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ABSTRACT
                Several of the papers in this collection describe
university programs or provide practical suggestions for using
technology to enhance literacy instruction; other papers focus on a
diverse range of issues, instructional strategies, and research
findings related to different aspects of literacy. Papers in the
collection are: "A Community of Thinkers: Creating Multimedia
Literacy Environments Overview" (Victoria J. Risko and others);
"Creating a Community of Thinkers within a Preservice Literacy
Education Methods Course" (Victoria J. Risko); "A Community of
Thinkers: Literacy Environments with Interactive Technology" (Marino
C. Alvarez); "Technology and Literacy: Challenges of the Twenty-First
Century" (Michael C. McKenna); "Integrating Technology and
Reading/Language Arts at the Undergraduate Level" (Jo Ann F. Bass and
others); "Building Critical Reading Skills and Countering Biases:
Using Tradebooks with the 'Oregon Trail'" (Deborah L. Thompson);
"Linking Reading to Math and Technology: Adventures on the 'Oregon
Trail'" (Lynn H. Fox); "Learning from a Distance: Triumphs and
Challenges" (Jane Meeks-Hager and Marilyn Eanet); "'Black Milk of
Daybreak': The Literacy of Testimony and Witness" (Ray
Simmers-Wolpow); "Reaction Paper: "'Black Milk of Daybreak': The
Literacy of Testimony and Witness" (Eunice N. Askov); "Response
Paper: 'Black Milk of Daybreak': The Literacy of Testimony and
Witness" (Noemi Ban); "A Survey of Teachers' Reading Habits" Jerry L.
Johns and Peggy Marciniec); "Factor Analysis of Teachers' Responses
to Why They Don't Use Published Reading-Teaching Methods and What
Would Cause Them to Do So" (Anthony V. Manzo and Ula C. Manzo);
"Student Readiness to Learn: Judgments of Prospective Teachers about
Background Based on Language Usage" (Richard Telfer and others); "A
Content Analysis of Current Content Area Reading Textbooks"
(Alexandra Ruschko and others); "Undergraduate Reading Metaphors:
Traversing the Information Superhighway or Weaving the Web?" (Alice
Randlett and Bobbie Stokes); "An Analysis of Story Content and
Discussion through the Lens of Banks' Stage Theory of Ethnic Identity
Development" (Louise M. Tomlinson); "Children's Book Awards and 1995
Shortlists from Five English-Speaking Countries" (Ira E. Aaron and
Sylvia M. Hutchinson); and "Alternate Routes to Understanding:
Reading and Writing in a Second Language" (Mary S. Benedetti and
others). The collection concludes with a "problem court" article and
a reaction paper in which various presenters take a humorous, but
critical, look at issues related to implementing technology and
"surfing" the information superhighway. (RS)

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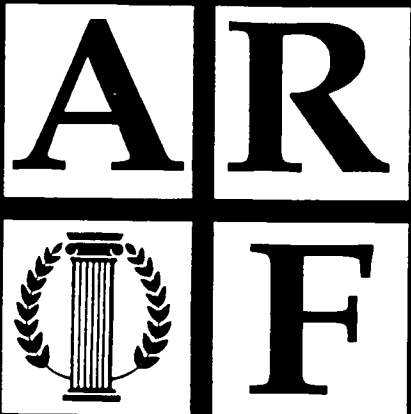
AMERICAN READING FORUM

1996, VOLUME XVI

LITERACY: THE INFORMATION SUPERHIGHWAY TO SUCCESS

Yearbook of the American Reading Forum

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1996, VOLUME XVI

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Editorial Board

The *Yearbook of the American Reading Forum* is the official publication of the American Reading Forum. It comprises papers recommended for publication by the Editorial Board from those submitted by presenters at forums, problems courts, and sessions of the American Reading Forum's Annual Conference.

The Yearbook of the American Reading Forum contains selected papers and reactions to issues or papers presented at each year's annual meeting. The yearbook, a peer-reviewed publication, is indexed with major reference sources nationally. The yearbook is received by the membership of ARF as well as many major libraries in the United States.

Four copies of typewritten doublespaced manuscripts (approximately 5 to 20 pages) that follow current APA form should be submitted. Manuscripts and all correspondence should be sent to Kay Camperell/Bernie Hayes, Co-editors, ARF Yearbook, Department of Elementary Education, Utah State University, Logan, Utah 84322-2805.

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From The Editors

Volume XVI of the American Reading Forum Yearbook contains papers that have been recommended by the Editorial Advisory Board from those submitted by authors who presented at the 1995 Annual Conference. The theme of the conference was *Literacy: The Information Superhighway to Success*. Several presenters' papers describe university programs or provide practical suggestions for using technology to enhance literacy instruction. Others, however, focus on a diverse range of issues, instructional strategies, and research findings related to different aspects of literacy. Articles in this volume begin with presentations by the keynote speakers who emphasized new uses of technology, ways technology is influencing practice as well as ways technology and the information highway may change our conceptions of literacy. The volume ends with a problems court article and a reaction paper in which presenters take a humorous, but critical, look at issues related to implementing technology and "surfing" the information superhighway.

American Reading Forum

Contents

A Community of Thinkers: Creating Multimedia Literacy Environments Overview

Victoria J. Risko, Marino C. Alvarez

At the 1995 meeting of the American Reading Forum, we presented two projects in which we use video and computer technologies to enhance students' learning and problem solving. One project focuses on teacher education and the second focuses on a high school science and literacy curriculum. A common goal for both projects is to situate students' learning in the exploration of interesting and realistic classroom events to encourage active, useful, and useable construction of knowledge. In both projects, multimedia cases are explored and developed as students become producers of knowledge rather than passive recipients of information told to them by their teachers.

Our case methodology invites students to analyze real-world problems and to understand how to use multiple sources of information to produce reasonable solutions to authentic and complex problems. Our instruction, developed as an alternative to a lecture-based method or use of prescribed materials, involves students in cooperative learning activities in which both the teacher and students share in the generation of questions and issues to explore and mediate each others' learning. We believe that our use of technology in combination with other teaching strategies is a valuable support for our instruction.

Creating multimedia literacy environments provides opportunities for teachers and students to explore available electronic resources. Literacy is changing in our society and we are exploring methods to

prepare our teachers and students for rapid technological changes. A literate person living in our society is drastically different from one who lived in 14th century England. The literacy skills of yesterday are no longer practical in today's fast-paced world of information. The printing press, invented in the 1400s, changed the way people thought and accessed information; so too, is the electronic information age changing the ways we view literacy. The societal needs of the 21st century demand that literacy definitions be revised to include this new information age. This electronic literacy requires individuals to access large quantities of information, determine their accuracy and worth, communicate with others over distances, and become involved collaboratively and interactively.

Multimedia case methodology offers insight into ways that viewers can visually and physically communicate within teaching/learning environments that invite exploration of authentic world happenings. These environments allow students to pursue individual paths of inquiry using critical and imaginative thinking skills, and develop competence in processing information. They provide them with problems and circumstances that tap an assortment of literacy and thinking skills to access, evaluate, organize and compose needed information. These skills enhance generative learning by enabling learners to engage in situations that probe their minds using their own thoughts, questions, and experiences.

In the following two papers, we describe how we use multimedia to develop problem-solving environments that encourage community building and shared learning opportunities to help students develop deep understandings of a problem domain.

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Creating a Community of Thinkers Within a Preservice Literacy Education Methods Course

Victoria J. Risko

During the last decade, we have been examining our education methods courses at Vanderbilt University and the progress made by our preservice teachers who have enrolled in these courses. I teach an undergraduate literacy education methods course, entitled "Remedial Reading and Practicum," every semester. For years, I noticed that my students left my course with new understandings about literacy development, factors that contribute to children's reading difficulties, and assessment and instructional methods. I was bewildered at times, though, when I observed my students' teaching in the practicum setting and during student teaching. Even though these students acquired knowledge about literacy development and instructional procedures, they seemed to be underprepared for responding to unexpected events when they occurred in their own teaching. They had difficulty thinking flexibly about how to adjust and/or alter their plans to accommodate the difficulty they were experiencing. As Lesgold (1988) suggests, factual and procedural knowledge can be gained from class discussions and textbooks, but this knowledge alone will not help learners solve problems unless they also learn how to translate this knowledge into "mental acts" (p. 98), or the defining and thinking about problems in ways that produce reasonable solutions.

The phenomenon of being unable to use knowledge spontaneously when it is useful to do so, described by Whitehead (1929) as inert knowledge, provides some challenging dilemmas for teacher educa-

tors. How can we help future teachers develop knowledge of a content domain, such as literacy, while at the same time prepare them to know how and when to use this information for responding to problematic situations? I know that this question is not unique to my experiences. For several decades, educators have observed that students across domains and professions have limited ability to apply what they have learned outside of the classroom (Boud & Feletti, 1991).

There are several ways to think about this issue. One way was addressed in an earlier paper generated by a group of us at Vanderbilt (Risko with CTGV, 1990), when we suggested that when people learn new information in the context of meaningful activities, such as problem-solving activities, it is likely that this information is perceived as "useable tools" for resolving problems. Within such contexts, people learn about the conditions under which it is important to know and use information they are learning.

In a recent paper, Hiebert, et al., (1996) offer another viewpoint in their support of problem-based curricula. They argue that if transfer of knowledge to real-world problems is going to occur, students should not only be engaged in problem-solving activities but that they should be *allowed* to problematize the content domain. Allowing students to problematize the content, instead of responding to problems that experts define for them, is essential because students need to "wonder why things are, to inquire, to search for solutions, and to resolve incongruities" (Hiebert et al., 1996, p. 12). This type of inquiry helps students to personalize the content and to come to their own understanding of the importance of newly acquired information and the use of this information for problem solving. Furthermore, Hiebert and his colleagues suggest that this type of inquiry, based on Dewey's (1933) notion of "reflective inquiry," facilitates students' *ability to acquire and apply knowledge simultaneously*. Rather than distinguishing instruction and experiences that develop knowledge from instruction and experiences that emphasize application of that knowledge, problem-based instruction can help students understand how to use information to think about, make sense of, and respond to problems and issues *while* they are acquiring new knowledge of a content domain.

My Problem: A Turning Point

One of the most complex problems that I confront as a teacher educator is related to my goal of preparing future teachers to provide literacy instruction for diverse learners. In collaboration with my colleagues at Vanderbilt, I am experimenting with the development

and use of multimedia cases to help our preservice teachers construct their knowledge about literacy instruction and problems they may encounter as classroom teachers. In several previous papers, I discussed features of these cases and data we have collected to help us understand the impact of these cases on our students' learning. In this paper, I will describe briefly the rationale for this project, the design of the cases, and what we are learning from our use of case methodology.

Beliefs About Cases and Technology

Our project, partially funded by the Sears-Roebuck Foundation (Risko, 1989) and the Fund for the Improvement of Postsecondary Education (Risko & Kinzer, 1991, 1994), provided an opportunity to design instruction that is anchored or situated in video-based contexts to invite preservice teachers' analysis of authentic classroom problems. Applying the concepts of anchored instruction (Bransford, Vye, Kinzer, & Risko, 1990, Risko with CTGV, 1990) and case methodology (Christensen, 1987; Merseth, 1991; Shulman, J., 1995; Silverman & Welty, 1995) to the education of future teachers we use videodisc, CD ROM, and computer technology to create problem-solving environments in which preservice teachers analyze classroom events that are embedded in our cases.

Our notion of anchored instruction is characterized by providing rich informational sources, presented in multimedia formats, and encouraging students' active involvement in sustained explorations of complex concepts and problems embedded in this information. The goal for such instruction is to enhance students' spontaneous use of information in new situations (see Bransford, et al., 1990; Risko, 1991; Risko with CTGV, 1990). Anchored instruction provides several problems simultaneously, representing real-world events and invites analysis, reflective thinking, and generative learning. Requiring students to frame questions and solve problems encourages them to apply and modify newly acquired concepts based on situational and contextual information.

Case methodology also influenced our approach to instruction. Case methodology is described by Christensen (1987) and Learned (1987) as a process-oriented approach that encourages problem formulation and problem solving--active learning that occurs during the process of defining and resolving authentic problems. This notion of case-based instruction is compatible with the goals of anchored instruction. Our cases differ, however, from cases that are typically used in methodology courses. A predominant use of case studies in teacher

education is to present a variety of minicases, that are usually written, to illustrate a particular problem and the author's method for resolving that problem. Our cases present several problems simultaneously and these problems and solutions are not identified by the case author but are generated by the viewers. These interpretations are shared during class discussions and examined by class members from multiple perspectives.

We developed multimedia cases for several reasons. First, we present most of our case information on video because we believe that visual information provides a richness of information that is difficult to describe in written and verbal accounts (e.g., nonverbal cues, facial expressions, the environmental context of lessons, events that occur simultaneously). Video is dynamic and allows students to more easily form detailed mental models of the problem situation (e.g., Johnson-Laird, 1985; Risko with CTGV, 1990). There is much to notice within video presentations. Increasing opportunities for noticing can increase the possibility of finding information that leads to problem identification and problem solving. Additionally, we use HyperCard software on the computer to access multiple sources of information (e.g., instructional context, student test data and portfolios, teacher lesson plans, teaching materials) and for viewing a case for different purposes. Access to the video, HyperCard stacks, and corresponding readings that are referenced in our software is especially important for preservice teachers who have limited knowledge of a content domain.

Another advantage of a multimedia presentation of information is its usefulness for generative learning. Previously, we used written cases that seemed to oversimplify real-world, complex problems. They usually focused on one major problem and provided the author's view of both the problem and the solution. Since they provided information that was already interpreted by someone else (the author of the cases), the use of these discouraged our students from taking an active role in decision making or from examining information from different perspectives that may lead to solutions different from the one presented by the author of the cases. The linear narrow format of the cases discouraged our students from making multiple connections across the cases or noting comparison and contrasting information. Conversely, video and software presentations provide the actual events and real artifacts and require the viewers to develop personal description, interpretations, and recognition of patterns--the problematizing of a content domain, as described above.

