new intertextual connections and knowledge are encouraged through critical thinking and abduction (Peirce, 1966). Knowledge for Peirce is never a static body of facts but a process of inquiry which depends on critical thinking where reasoners consciously make judgements regarding the possible truth of something. Because learners always construct meaning as they interpret their experiences, they never come to know the world directly and live with some doubt about their current understandings. These doubts do not prevent them from operating confidently and effectively in the world; but they do require learners to be open to the possibility of changing their beliefs and current intertextual connections by approaching their lives with an attitude of inquiry. The expectation that learners will encounter ideas that conflict with what they currently believe about the world is not an attitude encouraged by most classroom and research environments where the focus is on "correct" answers.

Peirce (1966) argues that every instance of critical thinking begins with the observation of something that is surprising, an unexpected occurrence or anomaly. Many students no longer expect anomalies or have learned to ignore them,

finding it safer to continue with their present beliefs or to give precedence to the teacher's beliefs. Once learners do recognize an anomaly, they search to find some point of view or connection that will explain the unusual occurrence. This search for connections between the current situation and their past texts and experiences leads to ideas or hypotheses which the learner must then decide whether or not to test. The process of noticing something unexpected, searching for connections to create possible hypotheses, and evaluating whether or not to test out the hypotheses Peirce calls "abduction." He believes it is the only process that can result in new knowledge. The learner then engages in the processes of deduction, reasoning from a general idea to specific ideas that would necessarily follow from holding a particular hypothesis, and induction, taking these consequences and testing them out against actual experience to reject, modify, or accept the hypothesis.

Peirce's cycle of critical thinking with its focus on anomaly and abduction is crucial to an understanding of the social environments that encourage more complex intertextual connections. Intertextuality is a process that involves both dysjunctions and connections that are set in motion when learners encounter anomalies through their interactions with other learners and texts. The connections allow learners to link ideas together, see new relationships, and bring unity to their understandings. The dysjunctions, the ideas that do not fit, force learners to go back and reconsider evolving and past texts and so can lead to fundamental changes in thinking. Both the dysjunctions and connections occur within particular social environments that can open up or close down dialogue and inquiry among learners.

Collaborative research in elementary classroom settings has brought to the forefront a number of issues related to the specific nature and characteristics of the environment in which that research occurs. These issues have become critical to developing an educational theory of intertextuality. To raise these issues, I will use insights and examples from a number of long-term collaborative studies and teacher research studies on a particular curricular context, literature circles. These studies were conducted in elementary classrooms with children ranging from first through sixth grade in both rural and urban settings in the Midwest and Southwest. My role within these classrooms was that of an active co-learner, teacher, and researcher with the teachers and children, rather than a classroom observer.

THE CLASSROOM LEARNING ENVIRONMENT: IT MATTERS WHERE WE RESEARCH

When I first began exploring intertextuality, I was involved in a year-long study with another teacher researcher, Gloria Kauffman, in a first-grade classroom (Short, 1986). We quickly realized that the type of learning environment created in the classroom had a major impact on the intertextual connections that students

were able to openly bring into the classroom through their interactions with each other. The research focus moved from the types of connections made by children to examining how to construct learning environments based in collaboration and inquiry that would encourage and support the making, recognition, and exploration of a wider variety of intertextual connections.

In the majority of reported research, learning and intertextuality have been examined in contrived, controlled settings where learners are asked to engage in experimental tasks or in traditional classroom settings characterized by "right" and "wrong" answers. In these settings, learners spend the majority of their time trying to figure out how the researcher or teacher is defining a "good" answer and so they often devalue their own connections or share them only in peer interactions conducted outside of teacher-sanctioned discussions. When data collection strategies are not viewed as integral to the learning experiences of that classroom, learners complete them as "assignments." Research tasks completed to give data to the adult researcher raise questions about ecological validity, support hierarchical relationships, and continue to perpetuate the separation of research, theory, and practice.

Research studies in experimental settings and traditional classroom environments do provide insights about learning in those contexts. Educators are able to understand "what is" and the limitations of these environments in relation to meaning-making and intertextuality because of the social relationships between and among teachers and students. However, in order to explore the potentials of these processes when learning environments support more democratic relationships, we must also examine these processes within the best classroom contexts that we currently know how to construct. We need to look at the process within learning environments where learners share and value their own connections, engage in critical and open dialogue with others, and are challenged to search for and consider new connections. Within these classroom environments, researchers will be able to build broader understandings and stronger educational theories of intertextuality. In classrooms where these explorations of anomalies and connections are restricted, researchers will find little new to explore.

