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There is no more crucial or basic skill in all of education than reading.
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Crossing boundaries: Addressing ageism through children’s books

Patricia A. Crawford
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ABSTRACT

Age-related biases, evident in so many aspects of modern society, are often perpetuated through stereotypical representations of older adults in children’s literature and other print media. Quality children’s literature can serve as a forum for critiquing these stereotypical perspectives and as a springboard for the development of healthy, positive, and accurate perceptions of the aging process.

Well, child, I recall once upon a time
An old woman lived on our street,
Oldest woman I’d ever seen...

So begins Jane Yolen’s (Philomel, 1997) sensitively rendered picture book *Miz Berlin Walks*. These lines could introduce one of many recently published children’s books that feature older characters or that deal with issues related to aging. This attention to aging is nothing new. As Americans, we are a culture that has become consumed with the ideal of youthfulness and perplexed by issues related to aging (Almerico and Fillmer, 1989; Blunk and Williams, 1997; Kupetz, 1994; Laws, 1995; Seefeldt, Warman, Jantz, and Galper, 1990). Issues related to growing older and concerns about age-related biases have made their way into popular literature for both children and adults. These concerns have been addressed by authors as diverse as Dr. Seuss (1986) in *You’re Only Old Once* and Betty Friedan (1993) in *The Fountain of Age*. 
In children’s books, some authors have explored the concept of aging through the utilization of metaphor, as seen in Shel Silverstein’s (1964) *The Giving Tree*. Other authors have provided light, humorous looks at what would otherwise be very serious subject matter, such as Mem Fox’s (1983) treatment of Alzheimer’s Disease in *Wilfrid Gordon McDonald Partridge*. Still others have presented poignant stories of growing older that can be classified as nothing short of tear jerkers. One need only to look at Robert Munsch’s (1986) *Love You Forever*, Eve Bunting’s (1994) *Sunshine Home*, and Aliki’s (1979) *The Two of Them* to see that growing older is often treated as both sad and serious business in the world of children’s literature.

With such a variety of texts and resources, it seems that it should be easy for teachers to find quality literature that addresses age-related issues and that fairly represents characters who are growing older. However, studies have consistently shown that grandparents and other older adults tend to be presented as one dimensional characters in the pages of children’s literature (Ansello, 1978; Crawford, 1996; Janelli, 1988; McElhoe, 1999). Storylines reveal that they are characters whose activities are limited to stereotypical tasks and who appear to have been “born old”. Typically, little information is provided about older characters’ personal histories, their work life, their passions, or their dreams. These characters tend to be represented as sedentary people who have few interests that extend beyond those directly related to grandparenting.

In addition to the ways in which older adults are stereotyped in the printed text of children’s stories, these characters also are stereotyped by way of the visual images presented in picture books. Studies of images of grandparents in children’s picture book illustrations, consistently indicate that these characters are visually typecast (Ansello, 1978; Barnum, 1977; Crawford, 1996; Janelli, 1998). Thus, a disproportionate number of grandmothers are represented as rocking chair-bound women who frequently wear aprons, sport gray buns, and engage only in traditional experiences such as cooking, baking, or sewing. Meanwhile, a likewise disproportionate number of grandfathers are depicted as bald or gray-haired characters who wear suspenders and glasses, and who engage only in stereotypical activities such as taking walks or fishing.

In the pages of children’s literature, grandparents are also frequently stereotyped in terms of age differentiation. Few distinctions are made among the ages of grandparents, with the majority of these characters
being depicted as very elderly. This stand in stark contrast to the reality of the young children who comprise the audience of most picture books. Studies indicate that the majority of people who become first time grandparents experience this landmark event before leaving their fifties (Porcino, 1983). Thus, in the real world of preschool and early elementary students, many have grandparents whose lifestyles are more in keeping with that of middle, rather than later, age groupings. These younger grandparents are typically engaged in a full range of professional and social activities that extend far beyond the immediate family. By not including images of young grandparents, the collective body of children’s literature denies these experiences (McElhoe, 1999).

WHY LOOK AT AGING?

Today we live in an age when people are living longer, healthier, and more productive lives than at any other point in history (Cartensen, 1996). Factors such as improved medical treatment, healthier lifestyles, and a declining infant mortality rate, have all contributed to increased lifespans. As the baby boom generation begins to approach their golden years, America as a whole, is graying. Estimates from the United States Census bureau indicate that the population among those aged 65 and over has more than doubled during the past forty years. Meanwhile, projections indicate that this number will double again within the next forty years (U.S. Census Bureau, 1999). It seems clear that aging is an issue that has serious and far-reaching implications for all of us. Thus, it is important that young learners develop a well-informed and realistic understanding of the aging process and the dynamics that accompany it.

There is another factor that makes age-related study essential; one much more personal and relevant than that related to demographics. The aging process is an important part of all of our lives, one that promises to have an impact on each of us (Kupetz, 1994). Not only do young children interact with grandparents, older neighbors, and mature family friends on a regular basis, but one day, hopefully, they will also see their parents grow old, and eventually grow old themselves. Aging is a normal and natural part of human growth and development, and should be treated as such.

Finally, there is also the issue of teaching for justice and equity. In 1976, Comfort coined the term ageism, defining it as follows:
...ageism is the notion that people cease to be people, cease to be the same people, or become people of a distinct and inferior kind, by virtue of having lived a specific number of years. Ageism is a prejudice based on fear, folklore, and hangups of a few unlovable people who propagate these images. (p. 35)

By not addressing age-related biases, we open the door to the systematic stereotyping of people simply because they are old; creating an environment and world view in which it seems reasonable to consistently portray, and ultimately perceive, all older adults as being the comic or tragic caricatures so readily portrayed in the media: the feeble old woman, the weak old man, individuals who are lonely, dependent, and hopelessly behind the times; in short, disposable people who are only a shadow of their former selves. Ageism poses the risk of perpetuating a type of inequity and social injustice that is not only aimed at a significant part of our population, but also one which will one day impact each of us in a very personal way.

LOOKING AT LITERATURE

Social and developmental factors point to the importance of addressing age-related biases within educational settings. Teachers have the opportunity to confront these biases among students and help them to develop healthy, accurate, and respectful concepts of what it means to grow older in our society. In order to do this, care must be used in developing curricula, in choosing appropriate instructional materials, and in the thoughtful selection of children's literature. Literature acts as a springboard from which readers construct meaning and begin to developing both affective and cognitive concepts. Quality children's books provide an effective and accessible avenue for inviting children to explore issues related to older adults and the aging process. Young readers need to have the opportunity to press beyond the stereotypes and to encounter older literary characters who are well-rounded individuals, who are active in a variety of life activities, and who represent the wide range of diversities that are common among older adults today. The books listed in Appendix A are examples of such literature; ones in which mature characters are presented in all their complexity, and challenge commonly held notions of what it means to be old.
In *Miz Berlin Walks*, Yolen’s poetic words, along with Floyd Cooper’s rich oil-wash illustrations leave little doubt in the reader’s mind that Miz Berlin is old — very old. No punches are pulled here. Miz Berlin walks slowly and sometimes she even talks to herself. The text acknowledges that the protagonist’s personality may lean towards the eccentric and that her movements may be a bit slower than those of her younger self. However, Miz Berlin is never reduced to the kind, but decrepit stereotype so often found in the pages of children’s literature.

As seen through the eyes of young Mary Louise, Miz Berlin is a fascinating woman; one with a past worth holding on to and who has a story worthy of being told. Initially Mary Louise simply watches Miz Berlin from afar, wondering about this unusual old woman who regularly walks the block. Then one evening, she decides to join Miz Berlin for her nightly stroll. As she falls into an easy stride beside her, Miz Berlin says, “Well, child I recall the time...”, and begins to tell some of the most fascinating stories that Mary Louise has ever heard.

Mary Louise and Miz Berlin become nightly partners and forge a relationship that crosses boundaries. Their relationship is one between neighbors, that hovers between eras, and that is both interracial and intergenerational. Much to Yolen and Cooper’s credit, there is not a hint of superficial moralizing or inappropriate sentimentality here. Rather, *Miz Berlin Walks* is a celebration of the connection between past and present, as well as of the authentic, genuine relationship that evolves between young and old. It is a story of hope and respect.

As the story draws to a close, it is clear that Miz Berlin is a woman of substance. She has impacted Mary Louise to such a degree, that even after her death, she continues to walk on and live powerfully in the life of the little girl who once traveled the block hand-in-hand with her. As Mary Louise becomes a storyteller in her own right, she carries Miz Berlin’s legacy proudly into the next generation. Inspired by Yolen’s own grandmother, Fanny Berlin, *Miz Berlin Walks* provides a sensitive, yet forthright look at both the potentials and challenges of growing older.

Timothy Gaffney’s (1996) *Grandpa Takes Me to the Moon* is another picture book that celebrates intergenerational relationships, while at the same time honoring the accomplishments of an older character. In this book, a young boy loves to hear his grandfather tell stories about his days as an astronaut. Grandpa’s stories are so vivid that they transport the young listener through a vivid, imaginary journey to the moon.
Together, grandfather and grandchild suit up for the lunar journey, travel for days, and then embark on their important mission. They leave tracks on the moon's surface, travel in the lunar rover, and of course, take some time to gather moon rocks. Finally, they return to the safety and comfort of the child's bedroom. Barry Root's detailed gouache paintings provide a wonderful complement to the written text. Together, words and pictures communicate the message that Grandpa is not only loving and caring, he is also capable and competent. He has made his mark on this world and beyond.

Grandpa Takes Me to the Moon crosses genres by bringing together a gentle bedtime story with a significant amount of information about the history of the space program. Written as a tribute to the astronauts who flew in the original Apollo missions, this delightful and informative text shows that Grandpa's past actions have not only impacted the present, but that they also have the potential to transform the future.

In The Wednesday Surprise, Eve Bunting (1989), challenges the notion that growth and learning are only for the young. In this inspiring and provocative text, Grandma and Anna are working on a surprise for Dad's birthday celebration. Each Wednesday evening Grandma brings a very large and heavy bag of books with her when she comes over to visit with Anna. Together, they explore books and work on their secret project. In this well crafted text, Bunting hints at the idea that Grandma is helping Anna with her reading, but keeps readers guessing about the exact nature of their surprise. The story does not climax until the evening of Dad's birthday party. At this time, Grandma begins to take books out of her big bag and reads them aloud, one-by-one. There is not a dry eye in the house. Grandma has learned to read for the very first time, and Anna has been her teacher.