We use videodisc technology because it has random-access capabilities. Appropriate scenes can be easily accessed and revisited easily and

frequently. Return to particular video content for different purposes is difficult in videotape applications or when there is no guiding "script" such as is available with the computer software. Exploring the same content from multiple perspectives is facilitated with these random-access capabilities.

Case Design

We produced a set of eight cases with the video portions presented on videodiscs and accessed by menu-driven computer software. Each case presented a comprehensive array of information. The cases contained various forms of naturally occurring classroom situations that demonstrated multiple layers of activities (e.g., teacher-student interactions, peer tutoring, student writing activities, teacher and peer questioning) that are associated with the complexities embedded in reading instruction. These video cases were recorded in grades 2, 4, and 6, and resource and Chapter 1 classrooms. The units were developed by the respective classroom teacher around conceptual themes or instructional goals. The classrooms are located in urban, suburban, or rural settings and involve children of different SES levels and cultural backgrounds.

Narrative Organization

Each case contains video that is 1 hour in length and begins with a coherent "story" about a teacher, students, classroom organization, and instruction. The remainder of the video material contains supplementary classroom scenes, student-teacher conferences, and interviews with parents, teachers, principals, and commentators who provide their perspectives on the literacy instruction. The video content represents the actual happenings of the classrooms where we videotaped. No content was scripted. The remaining case content includes references to supplemental text readings and the additional information about the case teachers and children (e.g., teachers' lesson plans, children's writing and assessment protocols), as described above. Four cases display varying approaches to classroom instruction (e.g., literature-based curricula, language experience and writing process approaches, integrated curricula) and are used in our developmental reading methodology course. The other four cases focus on literacy instruction (within classrooms and pull-out programs) for diverse learners and are used within our remedial reading methodology course.

Generative and Inquiry-based Learning

During the past several years, we have been experimenting with ways to use case methodology to develop communities of learners who are involved in educational experiences that help them develop the

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type of reflective inquiry described earlier in this paper. Our cases are designed to invite exploration and generation of questions and issues to pursue. Our preservice teachers are involved in rich discussions and cooperative learning activities within our college classrooms as they draw on multiple resources to help them understand the teaching dilemmas embedded in the cases and ways to respond to these dilemmas. They study the literacy instruction that occurs within the case classroom. They analyze the teachers' decision-making, choice of materials and curriculum goals, and the students' literacy abilities and problems. They generate interpretations, analogies, and conclusions. Asking these preservice teachers to think of alternative solutions for the case problems helps develop their expectations that there is more than a "one-right answer" to future problems they may experience.

Problem-based Learning

Problem solving occurs in several stages. First, the preservice teachers learn to resolve problems by generating what they perceive are the dilemmas embedded in each case. For example, one prospective teacher may observe that a child has difficulty understanding a passage and notices that he misreads several words. Another prospective teacher may be troubled by another child's lack of participation during a large group language experience activity and so on. As the preservice teachers analyze the classroom events and listen to interviews with the teacher, children, and parents, they substantiate the need for further analysis and frame the problems more clearly. Some of the problems they identify coincide with those presented by the classroom teacher in teacher interviews. Other problems are generated by the preservice teachers according to their own interpretation of the classroom happenings. It is at this stage of our instruction that our preservice teachers are learning how to *problematize* the subject matter. Theorists, such as Dewey (1929) and Hiebert et al., (1996), suggest that this process of problematizing a subject leads to intelligent thinking and construction of understanding. We believe that this process prepares the prospective teachers to understand the importance of applying theory to practice and for building practical arguments that are grounded in a domain knowledge, as described by Fenstermacher (1986) and others.

Next, our students pursue, quite actively and in both large and small group arrangements, a resolution to their identified problems by examining relevant issues from multiple perspectives. For example, if the preservice teachers are concerned about a child's lack of participation in the classroom they examine her educational records, her assessment portfolio, the teacher and parent interviews, and so on to develop a comprehensive view of her literacy development. During

this examination process, the preservice teachers come to understand how what may seem to them to be disparate sources of information can be used as *tools* to aid their problem solving (Risko with CTGV, 1990). The preservice teachers, according to the above example, use information about test scores, oral reading running records, patterns of classroom talk, the teacher's questioning style, and other information to better understand the problems this child is experiencing. The preservice teachers are developing useful and useable information to help them interpret the classroom situation.

Last, the preservice teachers are encouraged to develop solutions to their problems. To continue with the above example, the preservice teachers cross-reference their multiple sources of information and generate recommendations for instructional strategies that would support the learning of the child they are studying. They listen to the viewpoints of literacy professionals who were interviewed and appear within the video materials. They draw conclusions and examine the classroom video to evaluate the usefulness of their suggestions. They discuss divergent points of view generated by their peers and resolve issues when possible. During this entire problem-solving process, the preservice teachers are participating in a community of thinkers who are supporting each others' learning during their inquiry.

Coming to Understand the Benefits
of Multimedia Case Methodology

Across the years, we have examined the impact of our cases on our preservice teachers' learning.   We need to know if our efforts are fruitful or if case methodology is another example of "much ado about nothing." To address this issue, we analyzed the talk that occurs in our college classes, we interviewed the preservice teachers, we read their journals and lesson plans, and we observed their teaching. I summarize below some of what we are learning.

Cases Promote Inquiry and Community Building

The most visible (and enjoyable) outcome of using our multimedia cases is the change that occurs in our college classes. These cases provide a mechanism for inviting students' active and energetic participation in their own learning, their generation of personal issues to explore, and their contribution to the community that develops within our methods courses. Rich discussions are common in our classes and the professor, as a co-participant in the discussions, is one of many who elaborates on and extends each others' ideas. Many questions and alternative viewpoints are generated and examined. References to personal experiences and supplemental readings are

woven into the discussion to substantiate points of view. Our class-room talk displays learning as synergistic, suggesting to students that their mutual involvement in learning activities can enable and enhance knowledge acquisition for themselves and their peers (Risko, 1992; Risko, Yount, & McAllister, 1992). The shared inquiry that occurs helps preservice teachers move beyond the limitations of their own experiences and values. Learning is scaffolded by the community of class members (Shulman, L., 1995). Involving preservice teachers in dynamic exchanges around the inspection of case problems illustrates to these preservice teachers that knowledge is constructed through social interactions around the examination, reexamination, and reflec-tion of multiple sources of information.

Too often, class instruction follows a lecture mode in which the professor tells students what they should know and refers to text and personal examples to illustrate target concepts. This may be followed by the students' sharing an interpretation of the readings or a personal experience. Such instruction is linear, often forcing students to make sense of what may appear to them as unimportant information. In contrast, information shared within a rich context of commonly shared experiences enables students to make connections across ideas and to recognize how to apply relevant knowledge to specific conditions and situations.

Preservice Teachers Gain Flexibility in Their Thinking

In two recent studies (Risko, 1995; Risko, Peter, & McAllister, 1996), we report on our observations of how the preservice teachers changed their conceptions about teaching as they progressed through our course. We found that they began the course with a unidimensional, narrow focus. Their goals for teaching were simplistic and singular (e.g., expressing the need to motivate or build comprehension). They held inexperienced, global notions of how to evaluate, plan, and provide instruction for children experiencing reading difficulties. Starting with the first case, the students began to notice the complexity of problems that the cases posed--problems that required their atten-tion for analysis, reflection, and resolutions.

To respond to the case issues the preservice teachers reorganized their existing schemata, adopted new perspectives, and, in the process, advanced their thinking beyond their earlier naive conceptions. This progression of development is compatible with descriptions of how conceptual change occurs (Hynd & Guzzetti, 1993). Involving these teachers in sustained opportunities to examine multiple aspects of concepts embedded in the cases helped them integrate information across sources needed for problem analysis and problem resolution.

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By the time they completed the third case, there was a noticeable shift in their ability to adopt additional ways to think about these cases beyond their initial focus.

This Issue of Applying Knowledge to Novel Contexts is a Tricky One

It took us months to recognize what we believe may be benefits of case methodology for building transfer of knowledge, and there is still much more that we need to know. Initially, we felt good about how our instruction was affecting our college methods courses. We knew that our in-class discussions were enhanced greatly. We watched our students taking on active and multiple roles (e.g., mediators, generators of questions and alternative viewpoints) during class discussions to enhance their own learning and the learning of the other class members. We observed our students take on additional perspectives to guide their thinking and become more flexible in their responses to teaching problems discussed in our classes. Or students' comments indicated that they were enthusiastic about our teaching methods.

At the same time, though, we noticed that asking these teachers to apply their newly acquired knowledge to a new context--their own teaching in the practicum--presented a challenge for them. The preservice teachers had difficulty coordinating all that they had learned about students, materials, and their role as a teacher as they attempted to develop instruction for their own students. What we have now begun to realize is that problems associated with the transition from the college classroom to practice are inevitable, especially when the problems are as complex as those associated with teaching. How these future teachers respond to these problems, however, is a primary concern for us. Prior to our use of multimedia cases, our students had difficulty with problem analysis and resolution. They expected quick solutions to their problems and had difficulty adjusting their preconceived notions about instruction. Now, we notice that our teachers are responding with a careful analysis of their difficulties and with a deep level of reflection in which they seek varying sources of information to help them resolve their difficulties. Rather than coming up with quick solutions to their complex problems, they seem to be taking on the role of a reflective inquirer in ways that are consistent with what they learned in our courses.

We noted carefully what our students did to resolve their problems (Risko, et al., 1996). First, they carefully articulated their difficulties and generated specific reasons for these. Their ability to frame problems based on multiple sources of information was noticeably different from how they approached problems at the beginning of the

college course. Second, the preservice teachers generated multiple ways to think about their problems, and their solutions were not random but were thoughtful, comprehensive and appropriate. Third, similar to their experience with case-based discussions in the college class, these prospective teachers sought support for their developing ideas. Collaboration and dialogue with the course instructors and their peers served as an important scaffold and appeared to make a difference in the students' ability to reprocess relevant issues and move on with their teaching (see Guzzetti, Snyder, Glass, & Gamas, 1993). Last, these teachers were not uncomfortable with the difficulties they were experiencing. Their history with case analysis seemed to prepare them to expect problems and dilemmas and, as a consequence of this awareness, the preservice teachers were persistent in their problem-solving efforts. This experience with case methodology seemed to boost their confidence in their ability to resolve their problems. About midway through the practicum, the preservice teachers' struggle with their instructional problems began to turn around. It was at this point that they began to feel that they were moving forward in their instruction. Being able to examine their problems more broadly helped them to return to the behavior we had observed earlier in the class in which they incorporated multiple factors to examine and resolve instructional issues.

Teaching and Learning with Cases is Messy

There are many descriptors I would associate with teaching using multimedia cases. It is fun, challenging, provides the professor with a window into students' thinking, and as L. Shulman (1995) indicates, is not easy. For the professor, there is much to think about, much to organize, and much to manage.

As the course instructor, I need to be immersed in the range and depth of content that is related to my cases so that I can encourage my students to think more deeply about case content and explore alternative viewpoints. I need to know how to use my equipment, arrive in my classroom early to be sure my equipment is still working, and be prepared to access relevant information across cases (accessing scenes on the videodiscs or artifacts in the associated materials) when such access would enrich our case discussions. I begin each case, and each class, with content goals but I must be prepared to go with the flow of the discussion; to listen to the questions, reflections, and assertions of my students and respond in ways that acknowledge the importance of the many voices of my class; and to mediate our study of the cases so that learning and thinking are enhanced. I know, too, that supportive communities are sometimes difficult to establish and that I may need alternative ways to invite participation by every member of the group.

Most of all, I need to be responding in ways that will enable my students to draw connections across the multiple topics being discussed and constantly think about the implications and usefulness of this information.

Conclusions

Overall, we are finding that our cases are helping us meet some of our teaching goals and pushing us to ask new questions about these goals. Cases provide a way to foreshadow classroom events for our prospective teachers and this foreshadowing seems to be pivotal for grounding these future teachers in an understanding of teaching realities and for producing problem-solving strategies that will help them cope with dilemmas they will face as classroom teachers.

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A Community of Thinkers: Literacy Environments with Interactive Technology[1]

Marino C. Alvarez

Communicating what transpires within the confines of science, mathematics, and technology is vital to all disciplines, especially to learners who are expected to achieve educational goals espoused by the academies of these and other disciplines. The literacy skills needed to learn, make connections within and among disciplines, and communicate to others are vital in this enterprise. So, too, are the specific ways in which these learners use language and instructional tools for learning and applying scientific and mathematical concepts (e.g., hierarchical concept maps, Vee diagrams, computer applications). Scientific literacy encompasses mathematics, technology, and the natural and social sciences. However, this notion is extended in our Explorers of the Universe project by incorporating other disciplines such as art, music, history, literature, and other subject areas in ways that expository and narrative discourse are intricately interwoven.

In our project, incorporating the curriculum is accomplished through student-researched self-directed cases with primary data from automatic photoelectric telescopes, using electronic mail, and publishing papers on the Internet. This methodology offers teachers and students alternatives to conventional instruction with content literacy.

Alternatives to Conventional Instruction

No longer is the textbook the single resource for high school students. Students are now able to access the Internet through multiple pathways of inquiry. Most textbooks present information in a linear format, while the Internet allows students to access information from multiple perspectives in a nonlinear format. Neither is the school library the major resource for housing materials. Libraries from all over the world can be accessed instantaneously via the World Wide Web. Students are using the Internet to access various directories that take them to numerous data bases that enable them to sort through information and note category relationships. They serve as research tools to our students in solving specific problems and as a repository to publish their papers (Alvarez, 1996; Alvarez & Rodriguez, 1995). Electronic mail (e-mail) is being used by students to communicate with other students and teachers in our project, and with astronomers who facilitate their inquiry.