Researchers, teachers, and students need to work together to create collaborative environments that encourage intertextuality. In these contexts, the research tasks will be engagements that have authentic learning purposes within the curriculum and that make intertextual connections visible for examination. Even though learning is always intertextual, it reaches a greater level of complexity and depth when an environment encourages interactions among learners that support them in recognizing and exploring anomalies, reconsidering their current intertextual ties, and opening up new potentials for other intertextual ties.

Gloria Kauffman and I saw major changes in the connections made by first-graders over the course of the year as we moved from hierarchical to more collaborative relationships between and among teachers and students. Although some of these changes were due to their increasing proficiency with written

language and school tasks, the change in learning environment seemed to be a major factor.

In October, Stephanie produced a poem about pigs after a runt pig visited the classroom. As she wrote her poem, she shared it several times with the other children sitting at her table. One of these children, Marvin, produced a poem several days later that used Stephanie's pattern and many of her actual words. When he later shared his poem, Stephanie's response was "Hey! That's just like mine. You took my poem."

In February, after hearing *St. George and the Dragon* (Hodges, 1984), Corey wrote a fairy tale about a golden dragon and a prince who takes the dragon's gold after killing it by using his shield to ricochet the dragon's fire. Richard used Corey's idea of a golden dragon in his own story about a witch who devised an evil formula to make a golden dragon which a knight must set out to fight and kill. When Richard's book was later shared in class, both Corey and Richard talked about Richard getting his idea of the golden dragon from Corey. Corey remarked, "He's just like me. He likes dangerous things like dinosaurs and dragons." (Short, 1986, p. 330)

These two events differ not only in how the children responded to others' intertextual ties with their texts but also in the kinds of ties being made. Whereas Marvin's poem was a close replica of Stephanie's, Richard had transformed Corey's dragon into his own dragon and a very different story. Marvin was concerned with finding the "correct" answer and, because we were not providing him with answers to copy from the board, he looked for someone else who seemed to have that answer. Early in the year, Richard had engaged in the same behavior of finding someone who had a "good" answer (which seemed to be defined as children who received positive response from teachers and high status classmates) and producing a close replica of that person's work. By February, instead of subsuming his voice to another's, he had his own sense of meaning-making and used connections from others in the classroom to meet his own purposes.

The differences in how Corey and Stephanie responded did not seem to be due to social status or gender but to differences in expectations for connections with others. Richard and Corey expected others to pull connections from their texts and so did not treat the event as "copying" or "cheating." They had moved from an individualistic model of learning to a Vygotskian view of supporting each other as learners. They constantly searched around them for connections that would support and push their current understandings instead of feeling constrained by the need to identify the teacher's answer.

Figure 1 (p. 320) shows some of the complexity and variety of connections that Corey and Richard, along with several other boys, made in writing their dragon stories. The connections in the figure are ones they were able to articulate to me in interviews. They pulled from a variety of books, each other's stories, personal experiences, movies, television, objects in the environment, visual texts, texts in