The Wednesday Surprise is a powerful book in that it shatters the conventional perception of older adulthood as a time of stagnancy. It also challenges the notion that helping relationships are one way streets, with the young as recipients. Rather, Anna and her grandmother enjoy a wonderful, healthy intergenerational relationship, characterized by mutual respect and in which both members contribute in significant ways. The joy and poignancy of this relationship are captured well in Bunting's moving text and Donald Carrick's gentle illustrations.

Old People, Frogs, and Albert is another book in which the author explores the mutual benefits experienced by participants in a relationship
between young and old. This short novel, written by Nancy Hope Wilson (1997), features the story of Albert, a fourth grade student who has always struggled with reading. Albert is just about to give up hope when he meets Mr. Spear, a senior citizen and school volunteer, who helps Albert on the path to success. After working with Mr. Spear, Albert’s reading improves, his confidence soars, and he develops a tremendous fondness for the tutor who believed in him. However, when Mr. Spear has a stroke, Albert is taken aback. Although he is initially afraid to visit Mr. Spear, Albert realizes that it is now his turn to reach out to his friend. The experience causes him to take a hard look at his own perceptions about the elderly and to confront his fears. In the end, he comes to a new appreciation for what it means to be both a giver and a receiver in a helping relationship with an older friend.

The warmth and power that result from relationships between younger and older family members is celebrated in Dear Annie, Judith Casely’s (1991) charming picture book. Grandpa marked Annie’s birth by sending a letter to her on the very day that she was born. Since that time, he has written many more, and Annie has kept every single one of them. Grandpa’s caring letters commemorate important family events, provide a record of his own childhood, and let Annie know that he is interested and concerned about her life. Young children will cheer as Annie becomes a writer and top notch correspondent in her own right and will enjoy reading this realistic chronicle of the correspondence that occurs between grandparent and grandchild. At the conclusion of the book, Annie brings her grandfather’s letters to school to share with the other students. They, of course, decide that they too would like to have a pen-pal relationship like the one that Annie has with her grandfather. Dear Annie not only invites children to explore the relationship between young and old through the world of reading, but also in the realm of writing. Casely’s text could serve as a wonderful model for primary students who are ready to enter a correspondence relationship with older family members or other people in the community.

Older students may also enjoy reading a record of correspondence between grandparent and grandchild. Dear Hope...Love, Grandma edited by Mara H. Wasburn, (1993) is a collection of actual letters written between Hilda Abramson Hurwitz and her granddaughter Hope R. Wasburn. This book was the result of a class project in which students were asked to correspond regularly with a senior citizen in order to gain
a firsthand perspective of life during a particular time period. In these authentic letters, Hope and her grandmother explore many issues. They write about family life, religious traditions, friendships, struggles, fears, and dreams. Together, they discover that the circumstances that surround each of their childhoods differ markedly. However, they also discover that important life issues transcend both time and years.

Dear Hope...Love, Grandma succeeds on a number of counts. First, as these two correspondents investigate their lives and celebrate the relationship that they share, it becomes apparent that the human factor supercedes any false or minor divisions that have been constructed between generations. Second, it honors the differences and unique experiences that family members have experienced while living during different eras. Third, it brings to life the fact that senior citizens bring a breadth of strengths and experiences to the table; experiences from which younger people can learn and draw upon. Finally, like Dear Annie, it provides a wonderful example of the way in which young and old can benefit from connecting and building relationships with one another.

Age-related biases are confronted head on in Allen Say’s (1995) Stranger in the Mirror. Sam goes to bed as a vibrant, healthy young boy, and awakes to discover that he has changed. When he peers into the mirror he does not find his own face, but rather that of his grandfather. Neither Sam nor his family can understand how he could possibly have aged so many years in one night. While the doctor searches for a cure, Sam finds that his newfound wrinkles are only the beginning of his problems. Although he feels like the same person that he was prior to his transformation, he now finds that other people treat him differently than they did before. Although Sam still has the same interests and tries to maintain his regular activities, he finds that many people suddenly doubt his abilities and are not as anxious to be around him as they were previously.

Allen Say’s beautifully illustrated text raises profound questions about the aging process and about what it means to grow older within our societal context. Presented in the deceptively simple format of a picture book, Stranger in the Mirror probes the fundamental issues surrounding ageism. A reading of this text begs the questions: Is aging a malady or simply a stage in life? Who defines what it means to grow older? How are images of aging shaped by those around us? And, what should our responses be as we and others around us grow older? This book, which
provides serious treatment of age-related biases, will cross stereotypic boundaries and be appreciated by both older and younger readers.

Finally, Nina Bawden’s (1996) compelling novel *Granny the Pag* will invite young adult readers to rethink any preconception that they have ever held about what it means to be an older adult. In this book, Catriona Brooke is a budding adolescent who for all intent and purposes has been abandoned by her actor-parents and sent to live with her unconventional grandmother. Cat’s granny is one like no other. A retired scientist, she now rides motorcycles, wears blue jeans and leather jackets, and smokes cigarettes like they are going out of style. Granny is a pag who does not dress like, look like, or act like a proper senior citizen.

When Cat’s parents suddenly reappear in her life and demand that she return home, she cannot bear the thought of leaving her eccentric grandmother. She realizes that the pag has been more than a grandmother; she has been a friend, a nurturer, a bulwark, and an advocate. She has been family. With this realization, Cat determines that she will not leave her grandmother for any reason. Her decision requires her to take on her parents, the legal system, and even a would-be kidnapping attempt. But, she will not be swayed. Meanwhile, Cat’s grandmother is torn between her relationship with her granddaughter, her sense of duty, and her commitment to her own daughter. However, in the end, her love for Cat supercedes all other loyalties and she enters the battle to gain custody of her granddaughter. *Granny the Pag* confronts and shatters ageist stereotypes and offers readers the image of a complex, well developed older character that breaks all the molds.

**BEYOND THE BOOKS**

The books reviewed here provide starting points for personal and curricular explorations of the aging process, age-related biases, and intergenerational relationships. They are texts that invite readers to explore the permeable boundaries between young and old, and to take brave steps in crossing generational gaps. Of course, there are many other books that could also be used to serve this purpose.

When choosing these texts, teachers should seek to include books that include fair and varied representations of older characters, that raise provocative questions about ageist stereotypes, and that present models of successful and productive relationships between young and old. As
McElhoe (1999) notes, "We need to interrupt the steady diet of stereo-
typed grandparents that pervades so many picture books and increase the
potential for grandparent characters to be realistically wholesome, inter-
esting, productive and loving resources for our youngest children" (p.
256). And, of course, students will benefit from having the opportunity
to construct thoughtful responses to these provocative texts. Together,
with our students, we have the opportunity to grapple with the complex
issues related to aging and to help them formulate positive and realistic
images of what it means to be an older member of our society.

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APPENDIX A
Selected Bibliography of Children’s Books Related to Aging


**APPENDIX B**

Suggestions for Going Beyond the Books

- Invite students to begin a correspondence relationship with an older family member. This correspondence could take place via email or through a traditional penpal letter exchange. Books such as Casely’s (1991) *Dear Annie* and Wasburne’s (1993) *Dear hope...love, Grandma* provide a good model for this experience.

- Invite students to brainstorm a list of characteristics that they associate with the term “old”. Repeat this activity with the words “elderly” and “senior citizen”. Encourage students to compare the ways in which these lists are similar as well as different. This is a good opportunity to discuss the ways in which words have the power to shape our images and perceptions.

- Encourage students to be cultural critics by analyzing media representations of the elderly. Students may wish to keep a log of their television viewing in which they keep track of appearances of older characters and analyze the ways in which they are presented. Students can then examine whether or not older people are represented fairly and accurately over the airwaves. This might be a good time to challenge students to consider why old age is often presented in a negative or disparaging light and from a biased perspective.

- Encourage students to read biographies and explore the lives of older adults who have made noted contributions to our society. Senior citizens have served as President (e.g. Ronald Reagan), reigned as Pope (e.g. John Paul II), created enduring works of art (e.g. Grandma Moses), written best-selling children’s literature (e.g. Dr. Seuss), illustrated books (e.g. Barbara Cooney), been award-winning actors (e.g. Jessica Tandy),
and been active in virtually every facet of our culture. The possibilities for exploring the lives of active, well known older adults are endless.

- Invite students to examine the contributions of older adults in their community. Students can scan newspapers, interview local citizens, and look for evidence of public service among older members of their community.

- Encourage students to consider the question, "What would it be like to be old?" After formulating a response, students can compare and contrast their ideas with those espoused by Norma Farber (Dutton, 1979) in her book, *How Does It Feel to be Old?*

- Encourage students to read a wide range of picture books that include older characters. Students can then analyze the ways in which these characters are represented in both the print and visual texts. Teachers can then guide students in determining accurate versus biased representations of older adults.

- Through writing, students can honor an older person who has played an important role in their own lives. This type of response activity provides a good opportunity for students to explore a variety of genres including biography, memoir, informational writing, personal narratives, and poetry.

- Students might broaden and contextualize their personal responses to the aging process by exploring literature in which aging is prohibited. For example, students could examine the attitudes and consequences that surround aging in Lois Lowry's *The Giver* (Houghton Mifflin, 1993), a text in which aging community members are "released" before they have the opportunity to grow old, and in Natalie Babbitt's *Tuck Everlasting* (Farrar, Strauss & Giroux, 1975), a book in which the protagonists drink from a fountain of youth that immediately stunts their personal aging processes.
Children’s literature and environmental issues: Heart over mind?

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ABSTRACT

This article describes a project conducted by a classroom teacher to examine the effects of children’s literature on students’ existing attitudes and beliefs toward environmental issues. Using There’s an Owl in the Shower by Jean Craighead George as an organizer, two sixth grade classes reexamined their existing beliefs about endangered species. The purpose of using the book as part of the instructional strategy was not to influence student beliefs and attitudes one way or another, but to serve as a vehicle for getting students to critically view the issue of animal’s vs. people’s rights. The results from this classroom activity seem to suggest that students rely more on their feelings than their knowledge of science concepts in assessing the issue. This paper will outline instructional procedures used in the unit, describe assessment procedures and provide additional insight into using children’s literature in science classes.