A primary aim of our project is to actively involve teachers and their students in authentic tasks and materials couched in problem-oriented formats within meaningful contexts that foster thinking and learning--authentic in that students construct meaning from real data and are ask to make sense of the world around them. They pursue individual paths of inquiry using critical thinking (thinking about thinking in ways to bring about change in one's experience) and imaginative thinking (exploring future possibilities with existing ideas), and engage in social and solitary contexts that involve them in writing, interviewing, and reflecting with ideas gleaned from conversations and their readings. In our project, practitioners are facilitators rather than dispensers of learning. These teachers use their knowledge and skills to guide student inquiry using a negotiated curriculum. Teachers and their students engage in research practices that affect the four commonplaces of educating: teaching, learning, curriculum, and governance (see Gowin, 1981). The situational contexts (e.g., classroom, field experiences, and electronic communications) in which these commonplaces occur take into account both the affective and cognitive domains. Our project is unique in that it involves teachers and their students in the analyses of primary data received from automatic telescopes, and communication with astronomers who are directly in charge of these telescopes. The intent of our project is to develop a *community of thinkers* (Alvarez, 1995; Boomer, 1987).

A Community of Thinkers

The emergence of students and teachers into a community of thinkers is a vital component of our Explorers of the Universe project (Alvarez, 1995; Alvarez & Rodriguez, 1995). This project is supported

by our view that schools are not presently institutions of thinking and learning, in the sense that most teachers are not personally involved in the researching of their practice. Instead, they rely primarily on single texts and furnished materials to teach their students. We also believe that research practiced by outsiders will not significantly contribute to educational change until teacher research becomes established practice (see Boomer, 1987).

A community of thinkers is defined as an active group of students and teachers striving to learn more about a discipline by engaging in the processes of critical and imaginative thinking. During this inquiry the teacher thinks about the facts and concepts that need to be understood by students, the supplementary reading materials and artifacts that need to be provided, ways in which to incorporate other subject disciplines into the inquiry, and then selects from an array of teacher-directed/teacher-assisted strategies and meaningful materials that can be used to facilitate student thought. Likewise, the student becomes an active thinker in the learning process by engaging with the lesson by relating prior knowledge and world experience both informal and formal, selecting from an array of student learning strategies that are part of an individual's arsenal, and, with the teacher, works toward extending meaning and understanding of the subject matter.

Developing a community of thinkers focuses on the kinds of thought processes needed by the teacher and students to achieve learning outcomes. *Thinking of ways to achieve learning outcomes are not the same as focusing on ways that learning outcomes can be achieved.* The former is process-oriented; the latter product-oriented. Russell (1956, p. 6) states:

> In contrast to learning, thinking is a process moving from some initiation to some conclusion or solution rather than the process of increasing skill or perfecting the execution of the solutions. Thinking takes place during learning but is an intermediate phase rather than a final product. Conversely, learning may affect the efficiency of the different types of thinking.

In an effort to increase learning efficiency, we focus on the processes of thinking: selecting eliminating, searching, manipulating, and organizing information. Emphasis is placed on thinking as a process involving a sequence of ideas moving from some beginning thought, through a series of a pattern of relationships, to some goal or resolution. Within our community, teachers and students ask questions, seek answers, and reflect on their thoughts and feelings as they engage in action research case-based investigations.

Case-Based Student Research

The case method of teaching and learning provides a forum during which students can develop their own framework to reason and think about problems and situations related to an area of study (Hunt, 1951). Our students research and develop their cases as they investigate real problems. Their cases involve them in the processes of thinking as they interact with an array of print and multimedia environments. As students formulate their cases, they tend to focus their thinking processes beyond undirected thinking to more advanced stages that include inductive thinking to problem solving, critical and imaginative thinking, and discovery. The types of thinking processes involved to reach this culmination changes their view of learning from total reliance on product outcomes. Instead of thinking of ways that learning outcomes can be expediently achieved, these students focus on ways that meaningful learning can result when their energy is redirected to satisfying an intrinsic need to know and understand.

In a problematic situation, the underlying quality is "indeterminateness" (Gowin, 1994). It is this quality that guides the direction of the inquiry. For example, as students engage in their self-directed case inquiry they become intricately involved with an experience. Their cognitive and affective domains become intricately interwoven as they investigate and pursue their unanswered questions. It is in this experience that an event is identified (i.e., circumstances that include the study of variable stars). Events are units of experience (Gowin, 1981). In each of the six phases of the study of variable stars, one event is marked from another event by a dominating quality that culminates into an integrated whole. As with any event (e.g., a war, a play, a sculpture, a poem, a volcanic eruption, or a scientific experiment), all have a beginning, a middle, and an end.

Classroom Environment

The environmental context of a classroom or a computer-controlled automatic telescopic facility influences the degree to which thinking processes are stimulated and nurtured. This environmental context is stimulated by student-directed, case-based research and instruction that presents students with authentic problems that combine literacy, science, and mathematics in ways that integrate the thinking-learning process (see Alvarez, 1993). Astronomers focus on data accumulated on particular stars, make inferences based on their analyses of these data, and publish their findings in journals primarily read by other astronomers engaged in similar scientific investigations. In a similar vein, writing and publishing reports on the World Wide Web provide students with a venue to reflect and revise their thoughts depending on the audience to which they are describing their ideas.

The environmental context of the class also influences student writing of their reports. How a student describes a Cepheid variable star functioning in one environmental context differs from when she writes about Cepheid variable stars in a science report. If the report is for consumption within a class with a teacher and classmates it may be written in one form. However, if the environment changes to one that is electronically interactive (i.e., e-mail or papers published on the world wide web), the format of the writing and thought processes may be altered to meet the challenges that may be incurred from faceless and unknown readers.

This learning environment is in contrast to many content literacy classes. For example, much science teaching indoctrinates students with knowledge that has already been discovered. In this situation, the students' role is to learn the information they receive. This type of teaching becomes less meaningful when teachers depend upon materials furnished by the publisher that accompany a textbook. In these circumstances, little thinking is done by the teacher when preparing lessons and assignments, and students resort to completing these prefabricated worksheets and assignments with minimal effort and thought. In fact, because of this stilted manner of assignment giving, much of the science vocabulary is reduced to learning through rote memorization with little understanding of the concepts, details, generalizations, or theories (Gowin, 1981; Novak, 1990, 1993; Thelen, 1984). Thinking in lesson development occurs by someone other than the teacher responsible for his or her students. In many instances, the teacher becomes a conveyor of information and lessons that have already been thought and developed by someone else. The role of the teacher as an active thinker in the classroom is diminished, if not extinguished, in such practices.

Within our environmental context learning is spirited. Astronomers are in the role of explorers. They are constantly seeking to learn more about the stars they are investigating. They are involved in thinking and imaginative processes that motivate them to learn new knowledge and test theories. Likewise, teachers and students are active thinkers in search of new knowledge. The teacher facilitates this thinking-learning process by developing lessons that require critical and imaginative thinking. The teacher, like the astronomer, is an active thinker who interacts with new knowledge. Students also actively participate in this venture. Together they analyze data that add to a body of knowledge never before investigated. These teachers and students also become explorers at the frontier of the known universe.

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Tinkers

Within a community of thinkers are "tinkers." These are individuals who have learned to enjoy experimenting and playing with ideas. Teachers, who are tinkers, experiment with ways to actively involve their students with meaningful materials and lessons. They adapt, modify, and create new ways for their students to become more thoughtful and knowledgeable individuals. In the process, they become more thoughtful and knowledgeable of their discipline. A few students make up the subgroup of the community I call "town tinkers." Readily identified, these students exhibit an intense desire to know and understand more than what is required. Their knowledge of the subject discipline is considerably more advanced than the typical student in the class. They imagine what can be from future images and work back to their ideas of what it takes to reach this stage. Like the tinkering teacher, they are not bound by time constraints. These students relish the opportunity to "show the teacher what they can do." Experimenting, reflecting, discussing, modifying, and acting on their thoughts and feelings are their driving force.

Investigating Thinking-Learning Contexts

The ways in which students pursue and resolve open-ended assignments provide valuable insight to the teacher in planning for and meeting individual student needs. How students create their own thinking-learning contexts when confronted with authentic problem-oriented tasks is an important issue that influences instruction and learning. Thinking-learning contexts are those mental models (conceptual frameworks) that students invoke when confronted with problem-oriented tasks that go beyond memorizing and compartmentalizing information.

The construction of meanings by learners requires that they actively seek to integrate new knowledge with knowledge already in cognitive structure. Learners in our study include scientists, university educators, teachers, and students. Ausubel's (1963, 1968) assimilation theory of cognitive learning has been shown to be effective in guiding research and instructional design to facilitate meaningful learning. Gowin's (1981) Vee heuristic has been used effectively to aid our teachers and their students in understanding the constructed nature of knowledge. Concept mapping has also been used effectively with our students to aid meaningful learning with resulting modification of their limited or inappropriate propositional hierarchies (see Novak, 1993).

As educators we need to understand how new knowledge is understood by teachers and students engaged with research in a specific discipline so that we may better understand the workings of

different knowledge paradigms. Since all knowledge is constructed, we need to ascertain how an individual constructs his or her mental models (personal constructs) with this new knowledge. In so doing, it helps us to better understand how to incorporate this knowledge into related subject disciplines rather than allowing it to be kept in isolation and compartmentalized within a given discipline.

This collaborative project requires learning from astronomers a working knowledge of how they conduct their research and the paradigms they use when evaluating and learning about new knowledge in the universe. By involving astronomy and physics teachers in active collaborations with these astronomers, a better understanding of how these teachers incorporate knowledge and data collected by astronomers with their students is ascertained. Astronomy and physics students learn principles, solve mathematical calculations, and interact with the World Wide Web using facts, concepts and principles derived from the science of astronomy. Electronic mail communications take place on a regular basis. Teachers and students communicate with others in our project as well as with other astronomers at other locations.

Mediating Knowledge

The process of mediating knowledge involves Tennessee State University (TSU) astronomers interacting with teachers and their students. Greg Henry (TSU astronomer) serves as our knowledge base and reference. He passes on his experience and knowledge in a variety of ways, such as conducting a workshop for the high school teachers that prepares them to use methods of collecting, reducing, and analyzing data obtained by the Automated Photoelectric Telescopes (APT) that these astronomers at Tennessee State University operate at the Fairborn Observatory near Washington Camp in southern Arizona. He also is available to answer students questions as well as the questions of the teacher. Greg doesn't just tell the answer, but directs student-questioners toward sources that allow students to access and interpret information for themselves.

A series of e-mail messages are shown below that demonstrate examples of teacher-student thinking:

From Teacher [Bill]

To: Greg [TSU astonomer]:

I have encouraged the students working on this star to record their thoughts and analysis. Here is a summary of the work they are doing.

Are we off base? Close? Without a clue? We first graphed visual, ultraviolet, and blue readings of the target star vs. Julian date. We separated the data into two groups to eliminate the gap in the dates (assumed the summer happened). The data, according to Eric looked more like a squid than anything else useful. So, we proceeded to graph Blue-Visual to determine if the color was varying. Again, nothing seemed useable. We then tried Ultraviolet-Visual, on a fluke hope of some order, getting nothing. Next, came all three readings, visual, ultraviolet, and blue, vs Julian date, which produced three irregular groupings of points, which resembled each other, thus the reasoning for no tangible results from our previous graphs. Eric [a student] suggested isolating the second component to sort out the mess. Isaac suggested the following method of achieving this: We are trying to isolate the second component in the HD80492 system by taking a 24 day sample of the data. Assuming that the period of the star's variance in color temp of approximately 4 months in the paper written by R. F. Griffin, Cambridge Observatory is correct, we should be able to cancel out the light from the main component by subtracting out the value of the main star in an attempt to determine the brightness, and perhaps color temp of the second component. Once the second component is defined, we will then be able to determine the variance of the main component more exactly. The above I believe will work, but if the APT [Automatic Photoelectric Telescope] could isolate the second component it would be even better (*?:::Could the APT image second component?*) asks Isaac, Eric, and Barrett [students].

This communication reveals that the teacher and his students are negotiating meaning with the data and are suggesting possible ways to analyze the data. The students record their thoughts in a journal. Together the teacher and students think about possible ways for interpreting information that appears in a published astrophysics paper and its implications for their analysis of primary data being received from the Automatic Photoelectric Telescope on the same star. They go through a series of trial-and-error procedures: testing, re-evaluating, sharing ideas, and seek alternatives. By engaging with real data, their hypotheses take on new meaning when searching for plausible resolutions rather than solving problems to complete an artificial exercise.

In the reply that follows, Greg Henry facilitates their inquiry.

Reply From Greg [TSU astronomer]

Hi Bill [teacher], Isaac, Eric, Barrett [students]

First, you are correct that the gap in the data corresponds to the time between observing seasons for this star. You can find a Julian Date calendar in the Astronomical Almanac that will allow you to translate Julian Dates to calendar dates. Second, the Fairborn-10 APT observes in the Johnson, V, R, I bandpasses, not UBV. Data in the file are listed in the order, V, R, I for variable minus comparison star then V, R, I for check minus comparison. I would confine your analysis to the second set of data. The first set, taken just at the end of the previous observing season, aren't really sufficient to tell you much. As you will see in the Griffin paper, HD 80492 is a single-lined spectroscopic binary. This means that the secondary star, whatever it is, is much fainter than the K giant and that its light is too feeble, compared to the K giant, to register in a spectrum. Therefore, it is safe to assume that nearly all of the light we observe comes from the K giant star. There is no light from the secondary star to worry about removing, and any variation in light that we see must come from the K star. Stars in close binaries like this one have angular separations only a tiny fraction of a second of arc and so are impossible to resolve in a telescope. Therefore, even if we wanted to measure the brightness of each star separately we could not. However, the relative depths of the spectral lines in a double-lined spectroscopic binary CAN give you the relative brightness of the components. So keep trying. There IS a discovery awaiting in this data set (I cheated and peeked). Reread the Griffin paper for a clue as to what the rotation period of the giant star might be.