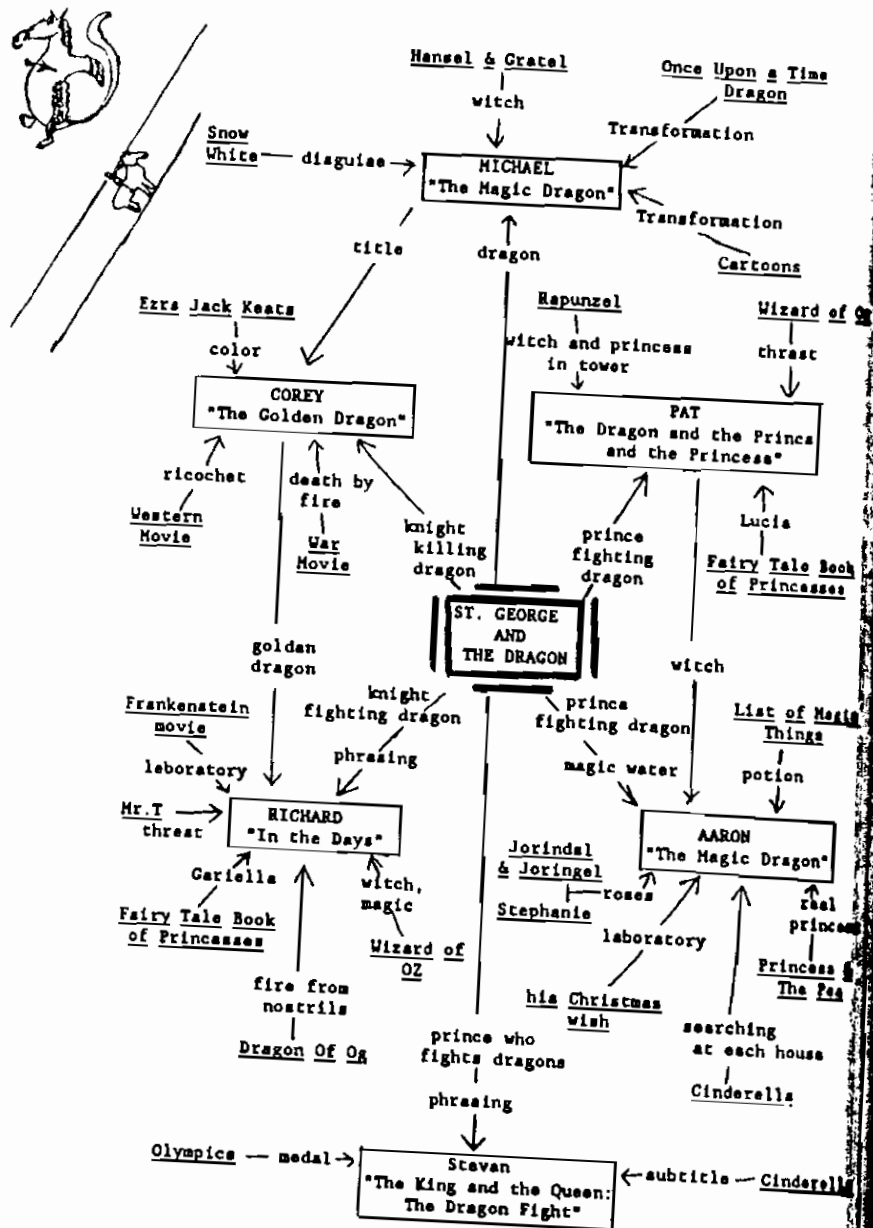


Figure 1. Intertextual ties between dragon stories (Short, 1986)

The social relationships operating in this classroom had a major impact on the potentials and constraints these learners perceived for making connections, taking risks, and engaging in action and reflection. One particular research environment which I have found powerful for examining intertextuality is that of literature circles. Literature circles are discussions by small groups of 4-5 students who read a shared piece of literature or a text set of related literature and come together to explore their "rough draft" understandings with each other. Instead of answering a set of questions, they share their initial responses to their reading and engage in critical dialogue about their responses and understandings of the literature. When teachers are present in these groups, they take the role of participant and reader, not director of the discussion.

In the next section, I will focus on literature circles as one example of a powerful research environment for building an educational theory of intertextuality in order to identify the characteristics of such environments. These characteristics include: (a) collaborative social relationships among students and teachers, (b) learning engagements that highlight anomaly and abductive thinking, (c) curricular strategies that support the process of making connections as well as a wide variety of types of connections, and (d) texts and experiences that reflect different ways of knowing across sign systems and disciplines.

ESTABLISHING COLLABORATIVE SOCIAL RELATIONSHIPS

As Lemke (1985) has pointed out, social constraints on the potential meanings and intertextual connections available and not available to learners are established by the particular language and cultural systems operating in that learning environment and event. The pattern of relationships that best seems to meet the needs of a community of learners is that provided by the complex relationships of a collaborative community (Short & Burke, 1991). One reason why literature circles provide generative contexts for researching intertextuality is that they are based in collaborative relationships. As Darcy, a third-grader, points out, "We don't have levels of reading. We are all valued equally and our thinking is valued."

Literature circles support intertextuality by involving learners in particular ways of thinking and working together as a collaborative community. The characteristics of literature circles as a context for collaborative relationships include common commitment, valued diversity, equal value of contributions, fluid roles, shared vulnerability, and decision-making through consensus. The following literature circle illustrates how these features affect the consideration and exploration of intertextual connections.