Explosive growth in the power and availability of multimedia offers enticing new opportunities for learning (McKenna, Reinking, Labbo, and Kieffer, 1999; Topping and McKenna, 1999). Multimedia technology combines speech, text, graphics, sound, video, animation, and special effects to convey meaning. Computer disk read only memory (CD-ROM) provides instant access to a diversity of multimedia materials that
may be used to facilitate language and literacy learning (Horney and Anderson-Inman, 1999; MacArthur, 1999). For example, with the click of a computer mouse, children can travel the Oregon trail, publish books, meet undersea creatures, and take virtual tours through the animal kingdom.

The use of children's literature in the teaching and learning of science is a topic of interest to both science education researchers and classroom teachers (Mayer, 1995; Cooter & Flynt, 1996; Neal & Moore, 1991; Royce and Wiley, 1996; Schallert & Roser, 1996; Vacca and Vacca, 1996; Butzow, and Butzow, 1988). While some research studies have shown that the integration of children's literature and science enhances literacy development, increases student understanding of difficult scientific concepts and increases interest and participation in science (Yore & Shymansky, 1991), other studies present a less positive view of incorporating children's literature into science classes (Mayer, 1995; Rosenblatt, 1991). From the points-of-view of many elementary teachers, incorporating children's literature into a science program is seen as a positive innovation, and understandably so. Many elementary teachers may feel ill-prepared to teach science (Pratt, 1982) yet feel very competent in using children's literature in their elementary classrooms. Finding time for science also is a problem faced by many elementary teachers. There is often little time for science in an overcrowded curriculum, but it can be "worked in" when integrated with children's literature.

There are numerous ways in which fiction and nonfiction books can be used in an elementary science classroom. Probably the most common way children's literature is used in elementary science is to provide factual information about a given topic. Children's books can provide a depth and richness not found in textbooks because children's literature is usually limited to one topic rather than the broad but often superficial coverage of topics in most science textbooks. Because science content is presented within the world that students know, they are able to make connections between science concepts and their personal worlds. Abstract concepts become more understandable when they are presented in a context that children can relate to (Butzow & Butzow, 1989; Dowd, 1991). Children's books can also create interest in a topic because they are enjoyable, fun to read and relevant to children (Casteel and Isom, 1994; Crook and Lehman, 1990; Hammond, 1992; Stiffler, 1992). Additionally, using children's literature in a science classroom can
encourage participation in science careers, develop critical thinking skills (Dowd, 1991), support the teaching of process skills, support inquiry (Hammond, 1992), encourage problem solving, and integrate cognitive and affective ways of knowing (Moser, 1994). From a practical standpoint, there are many reasons why the use of children’s literature in science is beneficial, but there is not a strong research base supporting use of this strategy (Rice & Rainsford, 1996).

CHILDREN’S LITERATURE AND ENVIRONMENTAL EDUCATION

The goal of this study was to describe the effects of children's literature on students' existing attitudes and beliefs toward environmental issues. The focus was on one particular purpose for using children's literature in science -- to integrate affective and cognitive ways of knowing. Using There's an Owl in the Shower by Jean Craighead George as an organizer, two sixth grade classes studied environmental principles related to endangered species and reexamined their existing beliefs. Within a Science, Technology, and Society (STS) framework, students were encouraged to make judgments about endangered species based on environmental principles and their personal values. Dowd (1991) states that fictitious stories about nature which incorporate scientific facts can increase children’s understanding of ecological principles and environmental problems and Moser (1994) suggests the use such books can contribute attention to values as well as knowledge.

Research by Rosenblatt (1991) identifies two methods by which students read: reading for content (efferent reading) and focusing on feelings while reading (aesthetic reading). The aesthetic method of reading is one that is given less attention in science classes and there is little research on the effect of this kind of reading on students’ attitudes and perceptions. The aesthetic dimension is believed to help children make connections between facts more easily when they are engaged in the story (Crook, 1990). Children's literature, unlike most science textbooks, deals with controversial science related issues in which the reader can gain insight beyond simply knowing "the facts" (Morrow, Pressley, Smith & Smith, 1997).

There’s an Owl in the Shower is an example of a book that lends itself to aesthetic reading because the story evokes an emotional response from the reader. The purpose of using the book as part of the
Instructional strategy was not to influence student beliefs and attitudes one way or another, but to serve as a vehicle for getting students to view more than one side of an issue and to develop critical thinking skills. This paper will outline instructional procedures used in the unit, describe data collection procedures and provide additional insight into using children's literature in science classes.

DESCRIPTION OF THE PROJECT

Participants

Approximately 35 sixth grade students took part in this project and comprised the entire sixth grade of a rural Idaho middle school. The school is located in a rather isolated setting and draws students from three communities, all with populations of less than 500 people. The school community is composed of modest, working class families who have to work very hard to support their large families. Most of the students live on farms and many are avid hunters. In fact, the first day of deer season in this community is a school holiday. Before sixth grade, students have limited experiences with science and in sixth grade students are departmentalized for their core subjects, including science. The teacher who facilitated this project had 10 years of science teaching experience, a Ph.D. in science education and extensive experience in using a Science Technology and Society philosophy in teaching science.

Instructional strategies

There's an Owl in the Shower by Jean Craighead George was the fictional story that provided the organizer for the sixth grade science unit on endangered species. The story is set in a small logging community in northern California where a debate is raging between environmentalists who want to protect the spotted owl and loggers who want to protect their jobs. Protection of the spotted owl's habitat has cost the main character's father his job as a logger, and the young boy sets out to kill any spotted owl he sees. When the boy discovers an owlet lying on the ground, he decides to rescue it, assuming because it doesn't have any spots, it must be a barred owl. As the owlet matures, it becomes clear that it is actually a spotted owl. In taking care of the owlet, the boy and his father come to realize how important the creature is to a healthy ecosystem.
During the course of the reading of the book, the teacher conducted numerous science and language activities to emphasize the science content that was a part of the story. The students dissected owl pellets to get an understanding of the diet of owls and their place in the food web. Students also participated in activities from both Project Wild and Project Learning Tree curriculums as well as teacher-developed activities. The purpose of these activities was to assist students in developing an understanding of the importance of food chains, food webs, overpopulation, natural resources and ecosystems. Students' understanding of key ideas was assessed through journal writing, the creation of a children's book based on an environmental issue, and the creation of informational pamphlets on a chosen local endangered species. Based on these forms of assessment, the teacher determined that students had a good understanding of each of these environmental concepts.

Data collection and analysis

Prior to and at the completion of the unit, students were asked to respond to a scenario in which they had to choose between the rights of people and the rights of animals (See Appendix A). The scenario was based on a local theme, dairy farming, which was a topic that all the students were quite familiar with since many of them lived on dairy farms. The instructional unit took two months to complete and the post-scenario assessment was administered two months after the completion of the unit, allowing for four months between pre and post tests. Additionally, mid-way into the unit when the reading of the novel was completed, students were asked to respond in writing to a question related to the book which asked them to choose which side of the issue they agreed with, the environmentalists trying to save the spotted owl's habitat or the loggers (See Appendix B). Students were also asked to give reasons to support their answers. A statistical analysis of students’ responses indicated no significant differences between pre, mid or post assessments. Moreover, there were no gender differences in any of the categories. In the table below, group responses are summarized.
Table 1

Students Attitudes Related to People's vs. Animal's Rights

<table>
<thead>
<tr>
<th></th>
<th>PRETEST</th>
<th>AFTER READING STORY</th>
<th>POST-TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favored people's rights over that of animals</td>
<td>41%</td>
<td>19%</td>
<td>30%</td>
</tr>
<tr>
<td>Favored animals rights over the rights of people</td>
<td>44%</td>
<td>69%</td>
<td>57%</td>
</tr>
<tr>
<td>Undecided</td>
<td>15%</td>
<td>12%</td>
<td>13%</td>
</tr>
</tbody>
</table>

DISCUSSION

Prior to beginning the unit, students' responses to the survey scenario were evenly divided regarding peoples’ vs. animals' rights. The "undecided" group could see both points-of-view and chose not to take a stand either way. After reading the story, the majority of students felt empathy for the plight of the spotted owl and identified with the environmentalist cause. Just as the main characters in the story changed their opinion about the plight of endangered species after actually interacting with a spotted owl on a personal basis, so did the students after reading the story. Yet, four months later when given the post-test scenario which did not relate specifically to the owl but rather to something they themselves could relate to in real life, the number of students favoring animals' vs. peoples' rights began to decrease. This could indicate that the change in attitude due to reading the book was short lived and did not transfer to other more personal relevant situations.

The finding that raised the most concern, however, dealt with the reasons students gave to support their opinions. As previously stated, in reviewing the research on using children's literature in science, some proponents (Dowd, 1991; Moser, 1994) state that fictitious stories about nature can increase children's understanding of ecological principles and
can contribute to students' knowledge. There was no evidence to support this claim in this study. Even though other measures demonstrated that students had a good understanding of the ecological principles taught as part of the unit, none of the students used these to support their opinions on either the post scenario or the mid-unit assessment.

Rather than relying on the factual principles that they learned during the unit, students responses were based on an emotional response toward either people or animals. It does not seem unreasonable that students of this age should begin to use facts to support their beliefs. A developmental framework for environmental education programs developed by Kelly and White (1975) suggests that at the upper elementary/middle level, students begin to see the distinction between fact and opinion and their relative worth as a basis for decision-making. Even though they were encouraged to support their opinions with facts, students relied solely on their emotions and feelings toward the issue. While attitudes of caring and concern are certainly beneficial for students to develop, some believe that the discussion of ecological issues outside the realm of principles and their relationship to the total environment is to "encourage mindless sentimentalism" (Labinowich, 1971).