Greg replies to the teacher and his students in a way that stimulates further inquiry on their part. He does not simply tell them the answer. Instead, he focuses their attention to revisit the scientific article pertaining to the star under investigation. He encourages them to keep striving for a resolution by again capitalizing "IS" in the sentence in the last paragraph and refers them to the article.

In this electronic mail exchange, both the teacher and his students and the astronomer engage in thought provoking ideas. Literacy is emphasized by both the teacher in his communication to the astronomer and by the astronomer to the teacher and his students. The paper becomes a focal point to make the numerical data analysis retrieved from the APT relevant and meaningful. A transformation of ideas results from reading and thinking about what the author of the paper, Griffin, has revealed, the ideas evolving from teacher and student dialogues, and the mediation of the astronomer in this negotiation process.

Critical thinking is in evidence because the lesson (self-directed, case-based research with variable stars) is situated in a context that

students invoke naturally as they actively engage in multiple paths of inquiry. These paths include:

1. Reading and revisiting the text and supplementary materials.

2. Accessing library resources within the school and community and through the Internet and making discerning judgments as to their content.

3. Receiving feedback from their peers and teachers.

4. Negotiating the thinking-learning process by exchanging in meaningful dialogues with peers, teachers, scientists, and university educators.

5. Publishing papers on the World Wide Web.

6. Writing, revising, and rewriting papers.

7. Using metacognitive tools to monitor their understanding with new information.

8. Incorporating information from other subject disciplines.

9. Using their imagination to think about unrealized possibilities.

10. Applying logic, mathematics, scientific, and literacy skills in meaningful contexts.

11. Building new knowledge about the kinds and types of stars.

Students are encouraged to make suggestions for improving the text of their written report. They can rewrite the pages themselves or make the suggestion and have their teacher edit the document. The students also ask Greg questions directly. This exchange serves two purposes. First, it provides the opportunity for students to interact directly with a scientist. Second, students seem to ask more precise, carefully worded questions than normal. Many times students use a shot-gun approach to asking questions: They fire a salvo of small, wide-ranging questions, hoping to find the answer. When dealing with the scientist, they spend more time thinking about the question(s) they wish to ask and take a more direct approach. This method seems to force them to collect their own knowledge first, look at the different connections that exist between the information they have at hand, and then compose the question.   34

Students report that they enjoy the concept of open-ended, self-directed, case research. A shift seems to be emerging from learning that is dependent upon the teacher to that initiated by the student and pursued with a purpose. One student expressed the sentiments felt by the others: "Usually we are asked to pick a single sentence thesis and defend it. Here we are allowed to roam and then define a topic. Then we can do further research in areas we really get interested in." Critical analysis of their textbook is also evidenced through their questions: "Why do astronomy books assume knowledge about terms when they are supposed to be introductory texts?" "Much information in the texts is superficial and rote in nature. There doesn't seem to be good explanations, examples, or pictures of the information."

We have also developed and pressed a compact disc that shows Bill and his students involved with various aspects of analyzing variable stars. For example, the mathematical process of period analyses is one of the events depicted. Other scenes show students describing their Vee diagrams and Concept maps to the teacher. The most interesting features of this CD are the subtle ways that the teacher and students are interacting with the data set in honest negotiation. The viewer is shown how a teacher and his students resolve primary data of variable stars by exchanging spontaneous questions and trying out their suppositions. Hypertext documents were developed to accompany this CD so that scenes can be instantaneously accessed in various ways by teachers and students wanting to see these events in action. Cameras have been installed in the two high school classrooms to enable students to have visual contact with each other. We are using the CU-CME interactive software from Cornell University to make these connections.

Conclusion
Emerging is a change in teaching and thinking from linear contexts to multiple paths of inquiry using multimedia learning environments. Thinking is evident in the written communications and conversations between a student and a teacher and between other students and scientists as each construct meanings, communicate ideas, and pursue unanswered questions.

The classroom teacher is thinking and learning more about his subject area as he prepares for these cases; analyzes students' concept maps, Vee diagrams, and working and report portfolios portrayed on interactive computer text files; and negotiates the curriculum by guiding and encouraging students to engage in imaginative and critical thinking. Likewise, students are thinking and learning about the world be relating their formal in-school experiences to their

informal out-of-school experiences. As they research their case, they are self-propelled into an arena that invites them to know more about the process of learning. Their student-researched cases provide multiple possibilities for resolution and open areas for discussion that extend and integrate the discipline with other subject areas that enrich the learning context. These students are becoming more deliberate in their thinking and learning and becoming more independent in the process. Their papers published on the World Wide Web tell their story about the research they are doing and the ideas to be shared. They write their stories based on the facts and ideas that are being received from the stars through automatic photoelectric telescopes. Their experiences, both cognitive and affective, play an active role in this thinking process. It is within this process of imaginative and critical thinking that moves them into the realm of learning. This environment is crucial in stimulating a desire within students to become self-empowered and in charge of their own well-being.

These trusting relationships between teachers, students, astronomers, and university educators are emerging into a community of thinkers. A community where participants are exploring literacy for multiple reasons in ways that promote learning as a life-long path of inquiry rather than a means to an end.

Endnote

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Technology and Literacy: Challenges of the Twenty-First Century

Michael C. McKenna

Two recent facts document a continuing trend in which electronic text increasingly affects the lives of educated Americans. In 1994, for the first time, the number of computers sold in the United States exceeded the number of televisions sold. In 1996, again for the first time, the number of American homes having personal computers in them reached 50%. The increasing use of electronically digitized text, both in the home and in the workplace, may at first seem unrelated to the way in which literacy is fostered in school settings. After all, the same basic processes of word identification and comprehension must occur, so that teaching children to read and write in conventional paper environments is likely to prepare them well enough for a world of electronic text. This at least is the rationale of many educators who remain resistant to the advent of computers in their classrooms. In this article, I will argue that such a rationale is not sound and that it will become increasingly important for literacy educators to make use of computers.

How Is Electronic Text Different?

If electronic texts amounted to no more than digitized versions of paper texts, then whether computers played an instructional role would make little difference. Teachers could defensibly rely on the same printed materials they have always used. But electronic texts differ in significant ways from their paper analogues. Reinking (1994) has identified four principal differences.

First, readers can interact with electronic text. While conventional reading is often described as interactive, the text is, in fact, fixed and cannot respond to the reader. Electronic texts, on the other hand, can alter themselves in response to reader input. For example, readers might request a rewording, clarification, expansion, or definition as they proceed through an electronic text.

Second, the reading of electronic texts can be guided. Such texts can be programmed to solicit reader input at key points and then to respond accordingly. For example, periodic comprehension checks might cause the computer to present a reader with additional or simplified material if comprehension were inadequate, or it might require rereading of the relevant portion of the text before permitting the reader to proceed.

Third, electronic texts may well have different structures than conventional printed texts. The most salient example is that of hypertext, the notion of a network of text components that do not need to be read in sequence but that can be accessed strategically instead. The broader idea of hypermedia incorporates nontext components as well, such as quick-time movies.

Fourth, electronic texts incorporate different symbols. In addition to all of the conventional print symbols a reader encounters, electronic texts often rely on symbols unique to the electronic environment. Icons signaling the availability of photographs, quick-time movies, audio clips, and so forth, not presently on screen, are examples. These new symbols must be processed strategically, in tandem with alphabetic symbols.

These differences are not peripheral to the acquisition of literacy. And they are certainly not the attributes of computer software, which educators are free to take or leave as they wish in the confidence that trends and fads will come and go. Rather, these changes are fundamental and have already irreversibly affected both the workplace and the home.

Consequently, educators who make use of electronic texts as an integral part of literacy instruction are doing far more than providing ease of transfer from the learning environment to that of a later application. The four features of electronic texts identified by Reinking (1994) essentially transform the very nature of literacy. It is now clear that to be literate in electronic environments requires skills and strategies in addition to those conventionally associated with literate behavior.

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How Is Electronic Literacy Different?

Naturally, virtually all of the skills one might list with respect to conventional literacy, from letter identification through higher-order comprehension, apply to electronic environments as well. The reverse, however, is not true. Electronic environments make unique demands on readers and writers, and only experience in such environments can help children meet those demands. Consider some of the major transformations in literate behavior that are now being affected by the rapid advent of electronic texts. (There are others besides those I will briefly discuss here, but these will serve to illustrate my point.)

Navigation. Hypertext and hypermedia systems have the advantage of affording readers maximal flexibility in achieving their purposes. But they have a dark side as well. For readers who have not yet become sufficiently strategic, these networks of textual and multimedia components can become labyrinths. Students may drift without purpose and fail to organize and internalize the information they encounter. In short, the nonlinear options made available through hypertext sometimes offer too much freedom, particularly when the user is not sophisticated enough to manage these resources.

Multiple texts. By linking a variety of text components, hypertext systems require that readers be able to interpret information from multiple sources. This means critical comparisons of what is read, as well as the resolution of contradictions, inconsistencies, and inadequacies. Such systems also frequently require that users be able to judge what to read, what to skim, and what to skip. In short, the ability to read critically becomes ever more important and its application becomes uniquely recursive. In fact, when one considers the linkages possible among textual components via the Internet, the need to make informed critical judgments becomes indispensable.

Conventional models of the reading process are now in agreement on the necessity of integrating information across sentence and paragraph boundaries (e.g., Lipson & Wixson, in press). Hypertext environments will no doubt require a reformulation of these models to account for the presence of multiple texts. In such environments, readers must not only be able to integrate information *within* texts but also *between* texts.

Multimedia impact. Hypermedia systems merge textual and nontextual sources, making both available at the discretion of the user. Inferential and critical abilities needed to evaluate and integrate information from multiple texts will have to be extended and refined to include nontextual components as well. In the near future, effective

literacy will entail not only reading and writing but alternatively viewing and listening as well.

Writing. The extensive use of word processing software in the workplace makes it hardly necessary to suggest that teaching students to write in word processing environments is educationally desirable. (This would be true even in the absence of research findings favoring the instructional use of word processing. See Bangert-Drowns, 1993.) What may be less clear to many educators, however, is the fact that electronic text environments are transforming the writing process. Examples include (a) the use of copy-and-paste functions and note pads while using and collecting data from electronic encyclopedias, (b) interchanges of electronic mail among ever-expanding communities of students, and (c) the creation by students of hypertext systems of their own (Bolter, 1991). Without doubt, effective writing is being transformed into a much more complex and demanding set of skills.

Instructional Implications

My argument has been this: (a) electronic texts now permeate the workplace and will become increasingly prevalent in the home; (b) such texts differ in fundamental ways from conventional, paper texts; (c) these differences affect the nature of literacy and literate behavior; and (d) literacy educators must revise their instructional approaches to account for this transformation.

Reasonable projections based on current developments both in hardware and software development make possible a provocative picture of literate activity in American classrooms of the early 21st century. The following are likely eventualities.

* Beginning readers are likely to be exposed to hundreds of high-quality children's literature titles, each one equipped with beautifully scanned illustrations and support features such as digitized pronunciations and embedded phonics minilessons (McKenna, Labbo, Reinking, & Watkins, in press).

* Continued improvements in voice recognition will not only make the keyboard and the mouse obsolete, they may well make language experience an instantaneous process. Likewise, they might be used to facilitate ongoing assessment of reading development by means of miscue tracking and analysis.

* Multimedia software will enable even prereaders' literate behavior to emerge in electronic environments as they mingle invented spelling with drawing (Labbo, Reinking, & McKenna, 1995a, 1995b).

- Children's interaction with software will be centrally recorded in electronic portfolios, and highly focused follow-up skills work will be provided prescriptively in engaging formats.

- Content area textbooks will cease to exist in conventional forms but will rather comprise hypertext networks, including support resources for less-able readers (Horney, 1994; Leu & Hillinger, 1994). Such resources will include digitized pronunciations on demand, on-line glossary entries, simplified renderings of text, teacher-generated marginalia, explanatory information, built-in guided reading, digitized signing for the hearing impaired, and other features.

- The hardware needed to make these transformations possible will continue to become smaller, more convenient to use, faster, and cheaper. Keyboarding may well become obsolete in an era when voice recognition software has been perfected. Expensive micros, with their costly and powerful CPUs, may give way to inexpensive shells linked to centralized computers at remote sites. In addition, more immediate ties to the home will become feasible as interactive television emerges and the distinction between televisions and computers becomes increasingly blurred.

In such an instructional context, the idea of approaching literacy instruction through conventional paper-and-pencil means will become increasingly archaic. It is now time for teacher educators, who are positioned to prepare the next generation of literacy teachers, to confront the transformations discussed in this article and to modify the manner in which teachers are prepared. For their part, inservice teachers must become increasingly cognizant of the type of world they will be educating their students to enter. They must ask themselves whether their methods are well aligned to the realities of the future.

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Integrating Technology and Reading/Language Arts at the Undergraduate Level

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Today's elementary teachers must be literate in many areas if they are to be successful in the classroom. Although undergraduates who enroll in teacher education programs are able to read and write, many are not literate in the area of technology. Therefore, it is incumbent upon faculty responsible for program development to plan and coordinate experiences with technology throughout the undergraduate program. The purpose of this article is to describe the technology experiences provided in undergraduate elementary education courses in reading/language arts at The University of Mississippi (UM). The experiences will be described as they were offered to the 1996 graduating class.