During January, a small group of first grade children were involved in discussing a variant of the folktale, "The Mitten." In this story, a series of progressively larger animals crawl into a mitten to get warm until finally a fly crawls in and the mitten falls apart. As the five children talked about the story, the majority connected it

their heads, and stories they had yet to tell. They also pulled from the general text types created by our society; in this case, fairy tales from which they made connections to characters, plots, illustrations, themes, language structures and phrases, and story structure.

with several others they had read in which a bee chases animals. They argued that a bee entered the mitten last and stung the other animals causing a commotion that led to the mitten falling apart. Richard argued that a fly, not a bee, was last. While the others did not initially agree with him, they explored his argument by returning to the book. When they realized that it actually was a fly, they began to explore other explanations for the mitten falling apart such as the fly's antennae shocking the mitten, the animals' claws accidentally tearing the mitten, the animals fighting each other because of being enemies, and the more conventional interpretation of the mitten becoming too full. Through their discussions, they rejected the first two hypotheses but the last two hypotheses were accepted as possibilities by different group members. During their last circle, they talked about what they felt they had learned from the story. The themes they mentioned included "stay away from things that are already full, finders keepers, share, always run away from bees, and don't run away from home." (Short, 1986, p. 410)

The children in this discussion shared a common commitment to making meaning which allowed them to focus on exploring their evolving understandings, dysjunctions, and connections. They were not completing an assignment for a researcher or teacher but were intent on engaging in inquiry and critique to make sense of this text and to extend their understandings.

As they discussed the story, it was obvious that they valued diversity and drew from the group members' talents, experiences, and perspectives to increase and expand the resources that the group brought to learning beyond the means of any single member. This valuing of diversity greatly increases the potential for new intertextual ties and creates greater equity among class members so that students who differ in race, social status, and gender are not silenced but valued. Richard was a child who was repeating first grade and had experienced many difficulties in gaining proficiency as a reader. In many classrooms, his voice would have been ignored and silenced as a low status classroom member. In this discussion, however, it is obvious that his contribution is valued even though the others do not initially agree with him. When they realize that their interpretation does not fit the story events, they actively listen and think together, trying to understand and make use of the diverse perspectives available in that group. Equal value means that all learners, no matter how apparently limited their experience or knowledge, come to recognize themselves and are recognized by others as competent contributors. The two-way process of receiving and sharing connections with others allows learners to become unique individuals as well as part of a generative and cohesive group of learners.

The competence of contributors is enhanced by the flexible roles which are generated by the needs of the group and filled by individuals as they recognize the suitability of their available contributions. Because learners are not "type cast" there is a greater likelihood that none of their talents or knowledge will go unused. Individuals are seen in terms of their potentials, not their limitations. This flexibility allows for Richard to take on what is usually seen as the teacher's

role in challenging others' interpretations and for different children to lead the discussion at various points.

This focus on potentials does not mean that learners expect to always succeed. Because literature circles offer the feature of shared vulnerability, the group cushions the mistakes which are part of all risktaking. Mistakes are valued for the cues they provide concerning the processes that are currently the focus of the members' curiosity and the group recognizes that new knowledge is produced even if there is not an immediate resolution to the current problem. The children's confusion of the bee and the fly is simply an issue for the group to discuss, not part of a quiz to see who has the right story comprehension. Richard and the other children know they can offer alternative hypotheses about the story for further discussion as something to be considered without fear of being "wrong." No individual members, however, are forced to put themselves so far away from their past experiences that they become vulnerable to ridicule or disconnected from their own intentions.

Because the focus of literature circles is on inquiry and not on final solutions, consensus becomes the key process for developing understanding into new knowledge. Individual knowledge, experience, and understanding become a pooled resource for intertextual connections as members confer on a question. In contrast to employing authority or compromise to make decisions, consensus involves exploring the diverse perspectives available within the group without creating winning and losing sides. The dialogue about the children's different hypotheses on why the mitten fell apart was brisk, challenging, wide-ranging, and in depth, but it was not coercive. Ideas, not members, were challenged and individuals were not coerced into changing their points of view. In this discussion, two hypotheses were accepted by different members of the group. They did not feel the pressure to all have the same interpretation. They did, however, seriously consider each hypothesis and reject those that could not be supported within their discussion. A community of learners can create knowledge and understanding through consensus that go beyond the current abilities of an individual member. The new knowledge, in turn, will create new connections, meanings and potential risks.

Chris, a third-grader, expresses his understandings of the collaborative environment in literature circles:

Everyone has a chance to give their opinion and even if you don't agree with that person, you keep on talking because you know that you will get more ideas. You aren't trying to figure out one right answer. In reading groups, when someone gave the right answer, we were done talking. In literature circles, we keep on going. We come up with as many different directions as possible.