Students of all ages need to develop attitudes of care and responsibility for living things and the environment, but as students reach the upper elementary and middle school level, these attitudes should be not be based only on statements that they "simply love all animals" or that "people should be able to do what they want with their property." These types of statements were representative of every comment offered by students in this study as support for their opinions. The scientific principles that the students were supposed to be acquiring through this unit of study, became unimportant in their decision-making process. A recommendation for teachers resulting from this study is one of caution when using children's literature in teaching about the environment. Environmental topics are common ones in the elementary school, but there is a danger that rather than developing critical thinking skills in students, we turn them into advocates for a particular point-of-view based not on the principles of science but solely on emotions. From this small study, it appears that much more emphasis should be placed on critical decision making as a skill for upper elementary students. Certainly, we want children's books to touch the hearts of students, but from a science perspective we also want to take advantage of the richness
of science content that is embedded in stories like *There's an Owl in the Shower*

**REFERENCES**


Rebecca Monhardt is a faculty member in the Department of Elementary Education, at Utah State University in Logan Utah. Leigh Monhardt is a faculty member in the Department of Education, at Westminster College in New Wilmington Pennsylvania.
Appendix A

Scenario

Tony and Jennifer have been helping on the family farm since they were very little. It is their job to help clean the barns, pick rocks in the fields, move water pipes and help milk cows very early in the morning before school. Both Tony and Jennifer have learned to drive a tractor and know the importance and expense of buying and maintaining farm equipment.

The family has recently been told by government officials that some of their farming practices are harming wildlife in the area. They are being instructed to make changes in their farming practices or they will have to pay very high fines.

Tony and Jennifer find out that to change their current farming practices will cost a lot of money. The family is worried that they may have to drastically change their lifestyle due to loss of money and it could possibly result in the loss of their farm.

1. Do you think it is fair that people should have to change the way they make a living in order to protect wildlife?

2. What is your opinion based on?

Appendix B

There's an Owl in the Shower
by Jean Craighead George

1. Pick one side of this issue that you support: loggers or environmentalists.

2. Tell why you support this side. (Give specific reasons to back up your answer!)
Reading and Writing Habits of Preservice Teachers

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and
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University of South Florida

ABSTRACT

Reading and writing experts agree that, to teach effectively, teachers must first be readers and/or writers themselves. In this study, we examined beliefs and habits related to reading and writing in preservice teachers based upon interview data. The results revealed a variety of reading and writing histories and patterns of involvement in ongoing reading and writing. Both readers and writers, and nonreaders and nonwriters, were able to identify strategies for reading and writing in their future classrooms that matched strategies taught in university methods courses. None of the students were able to articulate suggestions for fostering a love of reading or writing in their own future students. Implications focus on examining preservice teacher education programs to identify what we do and do not model for students.

READING AND WRITING HABITS OF PRESERVICE TEACHERS

Reading and writing experts agree that to teach effectively, teachers must first be readers (Mueller, 1973; Scott, 1996; Searls, 1985) and/or writers themselves (Bridge & Heibert, 1985; Faery, 1993; Hollingsworth,
1988). Some researchers (Bowie, 1996; Claypool, 1980; Decker, 1986; Hollingsworth, 1988) take the assertion further by stating that teachers who are unsure of their writing ability assign fewer writing assignments to their students.

In regards to reading, Daisey and Shroyer (1993) commented about their preservice teachers, "[The students] have never learned to read books. . . They just had to skim until they found the key word and then get it into the worksheet" (p. 627). Frager's (1986) work, and our own observations, suggest an alarming number of preservice teachers did not consider themselves to be good readers, did not enjoy reading, and had not read a book within the last six months. This points to an aliteracy problem among some preservice teachers (Draper, 1997).

There are mixed findings about preservice teachers' reading habits. Cramer and Blachowicz (1980) found 59% of a group of preservice teachers on a five-point Likert scale reporting that they like reading "more" or "much more than most" as opposed to 18% liking reading "less" or "much less than most." McNinch and Steelmon (1990) found in their research that all of a similar sample considered themselves to be frequent (60%) or occasional readers (40%). In another study, Healy (1990) found that more than 25% of the potential teachers at a certain university confessed to a "lifelong discomfort with print"(p.22). Gray and Troy (1986) found that 64% of their education majors were not reading a book at the time of their research. Preservice teachers consistently ranked reading low among choices for leisure activities (Mour, 1997; Worden & Noland, 1984).

The data are similar with regard to writing habits. Bowie (1996) discovered that when teachers are not confident writers themselves, they do not feel adequate to teach writing or to use it as a tool. In most cases, negative attitudes about writing were the result of previous writing experiences (Levin, 1993; Richardson, 1992; Phillips, 1992). In Levin's study, only one of 67 preservice teachers, made a connection between the word "interest" and the word "writing." Yet, in this same study, 25 out of 67 (37%) indicated that they enjoyed writing and often wrote stories and poems. Forty-two (63%) had negative feelings about writing, claimed not to have any time, and wrote only when required. Only half of the non-writers could remember learning to write, and even those who remembered cited examples that were related to penmanship rather than the production of written creations.
Roe and Vukelich (1998) recognized that links may exist between the "contexts under which preservice teachers acquire literacy and the beliefs about literacy learning they come to hold" (p. 281). Similarly, Cohn and Kottkamp (1993) acknowledge the difficulties involved in grappling with deeply held assumptions identified through reflective activities in which preservice teachers critically examine their past histories through the lenses of current knowledge of pedagogical practices. Many researchers (Duchein, et al., 1994; McLaughlin, 1994; Manna & Mischell, 1987) have used autobiographies to explore these histories. Roe and Vukelich (1998) carried this process a step further by examining these histories in comparison with students' responses to methods they would and would not use in class.

Because reading and writing are so intertwined, we were interested in examining both the reading and writing habits of our preservice teachers. Our perspective can be considered a biased one in that we do not believe that teachers who dislike reading and writing can effectively foster the love of reading and writing in the children they teach. Thus, we want our preservice teachers to love to read and to "view writing as a worthwhile and enriching endeavor in order to motivate children to think of themselves as writers" (Levin, 1993, p. 17). In the current study, we asked, (a) what factors have influenced the development of beliefs about reading and current reading habits in preservice elementary teachers, (b) what factors have influenced the development of beliefs about writing and current writing habits in preservice elementary teachers, (c) How do students' histories of reading and writing relate to present attitudes and habits? and (d) How do students relate their own histories, attitudes, and habits to their plans for teaching reading and writing in the classroom?

DESIGN

The study uses qualitative methodology. To gather general data on the reading and writing habits and attitudes of preservice teachers, we selected participants to be interviewed for the present study and developed and administered a survey. We conducted interviews for in-depth inquiry into preservice teachers who differed in terms of positive and negative perspectives on reading and writing. In this paper, we report on the interview data from 24 participants.
The researchers designed a reading survey and administered it to three classes of students enrolled in a course on Literacy in the Intermediate Grades (N=26 special education majors and N=54 elementary education majors). A similarly designed writing survey was later administered to one class of students enrolled in Language Arts Methods (N=27 elementary education majors). The reading survey was designed to identify: (1) How will this sample describe themselves in terms of reading ability, motivation to read for pleasure and motivation to read for information? (2) Are students able to provide a list of books and authors read during college? What types of books are listed? Are students able to provide a plot for one book listed? and (3) Is there a correspondence between Likert scale self-reporting and listed titles? For the writing component of the study, the survey was designed to determine: (1) Do students consider themselves to be writers? (2) How do students feel about writing? and (3) What types of writing do the students perceive themselves to do best, or to enjoy the most?

Together the researchers analyzed the survey data to identify emerging patterns in student responses for both the reading and writing populations. Frequency counts, percentages, and lists were used to summarize the data.

Interviews and participants

Based on the survey data, purposive sampling was used in the selection of interviewees. We invited 24 students to participate in the interviews. Twelve were interviewed regarding reading - six each who showed positive habits/attitudes and negative habits/attitudes toward reading. Twelve students were interviewed regarding writing - six each who held positive habits/attitudes and negative habits/attitudes toward writing. All of the selected students elected to participate in the research.

Semi-structured interviews were conducted to insure that all interviewees were asked the same questions, while allowing for probing questions and authentic discussions related to the questions. Interviews took between 45 minutes and 2 hours. The interview questions focused on students’ histories (of reading or writing), the relationship between current attitudes and habits and students’ histories, the relationship between personal histories, attitudes, and habits and future plans for teaching reading and writing in the classroom.
Interviews were transcribed and read by all members of the research team; we then met and analyzed the data together. Interviews were segmented into units of meaning using the approach described by Hycner (1985). Careful attention was given to the preservation of context within units of meaning, and individual units were double-coded if they contained information relative to multiple categories. After segmenting the interviews, the units of meaning were grouped in categories sharing common themes or characteristics using the guidelines suggested by Bogdan and Biklen (1998). After organizing these data in emerging themes, we categorized data with a label representative of commonalities within the grouped units of meaning.

RESULTS

Reading interviews

The interviews regarding student reading demonstrated that survey responses had been influenced by students' definitions of the terms "reading for pleasure" [RP] and "reading for information" [RI]. Our choice of terms defining purposes for reading in the survey had unfortunately reinforced perceptions that reading for information cannot be reading for pleasure. Thus, students whose greatest enjoyment came from reading for information had sometimes rated themselves as low RP (reading for pleasure) despite sometimes being avid readers of books, magazines, and/or newspapers that provided them with information.

There were differences in students who read only newspapers and magazines, and students who read from these sources and also read books. Newspaper and/or magazine readers reported that they did not like to read for enjoyment. Book readers tended to perceive themselves as individuals who hold more positive attitudes toward reading, who read more types of texts, and who have a greater variety and a higher intensity of motivations for reading. They also view themselves as better readers than non-book readers.

Students' histories.

Students' histories were studied in terms of both learning how to read and memorable reading experiences. Our goal was similar to that of Duchein (1993), who surveyed students enrolled in a developmental reading course, but we aimed for more thorough responses through use
of interview data. Most interviewees remembered little about their initial reading instruction, but five participants revealed a history of reading difficulties. Of these, one rated herself as high and two rated themselves as low RP. The high RP student learned to read within seven months while in sixth grade, following the suicide of her mother. One low RP student was so self-conscious about her difficulties that she asked that the tape recorder be turned off while she revealed her reading history.

Of the five students who revealed histories of reading difficulties, three noted alternate learning style strengths. For instance:

"I have to be visually stimulated . . . I couldn't just turn on the radio and listen, I have to be watching something."

"I just refused to read at home because, when I got home, the first thing I wanted to do was go . . . I was interested in sports."

"I am more of a touch learner, you have to touch it, build it, learn it."

We examined ages at which students became interested in reading and found much variability and no patterns. Seven interviewees could remember one or more influential school teachers, with one student including her parents (both of whom happened to be teachers themselves). Additionally, several students had family members who, in effect, served as influential teachers. The impact of remembered teachers was positive for all but two students, with the positive influence relating to teacher-led activities such as reading aloud every day, embarking on a yearlong multicultural celebration, providing special individual attention, allowing a child to arrive early and read with the teacher, sharing a love of history, and maintaining a safe and caring classroom environment.