Junior-Level Experiences

Students majoring in elementary education enroll in both general education and professional education courses during the junior year. Six of the 13 semester hours in education at the junior level are earned in two courses that emphasize computer technology. The courses were developed in 1993 when the Mississippi State Board of Education mandated that graduates have a computer course, a second reading education course, and a special education course in order to be eligible for provisional certification in grades K-8. With special permission from the Mississippi Certification Commission, UM was allowed to

offer two 3-hour courses, one integrating computer technology and reading and the other computer technology and special education.

In spring 1995, EDRD 350, Computer Technology and Reading Instruction, was taught for the first time. Three faculty members taught concepts related to literacy in three sections of the course, another taught computer technology in a lab located in the School of Education, and another coordinated experiences in Professional Development School (PDS) computer labs. The class met twice a week for 75 minutes; however, the education computer lab was available to students on a daily basis.

Reading Component

During the first 4 weeks of the semester, reading instructors provided overviews of topics such as integrating technology in the curriculum, theories of reading, the history of reading instruction in the United States, factors that influence reading development, and the writing process. The next 10 weeks were devoted to one day of reading instruction and one day of lab experiences, either in the education computer lab or in a computer lab at a PDS site. The reading sessions of this 10-week period introduced students to literacy instructional approaches (language experience, basal reader, literature-based, individualized, and whole language) and word-identification and comprehension issues. The final 2 weeks of the course consisted of three reading sessions, one dealing with study skills and the other two with a culminating activity on integrating computers and reading instruction in the elementary classroom. In the culminating activity, collaborative groups selected a reading approach or component of literacy instruction, identified and described software that could be used with the approach or component, and created a plan for integrating the software with literacy instruction in the classroom. Group presentations of the plans were evaluated by peers and the instructor of the section.

Student learning was evaluated on collaborative group activities, written examinations, written summaries and reflections of three self-selected journal articles on designated topics, and a written report of interviews with children regarding their perceptions of reading. For the interviews, students located three children of different ages and asked them the following questions: What is reading? Why do people need to know how to read? Who is the best reader in your class? Why do you think so? How good are you at reading? Why do you think so? How could you teach someone to read?

Education Computer Lab

As mentioned above, reading instruction and lab experiences were conducted on alternate days for a 10-week period. Students from each section of the course were placed in two groups for lab experiences. One half met weekly in the education computer lab for 75 minutes of instruction, while the other half observed in PDS labs for one hour per week. At the end of 5 weeks, the groups rotated.

The education computer lab was donated by EduQuest, a subsidiary of International Business Machines (IBM), at the conclusion of a collaborative research project between IBM and two School of Education faculty members. The donated equipment included 18 IBM personal computers on a local area network with a 386 file server, printers, and software programs. EduQuest also provided a systems engineer and an educational technology consultant to assist with installing the laboratory and training faculty during the first year. In order to obtain the additional support equipment needed to set up the lab, funds were secured through a UM Associates Grant to purchase furniture for computer stations, electrical wiring, additional hardware, training for faculty, and software manuals and other instructional materials. Each computer station was equipped with a color monitor, mouse, mouse pad, keyboard, and digitized speech speaker. The multipurpose, multiage literacy software ranged from tutorial and drill to interactive and problem solving.

In preparation for the lab experiences, one of the reading instructors and the computer lab instructor viewed each literacy software program. Tutorials, drills, simulations, and problem-solving programs were selected for use with students because they provided assistance or help screens, allowed for control of the response rate, offered various levels of difficulty, and provided accurate and immediate feedback.

Experiences in the education computer lab began with an introduction to computer terminology. To help students activate their knowledge of computers, the K-W-L strategy (what we Know, what we Want to find out, and what we Learned) was used. Students were paired, based on their levels of computer experience, to launch and examine several basal and literature-based software programs. The student with the most keyboard experience performed the job of keyboard operator, while the one with less experience wrote responses on an evaluation form (see Table 1) adapted from Vockell and Schwartz (1992).

Table 1

Checklist for Evaluating Computerized Drill and Practice Software
EDRD 350 Computer Technology and Reading Instruction

Name of Program	Yes	No
1. Does the program require active interaction?		
2. Are there clues that enable you to answer the questions correctly without mastering the concepts?		
3. Is there feedback? If yes, what type (corrective, immediate, or informative)?		
4. Are you able to control the rate of response to a question?		
5. Are you provided with all the information necessary to respond?		
6. Does the program focus on one concept at a time by using screen space effectively?		
7. Are help screens provided?		
8. Is it easy to request assistance if help is needed?		
9. Does the program use correct spelling, grammar, and usage?		
10. When you give a wrong answer, is that item reviewed later in the drill?		
11. Does the computer track errors and provide feedback on these errors?		
12. Is the drill motivational?		
13. Are you able to turn off the sound or distracting features?		
14. Does the program have a branching feature (giving harder questions after several right answers or easier questions after wrong answers)?		
15. Is the program easy to use with a partner?		

Additional comments regarding your initial reaction to the appropriateness of the program:

The second session demonstrated an integrated language arts lesson developed around the theme of feelings. As the session began, students assembled as a whole group to hear the story, *The Rough-Face Girl* (Martin, 1992). Then collaborative groups rotated through drama,

writing, and reading stations, following instructions written on task cards at each station (see Table 2). At the drama station, students created a script depicting feelings and performed the skit with hand puppets. Students used *The Children's Writing and Publishing Center* (The Learning Company, 1990) software at the writing station to draft a language experience story about feelings. At the reading station, students uploaded a file containing an excerpt of the story, *Stone Fox* (Gardiner, 1980). A task card provided instructions on launching the program and accessing the text. Students read the text and typed their responses to open-ended questions and prompts.

Table 2

Task Card for Writing Station
EDRD 350 Computer Technology and Reading Instruction

1. Recall a time when you experienced strong feelings (happy, sad, angry, embarrassed, frustrated, etc.).

2. Call up mental images of the incident. Make notes, map, draw, or outline what you want to tell about this experience. Use *The Children's Writing and Publishing Center* program for the prewriting stage. Choose the story option. Print a copy of your plan.

3. Use *The Children's Writing and Publishing Center* program to write a draft telling about your experience. Choose the story option.

4. Revise and edit your piece, if time permits.

5. Print your language experience story.

6. Place your story in the box in the Writing Station. Be sure your name is on the story.

During the third class session, students were introduced to desktop publishing programs. Working in pairs, they chose graphics and then drafted a story to accompany the graphics. After drafts were printed, papers were exchanged for peer review. Stories were then revised and edited on the computer, and final drafts were printed. Also in the session, a graphic organizer (semantic web) was used to demonstrate the development of a thematic unit. Collaborative groups were formed, and students within each group were guided in designing their own semantic webs on themes of their choosing.

At the fourth lab session, groups presented their units, including explanations of how technology was integrated. After these presenta-

tions, collaborative groups selected two out of three activities to complete following detailed directions on task cards. Groups selecting Activity A identified a theme, selected age-appropriate software, wrote several objectives, brainstormed activities, and chose learning outcomes for the objectives. Groups selecting Activity B examined 10 literacy software programs, using a checklist to evaluate the software and justify their choices. Groups choosing Activity C produced a four-page newsletter that included descriptions of reading approaches and featured rewritten literature-based stories, original language experience stories, appealing graphics, and interviews with whole language teachers. Students were evaluated on these activities with a rubric (see Table 3). At the end of each lab session, students summarized and reflected on their learning.

Table 3

Rubric for Scoring Group Activities
EDRD 350 Computer Technology and Reading Instruction

4 points	3 points	2 points	1 point
The activity showed high evidence of the students' perception of the work--knowing what to do and how to get it done. Team work was evidenced throughout the activity. Work turned in was the maximum amount required to complete the activity. All directions were followed. The material presented was original, creative, and very appealing to the viewer.	The activity showed evidence of the students' perception of the work. There were some misconceptions of knowing what to do and how to get the activity done. Team work was evident. Work turned in was the maximum amount required to complete the activity, but all directions were not followed. The material presented was original, creative, and appealing to the viewer.	The activity was done in a rather sketchy manner; students were not certain about the assignment. Some evidence of team work was shown. Work turned in met the minimum requirements, but attempts were made to think through the assignment. Some directions were followed. The material lacked originality, creativity, and appeal to the viewer.	The activity was attempted, but lacked direction. No evidence of team work was shown. Work turned in was below minimum standards and was not well thought out. Directions were not followed at all. Material lacked originality, creativity, and appeal to the viewer.

Rubric scoring for the projects: Points multiplied by 2.5 for each activity; 20 points maximum.

PDS Computer Labs

Students were assigned five lab observations in two PDS sites where they observed children interacting with technology. They reflected on and recorded their perceptions of the effectiveness of software programs being used and summarized observed activities. Their responses were guided by questions on a form that was completed after each observation (see Table 4). Completed forms were submitted to the

instructor responsible for coordinating PDS activities. The instructor then scored the forms with a rubric (see Table 5).

Table 4

PDS Lab Observation Form (Front of form)
EDRD 350 Computer Technology and Reading Instruction

Student's Name _____

Name of Program _____

Company_____

	Poor	Good	Excellent
	1	2	3
1. Does the program start as soon as the computer is turned on?			
2. Is the program varied to maintain interest?			
3. Are the instructions clear for this age student?			
4. Is the program interactive?			
5. Can students operate the program independently?			
6. Is the purpose evident?			
7. Is there a quick and easy way out of the activity?			
8. Are pictures and sounds related to the learning activity?			
9. Is positive feedback provided?			
10. Is there a clearly written user's manual?			
11. Is there a teacher's guide with classroom uses and activities?			
12. Is the approach unique to computer capabilities (not like a worksheet)?			
13. Can two students interact cooperatively?			

Program strengths:

Program weaknesses:

Table 4 (continued)

PDS Lab Observation Form (Back of form)
EDRD 350 Computer Technology and Reading Instruction

Summary of lab activities (What were the objectives of the lesson? How was the class organized? How did the teacher interact with students? How did students respond to the lesson? Was the computer used for drill or higher-order thinking skills?)

Reflections (How do you feel about the lesson? If you were teaching, how would you change the lesson? What are your reasons for suggesting the changes?)

School _____   Date _____

Lab Instructor _____   Time in Lab _____

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Table 5

Rubric for Scoring PDS Lab Observation Forms
EDRD 350 Computer Technology and Reading Instruction

Components of Excellence	4	3	2	1
Summary	All five of the questions in the summary were answered with extensive comments. Ideas were presented coherently and expressed with style and in good "first draft" form.	Four of the questions in the summary were answered with limited comments. Ideas were largely understandable. Some writing was awkward, and there were consistent errors of form.	Three of the questions in the summary were answered with very few comments. Choppy writing made reading difficult. Form did not represent high professional standards.	One or two of the questions in the summary were answered, but ideas were not clearly understood. Poor writing style reflected much difficulty in communicating through written form.
Reflections	All three of the questions were answered, indicating extensive reflective thinking and connection to the summary.	All three of the questions were answered, but reflective comments were not well related or linked to the summary.	Two of the questions were answered, but reflective thinking was not linked to the summary and/or many ideas were repetitive or very nonspecific.	Only one question was answered, and reflection was almost entirely without personal connection.

Two points will be given for the completion of the checklist and program strengths and weaknesses.

Total points possible: 10

Senior-Level Experiences

Elementary education majors at UM progress through the senior year in a cohort group. All students alternate coursework blocks on campus and action labs in PDS sites during the fall semester. One course offered in the fall is EDEL 414, Integrated Instruction: A Social-Constructivist Approach to Language Arts, Social Studies, and the Arts. This nongraded, 9-hour course contains six team-taught strands: lecture/simulation, a brief lecture followed by modeling in a simulated elementary classroom; lecture/workshop, lecture followed by hands-on experiences; tutorial, small group discussion; independent project, self-selected research or materials construction; field trips/community encounters, self-selected visits to educational and noneducational facilities; and technology, hands-on experiences with computers and other media.

The technology strand of EDEL 414 was divided into four weeks, with 2 weeks of instruction before and 2 weeks following Action Lab 1 in the field. Classes met weekly for 3 hours in the education computer lab, which contained additional equipment obtained with grant monies and faculty technology enhancement funds. Technology hardware introduced included networked IBM and stand-alone Macintosh computers, a CD-ROM, laser disc, video recording devices, cable and public television, and telecommunications. Software products included a variety of curriculum related computer programs, word processing programs, a multimedia CD-ROM encyclopedia, a drawing/paint program, a laser disc program, samples of educational television and commercial video programs, and telecommunications information.

During the first week, students assumed the role of learner as they rotated through a variety of centers designed by the technology instructors. Each center contained a task card describing the directions for proper operation and care of the featured technology, a step-by-step activity designed to introduce students to a particular software product, and an application modeling an effective integrated use of the technology in an elementary classroom. Students learned to scan bar codes to access information at the laser disc center. At the video camera center, students taped activities in and around the building. The research center involved a rotation through three computers. At the first one, students researched facts about an insect using an encyclopedia. At the next computer, they sketched the insect with a drawing program. At the last computer station, students typed a funny story incorporating facts about the insect.

Center activities begun during the first week were completed at the beginning of the second class. Then the class was divided into small grade-level interest groups, and students assumed the role of teacher to design integrated lesson plans. Technology instructors provided resource packets for each group. Each resource packet contained a list of available hardware and software materials, samples of grade-level curriculum guides mandated by the Mississippi State Department of Education, a copy of Bloom's Taxonomy of the Cognitive Domain, and a copy of the *Mississippi Teacher Assessment Instruments* (Mississippi State Department of Education, 1993) portfolio lesson plan form. Groups were required to use the resource packets to design a lesson plan integrating available technology into the curriculum for their designated grade level, and they also were required to generate computer task cards for center activities (see Table 6).