Because school structures perpetuate hierarchical distinctions between adults and children and between children of different abilities, races, genders, and

social status, establishing a collaborative community is difficult. Gloria Kauffman and I expended a great deal of energy working towards such a community with our students. While the current sociopolitical histories of both the institution of schooling and of educators and students work against a collaborative community, our efforts toward changing the social relationships within the classroom gave us a glimpse of the characteristics and transformative potentials of such a learning environment.

In my research, I have primarily focused on the ways in which collaborative environments facilitate the process of making connections across texts and readers but have not examined closely the impact of power relationships on intertextuality. Bloome (1989) argues that intertextuality is located in the social interactions between people and that once a juxtaposition of texts has been proposed, it "must be interactionally recognized, acknowledged, and have social significance" (p. 1). Bloome reminds us that we cannot just examine the types of connections being made by learners and the process of making those connections, but must also examine what happens to those connections once they are put forth within the social community. What connections are advanced by children and are not recognized or accepted by others? Who has the power within a particular learning community to sanction intertextual connections? What occurs when those in power do not sanction intertextual connections? By examining what happens to intertextual connections within the classroom community, many insights into the roles and relationships within that community are gained (Rowe, 1992). The intertextual connections that are negotiated within a collective both derive from and build up particular participant structures. The social relationships and participant structures within a classroom are thus an essential aspect of any study of intertextuality.

Highlighting Anomaly and Abduction

Another characteristic of literature circles as a powerful research context for intertextuality is that they provide an environment in which anomalies are often raised and explored through abduction. In the previous example of the first-grade literature circle, a number of children made an easy connection with several past stories involving a bee chasing animals. They created a unity for the story that depended on the bee stinging the other animals. When this unity was disrupted, the children faced an anomaly which caused them to search together for other kinds of signs in the story which they could connect with their past texts. Through a process of abduction, they created hypotheses about the story which they tested out during the discussion to construct new interpretations. The construction of these new texts required them to reorganize their knowledge and generate new anticipatory frames to use in making predictions in future literacy events.

Anomaly played a key role in their intertextual processes through creating dysjunctions and encouraging the making of new connections and reconsidera-

tion of prior connections. One of the central roles of teachers in elementary through college classrooms is to create environments which hold the most potential for raising anomalies for learners, not to give them the problems that need to be solved. These environments depend on social relationships that support risk-taking in pursuing those anomalies and provide the possibility for diverse connections.

Another example of the role of anomaly in intertextuality comes from a third-grade discussion of a text set on grandparents (Kauffman & Yoder, 1990). The children in this group approached their set of books believing that grandparents were old and had little to contribute beyond being "nice" people. As they read and discussed their books, they were faced with the anomaly of rethinking the value of grandparents' perspectives and knowledge. They spent several days looking through their books and trying to find some way to understand the role of grandparents. Because the class was also involved in a study of the life cycle of plants and trees, they made a connection between this cycle and what they called the "cycle of life" they were finding in the books on grandparents. After several days of excitedly exploring this connection, Carl made this entry in his literature log:

Our idea was that grandparents' life and other people's life cycle can go with the cycle of seasons. It goes like this. When you are a baby you are a seed in spring and it is the relaxed and easy time of your life. When you are a teenager, you are in summer. When you are an adult, you are in fall and when the leaves fall it is like ideas falling to the new seeds in the ground. When you are a grandparent, you are in winter.

On their web, the children noted that grandparents, like winter, reflect a time of life that is "harder, but you still have things to do." Their participation in the literature circle facilitated this complex connection by immersing them into books from a wide variety of perspectives on grandparents and by encouraging dialogue in which they shared and critiqued connections between their personal experiences and their responses to the books. Because the literature circle was set within a broader classroom context in which the class was focusing on the concept of "change" in relation to topics such as nature and families, the potential for the connection across cycles of life and seasons was more available to the group.

One of the reasons why anomalies seem more likely to occur in literature circles is that these circles encourage learners to shift their perspective in a number of different ways. They shift stance from reader to critic as they read, share their initial responses, and then move further from their initial engagement to critique their connections and the text. Learners also shift perspective as they think about and express their responses through different language systems and sign systems. The use of literature logs, webs, sketches, and dialogue all involve

using a variety of sign systems so different potential meanings are available. Literature circles are also particularly powerful in encouraging children to listen to and try out another person's point of view and connections as they work to collaboratively build meaning. Shifts in perspective often produce anomalies for learners as they consider meaning from another point of view (Harste, Woodward, & Burke, 1984).