A negative reading memory held by the student caused her to ask for the tape recorder to be turned off. She remembered a teacher who would "jump out" at her when she read aloud, making her feel "about an inch tall." This student and the other six low RP peers had no memories of positive reading influences from past teachers.

The interviews revealed much about home reading histories. Grandparents, parents, and/or siblings played a significant role in encouraging home literacy for 11 interviewees, with this influence equally present.
among students who had both high and low motivation for reading. The influence ranged from modeling and encouraging to shared reading, resulting in bonds not completely broken in adulthood even for those students for whom the joys of reading were taken sparse.

Of special note are comments about early and later reading pleasures. Some related to feelings of comfort, a grandmother reading to her granddaughter while rocking her and rubbing her back or a family having a special couch for reading, "the greatest couch in the world." Other early reading pleasures came from paradoxical feelings of thrill—reading forbidden material in the closet with a flashlight—or early freedom to read anything at all. One interviewee was faced with conflicting feelings of wanting to resist parents who were always trying to get her to do things like reading and of wanting to be like an older sister who loved to read. She found an outlet by using her closet as a haven where she secretly read Dr. Seuss.

Present reading and its impact on future classrooms

The students who read found time at night, on weekends, on the job, or by shutting out the family and delving into their books. Some students read for pleasure more frequently between semesters than while encumbered by school work.

The students who read made selections from recommendations of family, friends, and professors, picked up books found while browsing, or focused on a topic or a favorite author. Many talked about their reading with loved ones. Based on the enthusiasm these students displayed when discussing the pleasure of sharing reading with others, we could envision these preservice teachers sharing their love of reading with their students. Indeed, they were able to verbalize ideas for doing just that. For instance, one in this group whom we shall call Yvonne, in addition to engaging in general reading, showed signs of beginning a lifelong habit of professional reading:

Yvonne: Especially now that I am in my major, I am finding myself every morning, like going into the paper, and I always find articles on teaching methods and different things that are happening in different schools and I thrive on it, so I look for it. I subscribe to two magazines, Teaching K-8 and Instructor, and I read those from cover to back, front to back all the way through because I just get a lot of information that
helps me in my classes. I get a lot of ideas for lesson plans, activities, and the do's and the don'ts for teaching.

Not all of the preservice teachers engaged in reading. A student who we shall call Katie said, "it is too frustrating to just sit down and read a book. . . I have to figure out what they are talking about, and by the time I figure it out, it is just not enjoyable anymore." Another student, Kara, also experienced difficulty:

Kara: I can read something, but I don't comprehend it. I can read the same paragraph five times and then go on to the next page and have to go back and read that same paragraph again . . . I just lose interest in what I'm reading. . . . When it comes down to reading that lasts just a few minutes, I can't be still that long. I've got to move around.

When asked how she would motivate children, Kara referred to her grandfather who would take the children out to collect wild flowers and then go in to look up their names. She envisions the emulation of her grandfather as a single solution which will work in all situations, always resulting in learning being interesting. She said,

I am going to do it the same way my grandfather did. I personally know how I feel about reading. I know about my motivational level, how I put things off until the last minute, and then I do them. I do very well in what I do, but the way I do it is wrong. I don't think it is right to have kids starting off like that.

Kara was paradoxical. She said that her grandfather could always make reading interesting; however, Kara now "hated to look things up." It appeared that Kara avoided confronting her own comprehension problem as one that may well affect her own students:

We wondered whether or not students like Katie and Kara might have special empathy for reluctant readers. Would they find themselves having higher priorities for areas of instruction other than reading? How would they develop a knowledge of children's literature? These questions pertained to our high RP students as well. Some, as in any population, clearly preferred reading fiction or nonfiction. Yet, none of the students in our study were able to articulate any specific
plans for instilling a love of both types of literature among their own students in the future. Plans for encouraging reading in future classrooms were generally just at emerging stages. The latter finding is consistent with Fuller and Brown's (1975) stages in preservice teacher education, with preservice teachers seeing themselves more as students; they have not yet moved toward concerns about teaching situations and pupils.

Writing interviews

Similar to the reading interviews, we examined students’ writing histories in three stages: (a) early writing histories and how students remembered learning to write, (b) teacher/school influences (both positive and negative), and (c) home influences. Although most students did not have specific memories of learning to write, all participants recalled events such as learning to write their names or the alphabet and having assistance with those tasks from family members or a teacher in preschool or kindergarten.

Writing history and home influences.

When asked about how they first learned to write, all of the participants explained how they learned to form their letters or began to scribble. When asked about writing stories or compositions, the responses changed, and differences between writers and non-writers (NWs) became apparent. Generally, the NWs provided responses related to copying while the writers’ responses involved more creative writing.

The interviewees who perceived themselves as writers identified specific events from home and family. Kim, for example, stated that her mother was always asking her to help write lists for various activities. She and her mother wrote notes back and forth frequently. Michael’s mother was an English major in college when he was growing up. He discussed having a high level of support from both parents: "When it came to writing, they spent a lot of time with me. . . . They would sit down and explain how I can change it [my writing]."
Bonnie described family writing such as grocery lists, in which the children were asked to add items they wanted. She talked about charts that her parents created for chores with her siblings and their personal participation in this activity. She stated, "My dad, he loved reading and writing too. So, he encouraged it." The participants that did not perceive themselves as writers (NW) described no assistance or direct support for writing at home.

**Teacher/School influences.**

All of the interviewees were able to elaborate on specifics about their writing histories when describing school. Both the writers and the NWs described positive and negative experiences in writing. Interestingly, the writers showed a reverse pattern of response from the NWs. The writers described strong, positive early writing experiences and shared negative experiences in their later years of schooling. NWs, however, described early writing as "rote" and "drill-like," and referred to these experiences as frustrating and negative. The NWs continued to describe negative aspects of teacher influences throughout their schooling, including incidents at the college level. All but one of the NWs were able to describe at least one positive writing experience related to school writing. For instance, Sara had positive high school writing experiences:

> Well, I remember in elementary school we did--we had to do young authors, and that was somewhat forced because we had to do it, and uh, I remember I would kind of see what my friends were writing about and I would copy them. I didn't really--I didn't really like it then, but in sixth grade I had a teacher, my English teacher, who--she liked descriptive writing and she taught us about how to write descriptively, and poetry and stuff like that, and I liked her a lot. And I started writing.

Sara went on to explain how different teachers had fostered her interest in various types of writing during her high school years.

Another NW, David, had unpleasant memories of elementary writing. He told about the lack of structure from his first-remembered creative writing experiences in third grade. In this class, when students finished their seatwork, they were given open-ended sentences, and were
expected to be creative in writing endings. David did not enjoy this experience. On the other hand, he remembered a positive experience from tenth grade:

*My 10th grade teacher taught us the five paragraph essay. And that was like the greatest thing to me because it structured everything for me — introduction, body, conclusion— boom. And that — my mind is like that. I don’t know if you want to call it logical? That might not be the best word. But structured — it gave me a little structure.*

David described his most negative experience as occurring in a course in college:

*When I got to college, she just didn't like the way — she didn't like the way I wrote, I guess. I never did do, you know, exceptionally well in that class, but I don't know what it was. I really had gotten out of the — the five-paragraph essay really didn't apply here. It was a different kind of style. They didn't expect that. It was more of a free style. I was more out of the structure which I had learned back in high school, so that was the most negative [experience].*

David was comfortable and successful with writing when he was given a specific structure to follow, but uncomfortable and less successful with more creative writing tasks.

Bonnie, a writer, recalled discouraging remarks from her freshman English college professor. She recalled spending a large amount of time on her journal and getting a B. Other students would quickly scribble something into their journals upon arrival in the classroom, and also get B's. She felt that she should not bother to write because the professor would not read it anyway. (Bonnie was one of the students who had her greatest influences from home.) When asked about a positive teacher, she could not recall one specifically, but said, "I think all high school teachers are more positive."

Not all students could recall a specific negative experience with a teacher, and not all could recall what they could classify as a specific positive experience, either. Not surprisingly, the NWs were able to recall many more negative writing experiences and the writers had memories of greater numbers of positive writing experiences.
Present writing and its impact on future classrooms

One question probed the various kinds of writing in which each interviewee engaged during a given week. Until asked this question, the preservice teachers did not realize how much writing they actually did during one week. For instance, when a writer was asked, "Tell me about the different kinds of writing you are currently involved in," a researcher received this answer, "Well, uh, in college, lately, I've not been writing poetry or anything." Probing, the researcher continued, "Well, what about when you are not taking so many classes?" The response was, "Sometimes I just sit down and write a descriptive, narrative about a place or where I am or what I'm doing, just sitting, or about something that I remember from childhood. I have like a journal that I write in, not every night, but pretty often, at least a few times a month, that I've had for a while. I kept a travel journal. I went to Paris and Germany for spring break last year so I wrote about that. There was a lot to write about." Through additional probes, this preservice teacher revealed that she writes personal letters all of the time, sends email and thank you letters. In addition, she is a "list person," making lists for everything (although she did not consider making lists to fit in the category of "writing").

When asked about her current writing practices, another writer responded, "as far as, just everything?" When the researcher responded with a yes, the interviewee said, "of course I write for class--different projects, papers, essays, reports, more papers. I used to do extracurricular writing like poetry, free style writing, like writing out your thoughts." Probing further, the researcher asked, "Like a journal?" and the interviewee responded, "Yes, a journal. But I wouldn't do it on a structured basis. It was just when I got that feeling that I wanted to express myself, but I didn't want to tell anyone. I would just write it down. Write a poem. I used to do that a lot. But then it just stopped. [The student snapped his fingers.]

These preservice teachers had not considered lists, letters, email messages, personal notes, or thank you notes to be a part of their writing habits. Their implied definitions of writing included only academic writing and narrative or journal writing during the early phases of the interviews. It was obvious that these students had not yet looked at the complete genre of writing.
When we questioned the preservice teachers about future plans for their classrooms, we received some interesting ideas, most of which matched the methods being recommended in the Elementary Language Arts course they were currently taking. Sara provided the following list: “expose them to a lot of literature, and have them show — expose their feelings about literature; writing centers for making grocery lists, phone messages, job applications, journals, letters. I want to see writing used in more ways than just an essay.”