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Table 6

Sample Task Card Written by Students
EDEL 414 Integrated Instruction: A Social-Constructivist Approach
to Language Arts, Social Studies, and the Arts

1. Push the POWER button on the TV.

2. Push OPEN/CLOSE on the laser disc player.

3. Take the disc from the *Eyes on the Prize* box (*Eyes on the Prize I,* 1993).

4. Insert the disc into the player with SIDE A turned FACE UP.

5. Turn to PAGE 1 in the *Eyes on the Prize* book.

6. Push the BLUE read button to scan the appropriate bar code.

7. Scan the bar code labeled OSSIE DAVIS.

8. Repeat the above steps to scan other segments of the program.

9. Push the PLAY button if you wish to listen to the disc.

Week three of technology followed the first action lab experience. Students discussed technology projects observed in the schools, types and amounts of equipment available to children and teachers, and effective and ineffective uses of these technologies. Students were also given time to continue developing lesson plans begun in the second week of technology. They explored software, videos, laser discs, and educational television programs for use in their lessons. The remaining class time was spent in group presentations of the plans. Presentations were evaluated on the effective integration of technology into the curriculum, appropriate demonstration of the technology, and creativity in the lesson plans.

In the fourth and final week of technology, computer applications requiring critical thinking, collaborative work groups, and creativity were the focus. Each class was divided into two groups that rotated midway through the session. Group one met in the networked IBM computer lab with instructions written on task cards. These students created databases and spreadsheets and learned to communicate with each other via the local area network using e-mail. The second group,

coached by the technology instructors on newly acquired Macintosh computers, learned how to use multimedia software programs and then created multimedia presentations to share with their peers. These multimedia presentations were projected on a screen with the use of an LCD panel.

Revisions and Visions

Funds have been approved for public schools in Mississippi to purchase new computer equipment and to upgrade existing hardware and software in order to more effectively integrate technology into classroom instruction. As a result of this statewide direction in technology, student evaluations, input from public school personnel, observations made by course instructors, and national accreditation standards, the following suggestions are made for revising and improving the courses for the 1997 graduating class.

Junior-Level Course

1. Administer a computer literacy questionnaire. The information from the questionnaire will assist in placing students in collaborative groups during the education computer lab.

2. Schedule a meeting with PDS lab instructors and classroom teachers prior to placing students in the labs. The education computer lab instructors plan to inform PDS personnel about the course goals and objectives and to seek their assistance in planning the content of site visits.

3. Revise rubrics used for evaluating assignments. As assignments evolve, rubrics must be changed accordingly.

Senior-Level Course

1. Incorporate hands-on telecommunications experiences. These experiences will be possible, due to the education computer lab, classrooms, and offices being networked to the fiberoptic backbone that accesses the university mainframe and the Internet.

2. Explore new portfolio assessment, database, spreadsheet, and other software programs. Undergraduates need to be introduced to new programs being used in the schools.

3. Develop more sophisticated multimedia presentations and guided practice activities using scanners, CD-ROM and laser disc programs, still photos, and video footage. We need to develop presentations and activities that model the use of technology.

4. Update the hardware and software materials list used in resource packets. Recent purchases require constant cataloging for students to access materials.

5. Address technology standards of the National Council for the Accreditation of Teacher Education (NCATE) for preservice teachers. An upcoming review by NCATE means we must be prepared in the area of technology.

6. Propose to elementary faculty the implementation of technology as a component of one of the lessons taught during an action lab. Students teach four lessons in two action labs in PDS sites. Technology could be integrated with a reading, math, science, or social studies lesson.

Conclusion

As some authorities suggest, technology trends may peak by the year 2000, creating a new form of electronic, interactive education (Halal & Liebowitz, 1994). With such technological advances, state-wide technology planning efforts, increased appropriations for public school technology equipment, and differing instructional settings in elementary schools, courses instructing preservice teachers in the use of technology must constantly be updated. Undergraduates in the UM program need to be kept abreast of statewide developments and national and international trends as they continue to observe and practice effective uses of technology in the laboratory environment. It is essential that UM graduates moving into their professional teaching careers be equipped with the knowledge and skills to provide literacy instruction using technology and hold a vision that goes beyond the boundaries of their UM program experiences.

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Building Critical Reading Skills and Countering Biases: Using Tradebooks with the *Oregon Trail*[1]

Deborah L. Thompson

The *Oregon Trail* (MECC, 1992), a highly regarded educational software package, offers teachers myriads of opportunities to integrate technology into reading, social studies, science, and math. The software is a staple in many classrooms across the country. When the best educational software is listed, the *Oregon Trail* is almost always included. It is highly lauded in almost every review (see, for example, *Instructor*, May 1991, or *School Library Journal*, October 1994), and on first glance, has everything a teacher, wishing to integrate technology into the curriculum, would want. The program allows participants to engage in real life decision-making (e.g., whether to caulk the wagon and float across the Kansas River or try to ford it or to buy supplies at the next fort or to take a short cut). The object of the program is to get five people, a team of oxen, and a wagonload of supplies from Independence, Missouri, to the Williamette Valley in Oregon. Pitfalls and life-and-death situations lurk every mile of the trail. Yet it is the very nature of traveling the trail that presents a challenge to teachers who want to teach as accurate a version of American history as possible.

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[1] There are several versions of the *Oregon Trail*. The version referred to in this article is the *Oregon Trail Deluxe* VGA edition for IBM, version 3.01, unless otherwise noted. It differs from the CD-ROM version, *Oregon Trail II*, mainly in the quality of the graphics, some new characters and additional information in the trail guide.

Starting Out: Separating the Girls from the Boys

A student's initial encounter with the *Oregon Trail* may or may not be off-putting. Before students can travel the trail, they must select an occupation. The help screen (See Table 1 for the menu) gives students a list of occupations and information about those occupations. It is here where the first separation of girls from boys occurs. The vocational choices from which students can choose are historically male occupations with the exception, perhaps, of teacher. If students choose to travel as doctors, then they have $1600 with which to buy supplies, oxen and food. On the other hand, should they choose to travel as teachers, then they would have only $400 to purchase necessities.

Table 1

Occupations in Oregon Trail Deluxe VGA Edition, Version 3.01

Occupation Help Screen

Occupation	Starting Cash	Special Advantages	Bonus[a]
Banker	1,600	none	none
Doctor	1,200	sick or injured less likely to die	none
Merchant	1,200	none	x 1.5
Blacksmith	800	more likely to repair broken wagon parts	x 2.0
Carpenter	800	more likely to repair broken wagon parts	x 2.0
Saddle maker	800	none	x 2.5
Farmer	400	oxen less likely to get sick and die	x 3.0
Teacher	400	none	x 3.5

[a] Participants who complete the game are awarded points for the number of people in the party to reach the Williamette Valley. Supplies are also scored. The final score is then multiplied times the number in the bonus column. For example if you reach the end of the trail and your score is 755, then depending on the occupation you have chosen you either end up with a few as 755 points (if you selected banker as an occupation) or as many as 2643 points (if you selected teacher as an occupation).

To level the playing field the software makers have given the teacher the highest handicap. So students who choose to travel as teachers and reach the Williamette Valley in reasonable health with most or all of the original party intact will receive higher scores—number of points

multiplied times 2.5--than had they chosen to travel as bankers or doctors. The higher the player's score, the higher the player's name falls on the "List of Legends," a hall of fame for those who travel the trail and score the highest points. The highest scorers, 7,000+ points, become Trail Guides, the middle scorers, 3,000-6,0000+ points become Adventurers. Those scoring 3,000 become Greenhorns. Those scoring fewer than 2,000 points do not make the List of Legends.

Research shows that certain aspects of the *Oregon Trail* make it a less appealing program to girls than to boys. For example, researchers in the United Kingdom found that software with task/quest characteristics (similar to those of the *Oregon Trail*) negatively influenced girls' use of and performance on that software (Littleton, Light, Barnes, & Messer, 1993). Kiesler, Sproull and Eccles (1985) surveyed the software orders at selected computer stores. They found that the preponderance of games involved war, shooting, and killing. These types of packages were not appealing to female consumers, but highly appealing to male consumers. Caftori (1994) found, in a study of Illinois middle school girls and boys, that the hunting and shooting involved in the *Oregon Trail* made it one of the girls' least favorite software programs. On the other hand, the hunting and shooting and racing to get to Oregon before the bad winter weather made it the favorite software program of middle school boys surveyed. Caftori is concerned about *Oregon Trail's* becoming nothing more than an arcade game. She noted in her study that although boys favored the *Oregon Trail* over other educational software, they favored it for its arcade-like qualities and not for its educational value. Teachers in Caftori's study allowed students to work independently at computer stations, so they were not aware that they were allowing educational opportunities to become arcade experiences.

Bigelow's Biases

In a very thorough review of *Oregon Trail II* (the CD Rom version), Bigelow (1995) found that while the program has much to recommend it, it misteaches even more: "In fundamental respects *Oregon Trail II* is sexist, racist, culturally insensitive, and contemptuous of the earth. It imparts bad values and wrong history" (p. 14). He notes that no matter who the student is, as the trail is traveled, everyone eventually is forced to assume the role of a white male pioneer. Such decisions as when and where to hunt, whether to caulk the wagon or ford the river, whether to take a shortcut or stop and buy supplies at the next fort, or when and where to rest, were almost exclusively male decisions. Bigelow notes that documentary evidence (see, for example, Schlissel's *Women's Diaries of the Westward Journey*, 1992) shows women played far different roles in the westward trek to Oregon. They were the nurses, the social

workers, the glue which held the traveling parties together, but these roles are missing in *Oregon Trail II*, as well as, all other versions of the program.

There are also African Americans traveling the Oregon Trail. In the deluxe version, one can stop and talk to other travelers, one of whom is an African American female. Along the way, she talks about how the prices get higher and higher the further west she travels. She talks excitedly about spotting one of the landmarks along the trail. But, as Bigelow notes, the students set out on the trail from Independence, Missouri, in 1848, 13 years before the Civil War and 15 years before the Emancipation. Missouri, at that time a slave state, held many dangers for African Americans. However, in most versions of the *Oregon Trail* slavery is never mentioned. African Americans who did travel the trail, and there is evidence that they did (Katz, 1977; Katz, 1995; Schlissel, 1992; Schlissel, 1995), probably did so as slaves. Only a very, very few traveled as free persons. Even those free African Americans who traveled to Oregon did so at their own risk, because laws banned African Americans from settling there. Records show that a few African Americans were allowed to settle in the territory (Katz, 1977; Schlissel, 1992), but it was not until 1926 that they could freely settle in Oregon (Bigelow, 1995).

Native Americans fare no better along the Oregon Trail. There are no hostile tribes anywhere on any version. All of the Native Americans the settlers meet are friendly, and this, notes Miller-Lachmann (1994), was absolutely not true and it gives the student unfamiliar with history, a false picture of the westward movement. While Bigelow is not disturbed with the "all benevolent" Native Americans, he feels that this makes for many problems, especially in relation to the travelers' treatment of the environment, and the lack of the settlers' directing any real antagonism or racism toward Native Americans. In some cases, Native Americans appear on the screen to let the player know that they are unhappy to see the pioneers come, and they fervently wish to see them move on beyond their lands. Bigelow notes that in *Oregon Trail II*, there are some screens in which players can talk to members of a Pawnee village, should they choose to do so. If players click on the talk button, they will hear a Pawnee woman lament the coming of the pioneers and the diseases they brought to the plains. These screens are missed, however, if players are racing the calendar (the dates change as the pioneers move westward) and are trying to get to Oregon before a certain date.

The travelers on the trail consume nature, true, for survival, but in the deluxe version, as Bigelow notes in the CD-ROM version, there are

no consequences for this misuse of natural resources. For example in the deluxe version, when a player goes hunting, there are numerous animals to hunt depending on where the hunting grounds are located. Bison, bear, elk, deer, rabbit and squirrels bound across the screen. However, the most meat that can be taken back to the wagon is 200 pounds. Therefore, if a player shoots a bison, animals that weighted at least 1,000 pounds, more than three-fourths of the meat has to be left. The software indicates to the player how much of the animal is left (e.g., You shot 635 pounds of meat and used three bullets, but you were only able to take 200 pounds back to camp). There is no other message about waste or what one could do with the excess meat. Only if a player hunts in an overhunted area is a warning given about endangering the animals. In areas of plenty, there are no such warnings.

With all of these biases, one would think that Bigelow would warn teachers against using the program. To the contrary, he wants teachers to become aware of the problems and use them to give students points of departure for research into the real Oregon Trail, what happened to the land as settlers pushed westward, and the roles of women, African Americans, and Native Americans in the westward expansion.

Traveling the Trail with Tradebooks

Many students have little background for the era in which settlers traveled westward to Oregon and California. Fortunately, there are numerous quality tradebooks that give students a feel for the era of the westward movement and a better understanding roles of women, men and various cultures played during the westward movement. With the Bigelow article as a challenge to students' notions about the westward movement, a teacher can supply students with a variety of quality titles that span the genres from pictures storybooks to information books. Each book leads the reader to a better understanding of what was involved in traveling the Oregon Trail. Students can simultaneously build critical reading skills and develop background knowledge to counter the biases inherent in the program.

Early readers could begin with *Going West* (Van Leeuwun, 1992) or *Grandma Essie's Covered Wagon* (Williams, 1993). In the former, a picture storybook illustrated by Thomas B. Allen, Hannah, a girl of seven relates the story of her family's trek west. She describes what life is like in a covered wagon, the destructiveness of storms and raging rivers. The family in *Going West* does not go as far as Oregon, but they do have experiences common to families traveling across the frontier. A related picture storybook is *Grandma Essie's Covered Wagon*. Again, the family in the story does not go as far as Oregon, but they do have common experiences. The Williams' text is based on the recollections

of the author's grandmother. Like *Grandma Essie's Covered Wagon*, the characters in *The Way West* (Knight, 1993) did exist. As a matter of fact, the text of the book is actually an edited version of a diary of the real life of Amelia Stewart Knight. As her family travels to Oregon, Mrs. Knight writes about the hardship of travel, especially since she is pregnant. This diary, enhanced with scratchboard illustrations by Michael McCurdy, gives a far more accurate picture of women's roles on the trail to Oregon than does the software program. To counterbalance the under representation and the misrepresentation of women's roles in *Oregon Trail*, children can authenticate the game by assuming the roles of Mrs. Knight and her family. Traveling the trail with Mrs. Knight's point of view would give students a different perspective.