The first discussions of a shared book or a text set are usually highly exploratory and tentative, characterized by the sharing of half-formed thoughts, continual changes in topics, and social exchanges. During their initial discussions, the group using the grandparent text set told stories about their grandparents and brought up issues related to the ages and names of grandparents, what they liked to eat, places where they live, family reunions, visits from grandparents, things they do, the loss of memory, death, and life after death. The group skipped around from topic to topic without focusing on any one issue.

Although this initial talk is often not valued by teachers or researchers, this "mucking around" seems to provide a generative pool of possible connections from which participants can later pull as they "focus in" on particular connections to explore in greater depth (Short, 1987). The mucking around allows them to explore and share their personal connections and provides the opportunity for discovering anomalies and unexpected connections through sharing with others. Even though readers often do not appear to listen closely to each other during mucking around, they seem to be developing a wider range of possibilities in considering their meaning-making from the literature and their lives. This process allows them to find anomalies and connections worth focusing on and discussing in depth rather than talking about what they think the teacher or researcher expects. Sometimes a literature circle will naturally move from mucking around to focusing in and dialoguing on particular issues and sometimes that move is facilitated by brainstorming a web of possible issues to discuss further.

Whenever I have been involved with students in situations where they feel constrained in some way to produce "results" for either teachers or researchers, there has been little mucking around. Students almost immediately move to a form of focused discussion characterized by "safe" connections that often only superficially address issues of meaning. Although think-alouds and other research tasks produce data which is "cleaner" and easier to analyze, I believe that researchers need to become involved with the "messiness" and complexity of data created within authentic learning experiences in classrooms.

Most researchers and teachers value and study the more focused aspects of discussion when readers move to critical dialogue about particular issues. Topical cohesion maps and other research strategies for analyzing connections across talk do not capture what occurs during mucking around. Peirce's (1966) work indicates that during mucking around anomalies are raised and a wide variety of possible connections are considered. As learners create hypotheses through abduction, they then move into more focused dialogue to explore and test these

abductions. Peirce, however, points out that abduction often involves making a connection that is a "leap" of intuition rather than a direct connection. For this reason, it is often difficult, if not impossible, to show a direct link between mucking-around discussions and focused in-depth dialogue on a particular issue. Researchers need to find other strategies for data analysis in order to examine the data from these groups and understand the less obvious aspects of intertextuality.

ENCOURAGING INTERTEXTUAL CONNECTIONS AND PROCESSES THROUGH CURRICULAR STRATEGIES

Research on intertextuality has primarily focused on types of connections rather than on the process and strategies for making connections and on connections at one particular point in time rather than on how those connections form and change over time. By examining intertextuality within classroom environments where students engage in learning experiences that highlight intertextuality as part of their ongoing curriculum, researchers will gain better insights into the types of connections students make, the strategies they use to make connections, and the ways in which these connections change over time.

One particular curricular strategy that highlights the processes of searching for connections and using one book to facilitate understandings of other books and life experiences is text sets (Harste, Short, & Burke, 1988). A text set consists of 5 to 15 conceptually related books which are used in literature circles. Within the group, each student usually reads and shares several books with the rest of the group who then explore comparisons and connections across their books and lives.

In a study of two classrooms, the strategies and connections of third-graders and sixth-graders who were discussing text sets in 12 literature circles were examined (Short, 1992). Each group developed strategies for reading, sharing, and comparing the books in their sets, as well as strategies for focusing the discussions and exploring particular connections in depth. Each group began by reading several books in their set and then sharing these among themselves. However, all the groups developed different strategies for searching for connections across their books and these decisions affected their discussions and the types of connections they were able to explore.

For example, in one group where the students read different folktales with the motif of a "magic pot," each student read and became an expert on only one or two books. Every day the group discussed a particular connection that went across their books with each person relating that connection to the book on which they were the authority. Group members had to collaboratively build connections by listening to each other because each had limited knowledge of the other books in the set.

In another group where students read different cultural variants of the Cinderella story, group members continued reading from the set throughout the

discussions. Instead of retelling individual stories, each person shared connections across books. Their discussions consisted of sharing and comparing their connections across the books, and then collaboratively using each others' insights to develop new and more complex connections than was possible in the discussions of the magic-pot group.

Initially these group discussions ranged across diverse topics and seemed unfocused with many ideas being mentioned but not explored in depth. The groups shared and explored personal responses so they could create a broader range of ideas to be considered by the group and find significant issues for in-depth discussion. Gradually groups developed strategies to focus their discussions so that they could move from sharing to dialogue about issues and connections across their set.