Another writer, Kathy, said, "I already thought of doing journal writing with my kids, but I don't want to make it boring. Not like, okay, write down something — you have to write in your journal today. I want to give them something interesting." She also mentioned using poems and having students write their reactions.

The researchers encouraged the participants to imagine themselves in their own classrooms in a few years and tell what an observer might see in the way of writing instruction. As was the case for reading, these students were not able to articulate any concrete plans for writing instruction in their future classrooms. They could suggest activities like “journal writing,” and “writing process,” but they could not imagine possible details. Further, these preservice teachers were not able to identify any specific methods of fostering a love of writing in their future students.

DISCUSSION

"So how do you think you are going to encourage children to read and write if you yourself do not read or write?" Based on our experiences with preservice teachers in literacy education courses, this is the question with which we began the study and what we wanted to ask our preservice teachers, but we approached the problem more diplomatically. As teacher educators, we were concerned about the reading and writing habits and attitudes of our preservice teachers and the implications that these habits and attitudes held for their future practice as teachers and for their future students.

The results revealed several patterns regarding preservice teachers’ reading and writing habits in an elementary education program. Of the students surveyed in both reading and writing, none described themselves below a three on a five point Likert scale. Students were less
likely to give themselves extreme ratings in writing than in reading; both writers and NWs rated themselves fairly similarly. This relates to what Cramer and Blachowicz (1980) reported when they stated that the majority of preservice teachers in their study liked reading or writing "more" or "much more than most [other content areas]."

If we agree with the supposition of reading and writing experts that our students must be engaged in reading and writing events themselves in order to become effective teachers of reading and writing (Bridge & Heibert, 1985; Faery, 1993; Hollingsworth, 1988; Mueller, 1973; Scott, 1996; Searls, 1985), we must continue to probe not only our preservice teachers' reading and writing habits and attitudes, but closely examine our preservice programs. The preservice teachers interviewed for writing habits identified themselves as writers or non-writers based on their own early experiences and narrow, academic perceptions of writing. Certainly, these perceptions stand a good chance of influencing their own teaching practices and the lives of their students in years to come.

When asked to describe their reading and writing habits, many students stated that they were not actively engaged in ongoing reading and writing, as previously noted by Daisey and Shroyer (1993), Frager (1986), Levin, (1993), Richardson, (1992), and Phillips, (1992). Some of the participants did not see themselves as readers and/or writers, yet when asked how they saw themselves influencing future students, some were able to respond by identifying strategies for reading and writing in their future classrooms - sound strategies that closely matched recommendations from their literacy methods courses. For instance, several students responded that they would use good literature to model writing, allow for open topic writing choices, and develop reading and writing workshops in their classrooms. Based on the interview responses, it appears that the students intended to use some of the tools recommended in the college classroom. On the other hand, the students did not share any original ideas or plans, and they were quite nonspecific in describing ideas for the future. Of greater concern was the fact that none of the students were able to articulate suggestions for fostering a love of reading or writing in their own future students.

The students who participated in this study had limited experience in actual classroom teaching situations. The language arts group had experienced one beginning level internship, while the reading group was more advanced and was currently involved in a second internship that
included teaching numerous lessons. This study was limited in that there was no follow-up to experiences in classroom settings, and we recommend such methods for future research.

In examining our preservice programs, we need to look at what we model for students in our teacher education courses. We suspect a lack of congruence between the specific kinds of reading and writing activities to which the preservice teachers are introduced during courses and the kinds of opportunities we recommend that they provide children in their future classrooms. For instance, we suggest that when our students become teachers, they should allow opportunities for children to engage in self-selected readings, and they should allow children to write about self-selected topics. But do we provide opportunity for students to self-select titles or topics during their university teacher education experience?

These students referred to various models of teaching reading and writing in the interviews, but when asked to look at their own current reading and writing practices, most saw these processes as merely academic: text-based reading and report-type writing. Many of the students did not report having been engaged in reading and/or writing for pleasure. If our model in teacher education is to keep students strictly involved in academic reading and writing (never experiencing reading or writing for pleasure during their university experience), it follows that when these students become teachers, they will involve their own students in academic literacy events to the exclusion of pleasurable literacy events. From our perspective, this is problematic, and it has caused us to examine methods of infusing reading and writing for pleasure into our literacy methods courses.

It is clear from these data that home histories and past patterns affect preservice teachers' perceptions of themselves as readers and writers, as reported by Roe and Vukelich (1998). The degree to, and ways in which these perceptions will impact future practices, is not known. These preservice teachers were able to recall and discuss methodologies from their college classrooms that they intended to implement in their own classrooms. They wanted their own students to love reading and writing, even if they did not. Based on the interviews, it would appear that these students embraced the concept that children may actually "do as we say - not as we do." They had not grasped the importance of the underlying attitudes that may be modeled for children if they, as teachers, are not able to share a personal love of reading and writing. It appears important
that we, as teacher educators, model our loves of reading and writing and provide experiences designed to foster the development of a love of reading and writing in our preservice teachers. We recommend further research that investigates methods of cultivating a love of reading and writing in preservice literacy education courses.

Due to the fact that these students were able to identify strategies for teaching children to read and write, but could not identify strategies for supporting children in developing a love of reading and writing, it is particularly important that we begin to address this problem in literacy education courses. It is reasonable to assume that if we model the love of reading and writing for our students and engage our students in course-related activities meant to support the development of a love of reading and writing, our students may later model for their students in the same way and provide opportunities for their students to develop a love of reading and writing.

There are many opportunities in literacy education courses for professors to share their own loves of reading and writing. We can model our attitudes by sharing our personal reading with students in the same ways that we would expect teachers to share their enthusiasm for personal reading with developing readers. We can provide opportunities for preservice teachers to self-select books to read within the context of our courses. For instance, we could model the use of literature response groups by engaging our own students in selecting books, having literature response group meetings, and later sharing celebrations of the books they have read with the class.

Similarly, in preservice literacy courses, it is possible for professors to share their current personal writing with students, and to provide opportunities for students to engage in writing for pleasure within the context of a course. Perhaps, this could be a self-selected type of writing. That is, each student might be required to select a strategy for writing for pleasure and engage in using this strategy regularly during the semester. Near the end of the semester, students could share with the class the type of writing for pleasure they selected and share some of the pieces they actually wrote. Much further research is needed to investigate the value of such activities.

We are confident in concluding that preservice teacher educators cannot assume that their students are readers and writers, nor can they presume that their students hold a love of reading and writing. Clearly,
we can only help our students by seeking methods of modeling the love of reading and writing, and by including course activities designed to support students in the development of a love of reading and writing.

REFERENCES


Mary C. Draper is a teacher at Temple Heights Christian School, in Tampa Florida. Mary Alice Barksdale-Ladd is a faculty member in the College of Education at the University of South Florida in Tampa Florida.

Note: Our colleague, Marguerite Cogorno Radencich, died in October, 1998. She was an integral part of the research team on this project.
No two experiences with a text are ever the same, even for the same reader. (Hynds, 1989).

Our theories of literacy determine what we see and what we value. (Harste, 1989).

ABSTRACT

Building on recent advances in holistic writing assessment, this article reports on an attempt to use freewriting as a tool to assess reading comprehension. It begins by situating this project within several recent efforts to reform reading comprehension assessment. Next, it discusses freewriting as a form of written retelling, a procedure used historically as an alternative form of reading assessment. Then, it presents a taxonomy that illustrates several patterns constructed from using freewriting with proficient readers (graduate students). Finally, implications of this project for thinking differently about reading theory and reading assessment are provided.

This article reports on a research project exploring the use of freewriting to assess reading comprehension. The purpose of this project was to explore a new potential for solving an old problem in reading comprehension assessment; namely, that traditional forms of reading comprehension assessment, specifically multiple-choice questions on standardized tests, do not accurately reflect the best we currently know
about reading (Krashen, 1999, 1997; McQuillan, 1998; Flippo, 1997; Lipson and Wixson, 1997; Routman, 1996; Valencia and Pearson, 1987); and yet, recent trends indicate that the use of formal and informal standardized tests in reading assessment is both increasing and expanding (Bintz and Harste, 1991; see Harste, 1990; see also, Valencia, et.al., 1989). In response, increasing numbers of reading educators are looking not only to reading, but also to recent advances in holistic writing assessment to explore new potentials for assessing reading comprehension (Cooper and Odell, 1977). One powerful potential is freewriting.

I begin by identifying several recent efforts to reform reading comprehension assessment. Next, I describe the use of written retellings as a tool to support reading, as well as alternative form of reading assessment. Finally, I present a taxonomy that illustrates several patterns constructed from using freewriting with proficient readers. Implications of this research suggest the need to think differently about reading theory, reading assessment, and reading instruction.

RECENT ATTEMPTS TO REFORM READING COMPREHENSION ASSESSMENT

Many educators, most prominently reading educators, are responding to calls for reforms in assessment by proposing a variety of alternatives to standardized testing (Krashen, 1999; Flippo, 1997; Lipson and Wixson, 1997). Reading educators from all over the world are developing alternatives to formal and informal standardized testing that better reflect recent advances in reading theory. These alternatives include altering what standardized tests test, developing literacy portfolio approaches, and combining portfolio data with standardized test data (For a more complete discussion of these alternatives see Bintz and Harste, 1991).

Altering what standardized tests test

Over the past two decades, reading assessment has lagged behind recent advances in reading theory (Flippo, 1997; Routman, 1996; Valencia and Pearson, 1987). As a result, a significant gap has developed between our current understandings of reading and the standardized tests we use to assess reading comprehension (Valencia, Pearson, Peters, Wixson, 1989; see also, Durkin, 1987; Johnston, 1990). Many educators

...
believe that the best way to close this gap is to alter what standardized tests test.

In Australia educators have developed TORCH, a test of reading comprehension. This test includes a wide variety of reading materials representing multiple genres, and assesses reading comprehension through analysis of written retellings. In Great Britain, educators have developed the Effective Reading Tests, a series of tests filled with high-interest stories which students read and record answers to specific questions in a separate booklet, looking back to the passages as needed (see Pikulski, 1990).