An easy chapter book, *Pioneer Cat* (Hooks, 1988) describes how a young girl, Kate, smuggles a stray cat on board her family's wagon as it heads for Oregon. The challenge for Kate is to keep Snuggs the cat from being discovered on the 2,000 mile trek from St. Joseph, Missouri, to the Oregon Territory. Snuggs is discovered, but not before she proves her worth by killing the field mice that have eaten away at the family's dwindling flour supply. Another chapter book for middle readers is *Facing West* (Kudlinski, 1994). The book follows the 2,000 mile trek of Ben and his family from Missouri to the Oregon Territory. Because of his asthma, Ben has the task of being the keeper of the family's travel journal. Originally unhappy with this unmanly assignment, Ben soon learns that simply recording "The same as yesterday and the day before that" (p. 10) tells nothing of their great adventure. The many harrowing experiences of this 60-party wagon train soon has Ben writing furiously just to keep up with the many incidents that occur along the way.

Bound for Oregon (Van Leeuwen, 1994) is based on the true story of 10-year-old Mary Ellen Todd and her family who leave their home in Arkansas and travel to Independence, Missouri, to join a wagon train bound for Oregon. Again, as with *The Way West*, the reader is introduced to a female character and the special hardships there were for a young girl traveling west. This book is one of the many recent books based on primary documents that relate the joys and sorrows of the country's westward expansion.

An excellent resource for advanced middle school and high schools students is *Women's Diaries of the Westward Journey* (Schlissel, 1992). There are diary entries from women who helped their families cross the frontier in search of a better life. These authentic documents not only give students using the *Oregon Trail* program a more accurate picture of women's roles in the westward movement, they give students an

excellent model for using primary documents. Among the diaries in the Schlissel book are those of Amelia Steward Knight, whose diary is the text of *The Way West* (Knight, 1993), and Mary Ellen Todd, whose story is told in *Bound for Oregon* (Van Leeuwen, 1994).

There are several nonfiction titles that give students a background for playing the *Oregon Trail*. For example, *If You Traveled West in a Covered Wagon* (Levine, 1992) presents information in a question-and-answer format about traveling the trail to the Oregon Territory. Students can find out about, among other things, trail guides, fording rivers, kinds of people who traveled West, and distance a family could travel in a day. *Daily Life in a Covered Wagon* (Erickson, 1994) traces the westward journey of the Larkin family. The author intersperses snippets from the diaries of the individual members of the Larkin family. These entries are juxtaposed on pages with information on the life in a covered wagon, such as hunting, clothing, trail mishaps and Native American tribes met on the way to Oregon. *A Frontier Fort on the Oregon Trail* (Steedman, 1993) gives students the story of a frontier fort built along the Oregon Trail. The books covers many topics from surveying a spot to build a fort to descriptions of how forts were the lifelines for many pioneers traveling to the Oregon Territory.

The role African Americans played in settling the west is examined in many tradebooks. William Loren Katz has written numerous books on African American's contributions to this country. Two of them *Black Women of the Old West* (1995) and *Black People Who Made the Old West* (1977), are filled with information on African American men and women who did take that long trek to Oregon and California and made significant contributions to the development of the states in which they settled. Lillian Schlissel, too, has written a book on African Americans in the westward movement. *Black Frontiers* (1995) highlights African American heroes in the old West. In her book on women's diaries, Schlissel writes about numerous African American women who traveled to the new lands and made impact on the areas in which they settled. Middle grade and older readers will find these books quite informative. *Wagon Train* (Wright, 1995) focuses on an all black wagon train that travels west along the Oregon Trail in 1865. The characters are fictional, but the author adds historical bits and pieces about the thousands of African Americans who, in search of a better life after emancipation, left the South and headed west to California and Oregon.

A good survey series for middle readers is the First Americans series. Each book in the series highlights facts about selected Native American nations. *The Nez Perce* (Sneve, 1994) and *The Sioux* (Sneve,

1993) give students information that can supplement the guidebook screen contained in the *Oregon Trail* software program.

Once the pioneers reached Oregon, things were not always better. One could make a fortune, but not always find love and romance. In *Bargain Bride* (Lampman, 1977), 15-year-old Ginny has been sold by her cousins to Stephan Mayhew, a 45-year-old man of substance. He has a two-room cabin with real floors, a real bed, and a real cookstove with an oven. Ginny was married to Mr. Mayhew to pay off debts her family incurred traveling to Oregon. Although basically a romance (after she is widowed, Ginny falls in love with and marries a young man only three years her elder), there are some interesting historical issues explored in the book, such as the rights of women to own land, settlers' biases toward Native Americans, and the courtship rituals of the western frontier.

The Barn (Avi, 1994) is a chapter book for middle grade readers. In the novel, Ben and his siblings struggle to build a barn for their dying father. Much like Lampman, Avi uses his fictional characters to raise important issues such as how land claims were made and held in the Oregon Territory and the importance of getting a formal education.

There are numerous other related titles that can be used with the *Oregon Trail* program. Some of the titles inform readers about those pioneers who settled in other parts of the great west or in the Great Plains (e.g., *Sod Houses of the Great Plains*, Rounds, 1995). Others tell of the exploration of the territories when much of it was part of the Louisiana Purchase (e.g., *The Incredible Journey of Lewis & Clark*, Blumberg, 1987). And still other titles examine other famous westward trails (e.g., *The Santa Fe Trail*, Lavender, 1995).

Using Bigelow Critique as a Springboard

There is no question that high-quality tradebooks enhance a curriculum. Huck, Hepler and Hickman (1993) note that tradebooks should be a natural part of any classroom. By supplying quality tradebooks and the Bigelow critique, teachers can provide students unlimited opportunities to think, write, and read critically about the *Oregon Trail*. One way that teachers could use Bigelow's critique is to display the points he makes in table or chart form and provide titles of books that would help students explore a particular bias (see Table 2 for one example). As students read and research, they can answer the charges of bias Bigelow makes and add ones that they discover as they travel the trail. The chart would then serve as discussion and research points for everyone involved in the study of the westward movement.

Table 2

Biases Detected in Oregon Trail II and Selected Titles to Counter Those Biases

Biases	Selected Titles
The game maneuvers students into thinking and acting like they were white males. It highlights a male lifestyle and poses problems that were historically male: • whether and where to hunt • which route to take • whether and what to trade • to caulk a wagon or to ford a river	*Daily Life in a Covered Wagon* (Erickson) *...If You Traveled West in a Covered Wagon* (Levine)
Documents show that women were responsible for "community morale," something which the game at no time acknowledges.	*Bound for Oregon* (Van Leeuwen) *The Way West* (Knight) *Women's Diaries of the Westward Journey* (Schlissel) *Black Women of the Old West* (Katz)
African Americans did travel the Oregon Trail, some as slaves, servants or as well-to-do pioneers. However, during the time of the rush to Oregon, they could not settle there legally, a law that existed in Oregon constitution until 1926.	*Black Frontiers* (Schlissel) *Black People Who Made the Old West* (Katz) *Black Women of the Old West* (Katz)
Oregon Trail II sanitizes the treatment of Native Americans, even though the guidebook points out that the emigrants' fear of Indians "is greatly exaggerated." The guidebook does point out that the emigrants brought diseases, wasted natural resources such as trees and, of course, displaced and destroyed the buffalo.	*Bargain Bride* (Lampman) *The Nez Perce* (Sneve) *The Sioux* (Sneve)

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With educational software becoming commonplace in many class-rooms, teachers have to be diligent in how the software fits into the curriculum of study and the strengths and weaknesses of each program used. By tying tradebooks in with the use of software, teachers ensure that students get to explore and research issues raised by programs like the *Oregon Trail* that present so much information it would take hours of using it to get all the nuances embedded within. Teachers must pay strict attention to the accurate portrayal of other cultures in computer software (Miller-Lachmann, 1995). Spectacular graphics and nifty tricks in an educational software program cannot be used to compensate for inaccurate portrayals of minority cultures or women. However, should a teacher discover that a program could be useful, then she can bring in good tradebooks to counterbalance any biases and provide students with unlimited opportunities to correct the flaws.

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Linking Reading to Math and Technology: Adventures on the Oregon Trail

Lynn H. Fox

New subject-matter standards in mathematics and science (American Association for the Advancement of Science, 1994; National Council of Teachers of Mathematics, 1991) have focused attention on the teaching of higher-level thinking and problem solving in the content areas. The standards also emphasize the need for integrated and thematic instruction and the view of mathematics as a communication tool. They also call for the integration of technology and more cooperative learning. While these directives have been well received, there is a noticeable lack of detail on how all these initiatives are to be implemented. At the preservice level, it is the faculty of schools of education who must make the necessary changes in courses to acquaint preservice teachers with both the theory and the means to translate theory into practice.

This article describes one instructional model in a particular course for preservice teachers in which a computer simulation game, *Oregon Trail*, is used to demonstrate strategies for thematic instruction which links reading, mathematics, social studies, and language arts in grades 5 through 8. This model also emphasizes cooperative learning, child-centered instruction, problem solving, and higher-order thinking. The rationale and design for integrating technology and thematic teaching demonstrations into the course have evolved over several semesters and have paralleled the process of a review of the literature on related issues. Of particular interest is the evolution of thinking about the uses of computers in the classroom as part of the preparation of teachers.

Why Use A Thematic Model?

Many modern approaches to instruction are outgrowths of the cognitive constructivist views of learning. This philosophy leads to a classroom approach in which authentic activities are emphasized and direct instruction is often supplanted by more opportunities for learners to discover relationships, principles, and patterns and for opportunities for learners to work cooperatively in ways that encourage discourse about ideas. This approach encourages teaching in ways that emphasize the "big picture" or "gestalt," not just discreet facts and skills. Learning activities entwine and mesh opportunities for reading, writing, and problem-solving in several content areas (Brophy, 1992; Goodman, 1986; Watson, 1989). Thus, lessons built around a theme such as the Oregon Trail, conservation of water, or zoo animals might incorporate content from different subject areas with reading fiction, writing journals or letters, mathematical problem-solving, science experiments, and reading in history. Although some direct instruction may be included in the lessons, the motivation for learning and the value of the skills learned are linked to the theme.

Thematic lessons also allow for incorporation of newer models of intelligence such as Howard Gardner's multiple intelligences model (1983). In this model seven areas of ability are possible: linguistic, logical, musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal. The model encourages helping children develop in areas in which they are weak while gaining self-esteem from successes in areas in which they have strengths. Teachers are encouraged to provide students with choices for individualized projects that let them draw on their talents. Thus, in a thematic lesson, students might be given project choices relating to the theme that span a range of Gardner's seven intelligences.

Too often the theory of cognitive constructivism, the models of Gardner, and the concepts of cooperative learning, teaching for discovery, and thematic curriculum have been discussed in text and research articles but not demonstrated in the classroom for preservice teachers. We cannot expect them to fully embrace these new approaches if they have not had an opportunity to see and experience these approaches first hand.

Teachers and Technology

Although computers are available in the vast majority of schools--an estimated 95% had one or more computers for instructional purposes as early as 1987 (U. S. Congress Office of Technology Assess-

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ment, 1988)--only one-third of the teachers in K-12 reported having had as much as 10 hours of computer-related instruction. Most of that instruction only dealt with how to use the computer itself rather than how to teach with computers. In a study of those teachers who used computers to teach, only 5% of these teachers were classified as "exemplary" in terms of the breadth of their students' use of a variety of applications (Becker, 1993). The National Council for Accreditation of Teacher Education (NCATE) recognizes the importance of technology in education and has announced new, more demanding standards for this area (Wise, 1995). These standards address both preparation in the content studies areas and the general professional and pedagogical studies.

In a study of current classroom teachers' implementation of technology into their daily teaching, Honey and Moeller (1990) found that pedagogical orientation was related to computer usage. Teachers who favored an inquiry method of teaching were more likely to use technology than those who had more traditional or teacher-directed philosophies. The latter maintained higher levels of discipline, emphasized content over process, closely followed textbooks, and used lectures as a major means of teaching. Those who were more actively using technology had used technology as a process-oriented approach to enable students to explore and use applications to find creative ways to master curricular objectives.

Ritchie and Wiburg (1994) identified the following four major variables which account for how well teachers integrate technologies into the curriculum:

1. Support and leadership from administration;
2. Collaborative partnerships with outside organizations;
3. The pedagogical orientation of teachers; and
4. The quality of professional training provided to help the teacher incorporate technologies into their teaching.

The latter two variables are ones that can be influenced in preservice teacher training. A major conclusion reported in *Teachers & Technology: Making the Connection*, a report from the Office of Technology Assessment, a former arm of the U. S. Congress (1995), is that technology is not central to the teacher preparation experience in most colleges of education. Most new teachers graduate from teacher preparation institutions with limited knowledge of the ways technology can be used in their professional practice. When colleges of education do include technology instruction, it is too often taught as a separate subject, a course about technology, rather than a course on how to ~rate technology across the curriculum for K through 12.