Several groups brainstormed a list or web of possible comparisons, connections, or questions for discussion. Each group then chose one issue from this list to discuss each day. Not everything on the list was addressed and new topics arose through the course of discussion, however, this brainstorming gave the students a wider sense of possibilities. Other groups used category systems or lists of characteristics to focus their discussions. Some groups began with broad categories and then listed specific characteristics from their different books. Several times these characteristics were developed by physically sorting books according to the major categories under discussion and then examining the books in each pile. Other groups listed characteristics which they then sorted into categories. Still other groups explored a theme or question that cut across their books. Some of these groups began with a broad insight or theme which focused their entire discussion and other groups listed many smaller details which led them to a broad insight.

In examining the discussions, we found that often there was a particular book that did not seem to fit the set and so led the group to take another perspective on their topic. In each case, these texts served as an anomaly causing the group to rethink their connections and make more complex connections across the books and their lives which, in turn, gave them a new perspective on the set and issues being discussed.

Just as the groups varied in their search for connections, there were interesting differences in what they discussed and the types of connections they made across the texts and their lives. Intertextual connections that were frequently discussed included literary elements, illustrations, the response of the reader, the life of the author, and children's personal experiences. The students made intertextual links across a wide array of textual resources including connections within a specific text, between texts in their sets, and to texts outside the text set. When they discussed a particular issue, such as connections across themes or characters, they often considered these connections in terms of author decisions and the impact on themselves as readers and writers. For example, a group that was discussing books about pigs looked at the character of pigs closely, but did so

from the perspective of why authors and illustrators choose pigs as main characters and why readers like pigs in books.

As the groups finished their discussions, they planned a presentation to share their sets and connections with the rest of the class. They were asked to first think about what they wanted the class to understand about their books and the connections they had discussed and then brainstormed ways they might present those understandings effectively to others. Because the students valued the ideas and connections they had developed, they worked hard to find ways to communicate some of these to class members. As they worked on these presentations, new connections were introduced and previous connections were considered from a different perspective. Students faced the task of conveying connections developed in language through another communication system such as art or drama and so they had to reconsider those connections. Most groups used the presentations as a place to think through and present the connections that had been most significant to the dialogue in their group.

The research on text sets demonstrated that teachers and researchers can provide experiences in the classroom which highlight important learning strategies in ways that are not didactic or highly controlled. In these discussions, students were involved with ideas and connections that were meaningful and important to them, rather than in a lesson to practice making connections. The group discussions highlighted the contributions of each member, the move from sharing to dialogue as members critically listened to each other and built from what others had to say, and the consideration of alternative perspectives and connections through building shared meaning. Within these discussions, learners made a wide range of links across the books in their sets and with other texts in their life experiences.

Because the search for connections was essential to their discussions of these sets, it was natural that class members spend time sharing their strategies for making intertextual links. The class discussions, teacher suggestions, and small group interactions supported students in developing a wider range of strategies. Researchers, teachers, and students were able to explore and understand at a deeper level the strategies for making connections, the types of connections, and the ways these connections changed over time.

Exploring Perspectives Across Sign Systems and Disciplines

Another characteristic of literature circles as a powerful research context for intertextuality is the availability of different perspectives and ways of knowing through multiple sign systems and disciplines. In the world outside of school and academia, learners ask questions, use knowledge that cuts across different disciplines, and make and share meaning with others across multiple sign systems. In school, each discipline is isolated and approached as a set of facts and skills. The contribution of disciplines is not their bodies of knowledge but the different perspectives and ways of thinking about the world that they each offer (Burke,

1988). An historian asks different questions and uses different tools and strategies for researching those questions than does an economist or a psychologist.

If children are encouraged to ask questions across disciplines as they consider particular events and issues, the change in perspective offers greater potential for raising anomalies and the consideration of new intertextual connections. By opening up inquiry in literature circles so that learners consider a topic through texts from a variety of perspectives, learners are able to make intertextual connections that cut across disciplines. For example, in literature circles focused on ecology and the desert, a group of second-graders used text sets with fiction, nonfiction, music, and art pieces that facilitated connections across literary, scientific, and cultural perspectives (Short & Armstrong, in press).