**Developing literacy portfolio approaches**

In addition to altering what standardized tests test, an increasing number of educators are developing literacy portfolio approaches to trace the long-term evolution of student thinking or growth over time (Farr and Tone, 1998; Valencia, 1998; Wiener, 1997). These educators believe that developing more informed portfolio approaches, not altering what standardized tests test, better reflect recent advances in reading theory and function as powerful tools for teachers to document and monitor student learning over time (Valencia, 1990; Wolf, 1987/88). These approaches view a portfolio as a “living document of change” (Krest, 1990) and consists of a chronologically sequenced collection of work that includes writing samples, audio and video tapes, anecdotal records, observational notes, descriptions of reading strategies, and personal reactions.

**Combining portfolio data with standardized test data**

Similarly, much research is currently being conducted that attempts to combine literacy portfolio data with standardized test data for the purpose of constructing a more holistic assessment of student learning. Farr and Farr (1990), for example, have developed an integrated language arts portfolio system for classroom use that combines reading and writing in a single assessment. This system consists of personal, self-selected instances of reading and writing, as well as pieces of writing based on teacher-selected prompted activities. When combined, assessments on personal as well as prompted activities provide a highly contextualized, informative, and accurate profile of student reading and writing abilities.
WRITTEN RETELLING AS TOOL FOR ASSESSMENT

Written retelling of text has an extensive history in educational research. For at least the past sixty years, written retelling has been used in language-based research for a wide variety of purposes (see Johnston, 1993). For example, retellings have been used to explore children's conception of time, study children's memory processes, investigate differences between oral and written retellings, inquire into how individuals from different cultures retell stories differently, and determine to what extent student verbal and written rehearsal of reading results in improved reading comprehension performance (see Brown and Cambourne, 1987; see also, Kalmbach, 1986; Koskinen, et.al., 1988).

In addition, written retelling has been used as a tool for reading comprehension assessment since formal testing was initiated in the United States around the turn of the century. Specifically, written retellings have been used to explore: 1) the extent to which frequent practice in retellings with guidance can significantly improve reading comprehension of kindergarten students (Morrow, 1985a; 1985b), 2) the effects of retelling on reading comprehension processes (Gambrell, et.al., 1991), 3) the effects of retelling on comprehension and recall of text information (Gambrell, et.al., 1985), 4) the efficacy of frequent story retellings with structural guidance to improve student ability to dictate an original story (Morrow, 1986), and 5) the use of retellings by proficient readers as a means for identifying reading comprehension processes (Chandler, et.al., 1989).

FREEWriting DEFINED

Freewriting is similar to written retellings in that both represent written responses to text. They are dissimilar in that freewriting is practice in automatic writing; it involves writing quickly without stopping for a specified length of time, and without editing for quality or correctness (Elbow, 1973). In freewriting, students write for a predetermined period of time, usually at least ten minutes. They can write on whatever topics come into their mind, on specified topics, or on topics from earlier freewrites.
Conceptually, freewriting is an organic alternative to traditional models of composition in which the writing process is a matter of first getting thoughts straight (outlining) and then finding the right words to write (composing). In general, freewriting aims to help students: a) develop fluency in writing, b) understand and experience a concept before attempting to deal with it on an abstract level in writing, c) overcome the immediate editing of mistakes, d) make decisions about what to keep and what to omit, and e) avoid writer's block (see Rose, 1984; 1985; see also, Baxter, 1987; Tompkins, 1988; Stover, 1988).

FREEWRITING AS TOOL TO SUPPORT WRITING

Typically, freewriting has been used as an instructional, prewriting activity with different populations and across different disciplines. For example, it has been used in the following college-level composition courses: 1) English as a Second Language to encourage students to develop writing fluency (Nelson, 1985); 2) introduction to basic writing classes to help students prepare for the written essay part of GED examinations (ABE Project, 1987); 3) freshman composition classes at two-year colleges (Reynolds, 1984; Dodd, 1987); and 4) learning skills courses with college students at major universities (Stahl, et.al., 1991).

In addition, freewriting has been used as a writing heuristic across traditional academic disciplines. For instance, it has been used as a writing technique in music classes to help students appreciate and understand the process of musical composition (Duke, 1987), in computer assisted instruction for remediation in reading and writing (Doyle, 1988), in journalism classes (Averill, 1988), in social studies classrooms (Tamura and Harstad, 1987; Goggin, 1985), as well as in business education and communication (Sills, 1985), and advertising copywriting courses (Pearce, 1988).

FREEWRITING AS A TOOL TO ASSESS READING

Although researchers conducted studies on the use of freewriting to support the writing process, very little research looked at the use of freewriting to assess reading comprehension. This inquiry, then, was an attempt to recast freewriting from a tool to support writing to a procedure to assess reading comprehension. More specifically, I viewed freewriting
less as an instructional strategy for teaching writing, and more as an open-ended potential for assessing reading comprehension. I proposed that freewriting not only supported continuous and unedited writing but also encouraged and supported continuous and unedited personal responses to text. Moreover, freewriting was a potential to identify, understand, and come to appreciate the personal stances readers take on text, as well as the personal meanings readers construct from text.

Data sources

A total of 22 individuals participated in this study. At the time these individuals were graduate students in the School of Education at a major Midwestern university, and therefore assumed to be proficient readers. All students were enrolled in a semester long doctoral seminar designed to explore possibilities for developing alternative models of reading, reading instruction, and reading assessment.

One of the curricular invitations offered by the professor in this course was for students to collaborate on using different protocols for assessing reading comprehension holistically. These protocols included think-alouds, oral retellings, and freewriting. A total of fourteen students explored think-alouds; four selected oral retellings; and four others, including myself, chose freewriting.

Data collection

In this study, all participants read a chapter from a professional publication. In this instance, the chapter (total pages = 10) was “Current Thinking on Critical Thinking” in Critical Thinking: A Semiotic Perspective (Siegel and Carey, 1989). The following is a precise of this chapter.

Educators take different perspectives on the nature and function of critical thinking. Two conflicting perspectives, in particular, appear to dominate. One is represented by Robert Ennis’ paper “A Concept of Critical Thinking” (1962) in which critical thinking is conceptualized in terms of basic skills, that is, as a set of context-free discrete skills that can be used to evaluate statements in any discipline. Drawing from the literature on informal logic, Ennis argues that logic provides the rules for correct reasoning, and proposes 12 “aspects” of critical thinking that should be used to make judgments about the worth of statements,
and thus "avoid pitfalls" in assessing statements. The aim of these aspects is to simplify the various aspects of critical thinking into some basic rules that people can follow to correctly judge statements.

The other perspective is represented by the work of John McPeck (1981) who challenges the analysis of Ennis, claiming that critical thinking is not a collection of context-free skills, but rather is more an attitude where domain-specific knowledge and social context is primary, not secondary. Simply stated, critical thinking is not a static and decontextualized activity used to derive truth, but a dynamic, deeply contextualized, and reflective way of constructing understanding.

According to the instructor, this chapter was selected for several reasons.

- The concept of critical thinking has been, and continues to be, an important topic in reading education, especially in reading assessment. Thus, some of the major inquiry questions driving this seminar were: What is meant by critical thinking? What are some different conceptions of critical thinking? What is the relationship between different conceptions of critical thinking and recent advances in reading theory? What implications does this relationship have for developing new procedures for reading assessment?

- The article discusses semiotics as a perspective on critical thinking. Semiotics is a knowledge domain that deals with the notion of "sign systems", and builds primarily on the work of C.S. Pierce (see Siegel and Carey, 1989), as well as John Deely (1981; 1982), Umberto Eco (1976; 1979; 1983; 1984), Thomas Sebeok, (1977; 1986), and Charles Suhor (1982; 1984). Simply stated, from a semiotic perspective language, mathematics, and art, to name just a few, are sign systems. Each represents a constellation or system of signs, or symbols, that enable individuals to create, represent, and critically reflect on their understandings of the world. Since reading is an instance of language use, and language is a sign system, this article was selected to provide a semiotic perspective on reading, as well as on critical thinking.

- Although all of the students in this class were familiar with the term critical thinking, based on an informal conversation
between the instructor and class members at the beginning of the course, few, if any, were aware of different conceptions of critical thinking. Thus, this article was selected to introduce students to two different and conflicting perspectives on critical thinking.

After distributing the chapter in class, participants were asked by the instructor to read the selection, and complete the following instructions immediately after reading the selection.

Read this chapter. When you finish reading, use writing to explore what this chapter gets you to think about. Don't worry about spelling, revision, or finishing thoughts. Just keep writing. Write for 10 minutes. When you finish writing, read back over what you have written and underline parts that you particularly like - words, phrases, whole sentences - then share these with other members of your group. Afterwards, look to see what you can say about who you are as a reader on the basis of your freewriting. Share these with other members of your group, and prepare a list of the patterns of reading response that appeared to you.

All freewritings were completed and collected during one class session. The data consisted of a total of 22 handwritten freewrites (44 total pages). Over the next two months, this data set was analyzed collaboratively by the four member research team.

Data analysis

Data analysis focused specifically on developing categories based on identifying recurring patterns in the data (Glaser, and Strauss, 1967; see also, Glaser, 1978). For example, collaborative analysis took place at a total of 8 weekly meetings. The research team proceeded through a three-step process. First, each member of the research team read non-stop through the entire data set, recording no comments and not stopping for any long period of time to discuss and reflect on what we were reading. At this point, we were simply trying to familiarize ourselves with the data. That is, we were trying to get some preliminary understandings of and intuitive feelings for the data by reading and constantly asking
ourselves, What are these (free)writers really saying? Later, we met to share some of our first impressions of the data.

Second, we read through the entire data set again, only this time we read more critically and reflectively, in an effort to collaboratively construct working hypotheses from the data. At these meetings, we exchanged and discussed what we perceived were some preliminary categories in the data. Then, based on any overlapping in categories across members, we generated some preliminary patterns in the data by rereading the data set and asking ourselves What are these (free)writers saying or doing that is similar? And third, keeping in mind our current preliminary patterns, we read through the entire data set once again. This time, however, we focused on testing and refining emerging patterns by comparing them against the data. Here, we asked ourselves What are these (free)writers saying or doing collectively? and What evidence in the data negates or refutes our emerging patterns? (Glaser and Strauss, 1967; see also, Lincoln and Guba, 1985).

FINDINGS

Based on data analysis, the research team collaboratively developed a taxonomy which included five major categories: Voice, Generativity, Risk-taking, Reflexivity, Anomalies.

1. Voice: This category describes attempts by learners to establish a voice or take a perspective in the freewrite (e.g. the voice of the reader, the voice of the author, the voice of the instructor).

Examples:

1.1 The Voice of the Reader: “My concept of critical thinking is dialectical thinking. From my point of view, readers should not be satisfied with their own perspectives.”

1.2 The Voice of the Author: “Critical thinking is an important skill that every student should have. Education should be meant to train students to think critically, therefore, the curriculum should reflect the acquisition of critical thinking. I agree with Ennis’ definition of critical thinking in this regard.”

1.3 The Voice of the Instructor: “I must say that the teacher in this class is giving me a lot of ideas, not just to think about in the context of my current classes, but in thinking about what I would like to do different and how I intend to write my book...it would have to be a whole
language, broad based one which would help the student learn to think rather than learn to fill in the blanks.”

2. Generativity: This category describes attempts by learners to generate ideas that go beyond the text by making intertextual links and personal connections, as well as speculating, synthesizing, extending, and analyzing.

2.1 Making Intertextual Links: “Afterwards I started to think about what Ennis’ twelve aspects had to do with semiotics. It seems to me that Ennis’ position is consistent with a realistic ontology endemic to semiotics.”

“Based on this article, I now want to go back and look at Louise Rosenblatt’s volume.”

2.2 Making Personal Connections: “We know that teaching pieces of fragments in isolation presents problems. When Siegel and Carey mentioned the Friday spelling test, it reminded me of the student who can fill in correct verb forms for days but cannot utter a simple complete sentence.”

“In high school teachers were always inserting into their lesson plans some activity that purportedly required critical thinking. These activities were most often excruciatingly boring and dull. This reflection back to my high school days was perhaps responsible for why I moderately enjoyed this piece.”

2.3 Speculating: “For me, reflection and skepticism are not enough. Critical thinking involves much more than that. For me, critical thinking strikes at the heart of a person’s ideological assumptions about his/her social world. Thus, I am very interested in seeing what relationship, if any, semiotics has with ideology.”

“Perhaps McPeck and Cornbleth can turn all of this into more specific strategies for teaching critical thinking.”

“We may be doing the wrong thing, and I can see now, as I write this, that we may be using a skills approach to teaching reading and writing.”

2.4 Synthesizing: “Siegel and Carey are mounting a challenge to Ennis’ conceptualization of critical thinking, alleging that it is skills-based, interactional in nature, and not context specific. In order to formulate an alternative definition, they draw on semiotics pointing that
it is instead strategy-based, transactional in nature, and highly context-specific.

2.5 Extending: “So there is an issue for me that recurs in many contexts as I think about education. It centers on what is sometimes referred to as the conventions. Logical thinking/critical thinking have some cultural norms, historical baggage from their passage through our society and our society’s educational roots in the English grammar school.”

“In some respects this distinction between thinking and critical thinking is similar to the distinction my English teachers made between writing and creative writing.”

2.6 Analyzing: “In the area of reading, critical thinking means reading between and beyond the lines. One might claim that critical thinking is an essential part of comprehension. I think the opposite is also very important. Comprehension is essential for critical thinking, too.”

3. Risk-Taking: This category describes ways in which readers make themselves and their knowledge vulnerable by questioning, taking a stance, shifting interpretive stances, and rethinking the self as a reader.

3.1 Questioning: “Another aspect of critical thinking that I see is that it is creative. It’s a very creative act. But given that, what are the implications for teaching?”

3.2 Taking a Stance: “I fully agree with McPeck’s and the current view of critical thinking as a broad spectrum of knowledge and skill which come together to enable a person to raise their level of thinking beyond the superficial.”

3.3 Shifting Interpretive Stances: “What’s interesting to me is to see that I changed my thinking strategies as I read about the two perspectives on critical thinking. I became Ennis when I read about him and I felt myself in the company of McPeck when he argued for an alternative.”

“I had never thought about the necessity for including context as a prerequisite for thinking, but it’s true!”

3.4 Rethinking the Self as a Reader: “I am irritated by my lower ability of reading comprehension. I am also frustrated that I cannot see the connection, and tell the author’s ideas logically.”

4. Reflexivity: This category describes how learners used themselves and others as instruments for learning.
"I think from my discussion with others in my group, I found out what people, like Ennis, think while they believe in finding out precise and universal principles. For example, one student in my group is majoring in general linguistics. I think he believes in the traditional scientific method to systematically analyze a set of data. He thinks that the idea and logical analysis is a good way to train one's mind."

5. Anomalies: This category describes the points of tension or uneasiness the learner expresses toward the text; the onset of patterns that don't connect.

5.1 Points of Tension: "I thought I knew the meaning of critical thinking. Now, I realize it is very hard to really understand what critical thinking really is."

5.2 Patterns That Don't Connect: "The twelve aspects represented by Ennis are very interesting. But my concept of critical thinking and his concept are a little bit different."

IMPLICATIONS

Before discussing implications, it is important to note that this study, like most, if not all, research, has limitations. Some of these limitations include the following:

- This study involved a highly selected population. Participants were doctoral students, and therefore had intensive interest in and extensive knowledge about teaching, learning, and schooling.
- This study involved a highly specialized single text. Participants were asked to read a selection that was not self-selected, but assigned, and on a subject (critical thinking from a semiotic perspective) that was outside their personal experience and professional education.
- This study involved a less than authentic context. Participants were asked to read a selection, and then create a freewrite within a specified period of time and without discussing the selection with other readers.

With these limitations in mind, this study nevertheless suggests several implications for reforming reading comprehension assessment.
These implications include the notions that real reform in reading assessment will take place when: 1) the criteria used to assess reading comprehension significantly changes, 2) criteria used to assess reading comprehension liberates, rather than constrains, what readers can know and what we can know about readers, and 3) reading educators use criteria to continually reposition themselves as teachers and learners.

In many ways the taxonomy presented here represents a metaphor for proficient reading because it identifies reading processes and interpretive stances used by proficient readers. As a metaphor, it offers educators an alternative way of knowing about reading by providing a different perspective for thinking about comprehension, and a different set of criteria for assessing reading comprehension.

For instance, criteria such as the following typically have been, and continue to be, used on formal and informal standardized tests, commercially produced materials, and teacher made tests as measures or benchmarks for assessing reading comprehension:

- **Building Sight Vocabulary**
- **Recognizing Text Structures, e.g., Cause and Effect, Most Important to Least Important, Chronological Order**
- **Distinguishing Main Ideas from Supporting Ideas**
- **Recognizing Context Clues**
- **Organizing Ideas**
- **Making Inferences**
- **Sequencing Major Events**
- **Recalling Important Facts and Specific Details**

These criteria, and others like them, have been used primarily to determine to what extent individual readers comprehend text. In this traditional perspective, reading comprehension is seen as the reader's ability to demonstrate comprehension of a predetermined set of propositions that test makers assume already exist in a specific text. The extent to which readers can identify and recall this predetermined information is how they are assessed and subsequently placed at some point along a continuum ranging from a novice to an expert reader.

Criteria for assessment, however, like theories of learning, can be constraining or liberating. Specifically, they can constrain or liberate what readers can come to know from text and what teachers can come to know about readers. For example, requiring individuals to read and
answer a set of multiple choice questions at the end constrains not only what personal meanings readers can create and express from a text, but also what we, as reading educators, can know about thinking processes readers use to create personal meanings. Simply stated, criteria can constrain when they focus on verifying what readers should be comprehending; criteria can liberate when they focus on inquiring into what and how readers are comprehending. The taxonomy previously described significantly changes some of the criteria typically used to assess reading comprehension. These criteria illustrate that proficient readers in this study used a set of open-ended or liberating (rather than closed-ended or constraining) processes to construct meaning from text. The categories of voice, risk-taking are illustrative examples.

All too often, reading comprehension has been assessed based on individual readers' ability to hear author voices, or understand and recall author intended meanings of text. In this study, however, reading comprehension appeared more "plurivocal" (Polkinghorne, 1983) than monovocal in nature in that readers didn’t privilege author voices over all others. Rather, readers heard and reflected on a variety of voices (e.g., the voice of the author, the voice of the instructor, and the voice of the reader). Each of these voices gave readers very different perspectives on, and therefore different interpretations of, the same text. As such, freewriting appeared to function as a potential for readers to not only hear multiple voices, but in the process of hearing these voices, they were able to hear their own voices as well. In this sense, reading comprehension seems to be enriched or enhanced.

The category of risk-taking is another change in criteria. Risk-taking is inextricably linked to the notion of voice. Freewriting enabled readers not only to hear different voices, including their own, but also to assume a position or take a stance. That is, freewriting allowed them to better understand what they currently know, how they came to know it, and why they continue to believe it. At the same time, readers used freewriting as a tool to generate questions, construct anomalies, and consider alternatives that actually put their current knowledge to the test. As a result, freewriting enabled readers to actively participate in a process of meaning making that involved taking stances, shifting stances, and taking new stances as they reflected on their own voices, as well as the voices of others.
Similarly, the categories of generativity and anomalies are changes in criteria. Unlike criteria such as Building Sight Vocabulary, Recognizing Text Structures, Distinguishing Main Ideas from Supporting Ideas, and Recalling Important Facts and Specific Details, which characterize comprehension in terms of propositions, generativity and anomalies are categories which conceptualize comprehension in terms of potentials that readers use to construct and extend ideas. These categories view reading comprehension as involving a variety of thinking processes which readers strategically use not only to create meaning from a text, but also recreate meaning beyond a text. Stated differently, these criteria suggest that reading comprehension does not stop with propositional meanings; rather, it starts with meaning potentials and continues indefinitely both onward and outward. Unlike traditional multiple choice question formats, freewriting functioned as an open-ended meaning making potential that gave students access to a variety of different thinking processes and interpretive stances which created personal meaning from text.

Finally, this study offers reading educators a vision of assessment as a potential to reposition ourselves. By repositioning, I mean continually taking a new stance or developing a new set of eyes through which to see reading, readers, and reading assessment. Freewriting is just one potential that enables reading educators to continually investigate and interrogate not only our beliefs about reading and readers, but also the criteria we use to assess reading comprehension. As such, it offers us a tool to put our criteria continually to the test, and in the process allows us to outgrow what we currently believe. As both teachers and learners, it's a win-win situation.

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