Sign systems are multiple literacies which we use to make and share meaning about our world. Language is the sign system that is emphasized in school contexts, however, other basic ways of learning and communicating include mathematical symbol systems, visual forms, music, and movement or performance. Each of these systems allow us to know and communicate different kinds of understandings about the world. In most real-world events, more than one system is used at a time to offer the potential for broader and more complex connections and understandings. The process of transmediation involves taking meaning understood in one sign system and conveying that meaning through a different system, such as when children use art to express their understandings of a written text. Meaning cannot simply be transferred from one system to the next, but is transformed because of the different meaning potentials of each system. Transmediation frequently raises anomalies for learners and offers new potentials for meaning-making and intertextual connections (Siegel, 1984).

In one classroom study, third-grade children explored a broad focus on communication and formed inquiry groups around the sign systems of language, mathematics, dance, music, and art (Kauffman & Short, 1990). Initially the students were uncomfortable with tools from sign systems other than language because of their lack of experience with these systems, therefore we gave each group a literature text set. As they read and discussed the ways in which characters in their books used a particular system as part of their lives, they began to use tools from that system as part of their group inquiry. From their reading and discussing, they were able to put together a list of items they needed to explore their system; for example, graph paper, math manipulatives, rolls of newsprint, chalk, paint, instruments, a keyboard, records, and scarves. The reading/writing center that previously stored various kinds of writing papers and utensils became a literacy center with tools available from many sign systems.

The group discussions varied but most of the time focused on understanding the system as a process, a way to communicate. The groups discussed how their system was different from the others and their feelings about using that system. They spent time exploring the system through reading about it, actually using the

system, and discussing their reading and explorations. They continuously moved back and forth between these ways of understanding.

One of the groups, the math group, had a difficult time understanding why they were a sign system, a way to communicate. They saw math as content rather than process. Through group discussions, they began to focus on how each of the systems involved different kinds of patterns. As they talked about music involving patterns of notes and sounds and art consisting of patterns of shapes and colors, they realized that math involved patterns of numbers. A book on the history of numbers helped them understand that math can be used to reason through ideas and does not have to involve numbers. They discussed concepts of "numberness" and problem solving as well as how math was part of their daily lives. They also realized that they needed a pencil and paper to jot down numbers and operations that could be manipulated in order to "talk" about mathematics. They could not just use language. They became more and more involved in using math manipulatives as well as a pencil to create and share mathematical concepts with each other.

As the tools of each sign system became part of the classroom, the groups began to integrate the systems. The art group, for example, took a favorite painting and went to the keyboard to compose music to go with the painting. The math group used drama and musical instruments to bring alive the mathematics in a favorite book. Children in the music group looked for music to go with books they were reading during other times of the day. Instead of staying only with the system they were examining, they naturally made ties across the systems.

Interviews with the students at the end of this inquiry focus indicated that their thinking had been changed by this experience. As one child said, "I look and see and care more." They could discuss these changes explicitly. For example, a child in the dance group stated, "I look at the world differently. It's like a big dance. People look like they are dancing to me, not just walking." A child in the music group said, "I hear music in my mind when I read. I look at a cover and find a song in my mind to match it." In later experiences, we noted that children were making greater use of these systems in sharing their ideas with others. Their choices and ability to discuss these choices based on the meaning they wanted others to understand seemed to indicate that they were aware that the different systems had different potentials for conveying their message and worked hard to find a system or combination of systems that would be most effective.

Research on intertextuality has primarily focused on connections across different types of linguistic texts instead of taking an expanded view of literacy and text. For many learners, their connections are not primarily between written texts but with visual texts, especially the mass media of television and movies. As educators explore the implications of a broader perspective on literacy in learning environments where students are encouraged to use a variety of disciplines and sign systems to make and share meaning, research on intertextual connections

will allow educators to develop a more complex understanding of the process of intertextuality.

CONCLUSION

Although intertextuality is currently receiving a great deal of attention among researchers, the issue of where this research is occurring needs to be given greater consideration. The majority of research studies on intertextuality have either used research tasks outside the classroom setting or examined the process within hierarchical classroom environments. The lack of authenticity in these research tasks for learners and the restrictions on the intertextual connections that can be advanced within a hierarchical learning environment have limited our understandings of the process of intertextuality.

Research is needed in classroom learning environments which support collaborative social relationships, highlight anomaly and abductive thinking, encourage the development of strategies for exploring connections, and make available ways of knowing across multiple sign systems and disciplines. Although research examining intertextuality over time within these environments complicates data collection and analysis, this research would allow us to better understand how intertextual processes actually function in the human process of making sense of the world. Through this research we will gain better insights into student learning and effective learning environments and learn more about the nature of intertextuality. Researching intertextuality within collaborative classroom contexts is essential to building a strong educational theory of intertextuality.

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