Basically there are five broad uses of computers that can be incorporated into teaching the content area. The first is computer-assisted instruction (CAI). This is usually commercially developed and targeted at a fairly narrow skill or course of study. While such a program often incorporates many diagnostic-prescriptive features, these features do not lend themselves readily to thematic teaching. Another closely related category is skill and drill activities, these are usually focused on one specific content domain such as *Reader Rabbit* (The Learning Company, 1991), a popular software program for children in primary grades. A third area is the use of the computer programs as tools for data processing and word processing, such as spreadsheets, database programs, authoring programs, graphics packages, and all types of software that are useful in preparing materials for reports and class presentations. These can readily be incorporated into thematic teaching lessons. A fourth and newer category of computer usage that is not quite as available in schools as the other four types of software packages is telecommunications such as e-mail and Internet. These tools have great potential for thematic teaching. The final category is comprised of software for simulations that have complex problem-solving tasks such as *Market Place, Sim Ant,* and *Oregon Trail.* This category of computer software lends itself to becoming the center of the thematic unit.

Thematic Demonstration Activities for Preservice Teachers

In the course Math for Elementary School Teachers at American University, the software programs are used to create simulations and activities that meet a variety of goals and objectives for the course. These course goals parallel the goals and standards for mathematics instruction in grades K-12 put forth by the National Council of Mathematics (1991). The goals for the course that particularly relate to the use of computer simulation games are as follows:

1. To demonstrate the use of thematic curriculum to integrate mathematical content and activities into lessons in other content areas;
2. To foster positive attitudes towards mathematics by showing preservice teachers ways to make instruction fun, authentic, and challenging;
3. To encourage preservice teachers to use cooperative and collaborative efforts and to model them in the course;
4. To demonstrate ways to individualize teaching and apply diagnostic-prescriptive teaching methods to mathematics instruction;
5. To demonstrate ways to incorporate technologies such as calculators and computers into daily lessons; and

6. To encourage preservice teachers to plan lessons that incorporate higher order problem solving, and opportunities for creative thinking along with direct instruction and practice of basic mathematical operations and to model this behavior.

The *Oregon Trail* (MECC, 1992) is one of many software programs that can be used in ways that promote these goals. As a simulation game of traveling the Oregon Trail in the 1800s, it is a natural source of ideas for thematic teaching with extension activities in reading, writing, history, geography, science, and mathematics. The program itself offers a variety of problem solving tasks. For example, at the start of the trip, each wagon purchases supplies for the trip on a given budget. Cooperative team play can be used and, indeed, may be necessitated depending upon the number of available computers in the classroom. Problem-solving activities can require decision making by a small team of students for each wagon or the whole class can become involved by creating a wagon train. It is now possible to buy a networked version that creates dilemmas. By its very nature, the simulation captures the interest of players who become caught up in the struggle to overcome the hardships of the trail and reach Oregon. A matching of the course goals to specific uses of the program for activities for students grades 4-8 along with the parallels for use with preservice teachers is shown in Table 1.

Table 1

Using the Oregon Trail to Demonstrate Teaching Objectives

Objective	Students (grades 4 through 9)	Preservice teachers
Thematic, authentic, and integrated lessons	Social studies content and skills with reading, writing, and a variety of mathematics	Technology is integrated into the demonstrations on teaching an integrated lesson for mathematics and social studies
Positive attitudes	A computer-simulation game and many opportunities for role play and fun activities	The computer game and the creation of projects and additional lesson plans are enjoyable activities
Cooperative and collaborative activities	Students should work in pairs or teams to play the simulation	Teams or pairs play the Oregon Trail and use the spreadsheet in the class and follow up projects may be done in teams or alone
Individualized and diagnostic teaching	Multiple intelligences model to create individualized projects for each area (See Table 3)	The follow up projects allow for individual differences in interests
Use of technologies such as computers and calculators	Data gathered on the trail can be analyzed with spreadsheets on computers or with calculators	The class activity uses a computer spreadsheet but calculators can be used and follow up projects can use either
em solving, creativity, ills practice	Students are given a variety of problem solving activities in the simulation	The class simulation requires students to do a variety of problem solving activities

An example of a specific lesson that has proven successful with preservice teachers is shown in Table 2. The initial lesson demonstrates a relationship between geography and mathematics and can be extended in several different directions for follow up activities. The mathematical ideas that are stressed are ratio and proportion in scale drawings of maps; simple equations showing the relationships between distance, rate, and time; and the concept of averages. The lesson also incorporates the use of either a spreadsheet or a calculator. It typically takes two full 75-minute class sessions to accomplish the initial demonstration and to review the use of spreadsheets.

Table 2

Adventures on the Oregon Trail

Today we will be playing a computer simulation as if we were in a prairie schooner traveling across the country from Independence, Missouri, to Oregon City, Oregon, around 1850. We can collect data about our trip and analyze it in a "spreadsheet," an electronic device that allows us to make fast calculations.

The instructions for today are below. A manual for playing the simulation is available in the reading corner but the instructions are contained within the program itself, so just respond to the prompts and play once you log in.

Separate instructions for spreadsheet are attached. Raise your hand if you want some help, and one of the "trail blazers" will assist you. Today the "trail blazers" are Dr. Lynn Fox and her assistant, Mary.

DO NOT BEGIN THE COMPUTER SIMULATION UNTIL AFTER YOU HAVE READ ALL THE INSTRUCTIONS BELOW:

I. If you are not familiar with the Oregon Trail, you can read about it in one of the books in the listening and reading corner. Take a few minutes to browse through a book to get an overview of the background.

II. Look at the attached map and estimate the distance from the starting point at Independence, Missouri, and the final destination in Oregon. Then estimate the distance from Independence to Ft. Laramie in Wyoming. For today, we will travel as far as Ft. Laramie then save our journey on the computer.

III. With a teammate, play the Oregon Trail simulation on the computer as far as Ft. Laramie. Look at the sign by your computer to tell if you are to take the role of either the Banker, the Carpenter, or the Farmer. Create a journal and record the information for each leg of the trip (Independence to Kansas River, the K River to the Big Blue, the Big

Blue to Ft. Kearney, the Fort Kearney to Chimney Rock, and the Rock to Ft. Laramie). Use the colored paper and lined paper to write about the members of your wagon. Use the attached blank spreadsheet to record important facts from the computer screens. Take a minute now to look over the spreadsheets. The data you will collect is as follows:

the date you start, and dates of arrival at points along the way,

the amount of food left at each stop,

the pace and food ration level for each leg (note that you can change the pace and the amount of food to be rationed for each leg of the journey),

the distance traveled.

At each leg, note any major changes in the possessions you have, such as oxen lost or gained, etc.

Record the accidents that befall you and your team.

You should also **note the amount of money you had at the beginning and how you spent it. Use the attached charts to help you compile and analyze your data** after you reach Ft. Laramie for each of your occupational families.

IV. Use the spreadsheet in QuattroPro on the computers next to the ones with Oregon Trail to help you **calculate the average miles per day and food per day for each leg and for the overall time** from Independence to Ft. Laramie. A separate sheet of instructions to help you enter data and make fast calculations on the computer is available for those who need them.

V. After you have gone to Ft. Laramie on the computer and calculated the averages described above, **find a team of players who had a different occupation from yours. Share and compare your findings.**

How did changing the pace or rations effect the results?

Which occupational group reached the fort in the fewest days?

What accounted for some of the outcomes?

VI. If you understand all the above, you may log into the Oregon Trail. First click on the icon that says "EDUCATION," then look for the icon with a large arrow and word "OREGON."

Although the program could be used for large-group instruction with a hookup to a large monitor, it is probably more appealing to students when played in teams of two or three players who can spend more time talking and problem-solving together. For preservice teachers the classes usually have met in a computer laboratory that is equipped with 20 networked machines. Because there can be great variability in how long it takes a team to complete a crossing, it is important to have the capacity to save the program for later recall.

After the initial two classes, students choose a project as follow up and share it with the class in two additional later sessions. Most of the follow-up activities in the last two classes in which the students demonstrate their own projects are done to simulate a classroom in which a teacher would have between one and four machines. The projects are designed to link to Howard Gardner's multiple intelli-gence model (1983).

Linking Content Areas Using Gardner's Multiple Intelligences Framework

Project choices for students in grades four through eight that can be done in small groups or by individuals which were modeled on the multiple intelligences theory of Gardner (1983) are shown in Table 3.

Table 3

Individualized Projects Using Multiple Intelligences and the Oregon Trail Software

Intelligence	Subject area	Activity
Linguistic	Reading and History	Read several books about the Trail and journals kept by real Oregon travelers. Use sources such as Encarta or the Internet to find out more about the Oregon Trail.
Logical	Mathematics and Technology	Use a calculator or computer spreadsheet to develop statistical charts about the experiences of your classmates as they travel the trail on computer. For example, how much food is eaten per person per day on a normal ration vs a meager ration? How many miles per day are traveled at different paces?
Spatial	Geography and Mathematics Mathematics and Art	Make a scale drawing of the map between Independence and Oregon (a variety of types of maps could be made including topological). Make paper quilts using a variety of colors and shapes to create patterns.
Musical	Music and Language Arts Physical Education	Study the music, dance, and games of the era, then write a song in the style of the old campfire songs. Try converting the beat and language to reflect the 1990s

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Table 3 (continued)

Individualized Projects Using Multiple Intelligences and the Oregon Trail Software

Kinesthetic	Mathematics: Measurement and Money	Create a frontier store with a variety of weighing and measuring instruments from then and now. Practice measuring, buying and selling, and making change.
Interpersonal	Social Studies and Language Arts	Form a wagon train with other class members. Choose a leader. Work out a form of governing for the trip and a plan for communicating. Then travel the trail on computer trying to start and stop together. What will you do if someone gets lost? Keep going or pause everyone?
Intrapersonal	Language Arts	Keep a diary as if you are traveling the Oregon Trail today by car. Explain how your experience differs from those we have read about who traveled by wagon in the 1880s.

To help make this a bit more real for the preservice teachers, they too must select an individual- or small-group activity as follow up to the first two classes using the *Oregon Trail* software. The types of activities for the student teachers' project are more limited in that they must all develop a lesson plan using a software program chosen from a list of those available in the computer lab. They also give a 15-minute demonstration and simulation of their lesson with the whole class. Their project must incorporate some aspects of the software program, extend beyond it to other activities besides just working directly with the software, and must be thematic so that it links mathematics to at least one other area. The preservice teachers may use any mathematical content appropriate for grades 1 to 6 and may, but are not required to, incorporate spreadsheets, calculators, or measuring devices. They are encouraged to use role play and manipulatives and to make the activity one that students would find challenging but motivating. Some ideas for thematic lessons that draw upon different intelligences are described in the next section.

Linking Skills and Content Areas
Along the Oregon Trail

Played individually or as a group, the program offers many possibilities for planning lessons and/or learning stations that link some of the activities and content about traveling the trail to basic and advanced topics and skills in mathematics. At a fairly basic level of mathematical skills, one can create activities related to addition and subtraction using decimals with problems involving money and shopping for supplies for the trip or activities related to measurement and conversions to and from the metric system with both map activities and simulated shopping at a general store. More advanced topics can connect issues in ratio and proportion to problems in scaling for maps and models or uses of formulas and functions in discussions of the relationship of distance to time and rate of travel. In a classroom with access to other computer programs such as spreadsheets and atlas programs, activities can bridge to the use of these tools as well. Some specific lesson plan ideas are described in the following sections.

Distance and Time

The relationship of distance, time, and rate of travel can be taught by induction by providing numerous examples in a chart format and having students discover the relationships. Students can use maps (road maps provided by automobile club are best) and trace the Oregon Trail with a highlighter using major highways and recording mileage between major cities or landmarks. Students decide on different average rates of speed between points and calculate the likely time to travel the trail today. They can compare the time it takes by car with the time it took original travelers in their oxen-pulled wagons. For variations, they can read historical accounts to find the time a typical family took to reach Oregon and use that information to estimate daily rates of travel. Another way to analyze travel times is to have students record their mileage each day on the trail in as they play the computer simulation program. Students can calculate the rate of travel two ways: first, count only the days they actually were in motion and second, include those days they rested or were lost along the trail.

Extensions using spreadsheets or calculators. If students have access to a spreadsheet program, they can enter their information in charts and let the computer run the calculations for each leg of the trip by various modes: car, plane, wagon, etc. A hand-held calculator can be used if the spreadsheet program is not available. A sample worksheet for the calculations is shown in Table 4. The program itself requires players to decide how to spend their money to purchase supplies for the trip. This lends itself to creating a spreadsheet to see

how many possible ways they can spend money and how the possibilities are more limited for some occupational groups than others. A good book to accompany this activity is *Overland to California in 1859: A Guide on Wagon Train Travel* (Bloch, 1990). One chapter is devoted to the question of food supplies; another to wagons, oxen, and yokes; and another chapter discusses the problems of fording a river. (See the article by Thompson in this volume for a more detailed discussion of children's books related to the Oregon Trail.)

Table 4

Adventures Along the Oregon Trail Worksheet

Banker

Place	Date	Food	Distance	# Days	Miles/day	Food/day
Indep	May 1	1000	0			
KS River	May 11	850	102	11	9.27	13.6
Big Blue	May 17	780	185	17	10.9	12.9
Ft Kearney	May 25	660	304	25	12.16	13.6
Chim Rock	June 7	465	554	38	14.58	14.07
Ft Laramie	June 12	390	640	43	14.88	14.18

Carpenter

Place	Date	Food	Distance	# Days	Miles/day	Food/day
Indep						
KS River						
Big Blue						
Ft Kearney						
Chim Rock						
Ft Laramie						

Farmer

Place	Date	Food	Distance	# Days	Miles/day	Food/day
Indep						
KS River						
Big Blue						
Ft Kearney						
Chim Rock						
Ft Laramie						

Extensions using map-making activities. Students can learn about proportion and ratio by drawing maps to scale or working or using rulers and a map's legend to estimate distances between different points along the trail. Mileage can be converted to metric measure and map legends devised to reflect both miles and kilometers for conversion. Map activities offer artistic project options for some students. Atlas work allows for expansion to other topics in geography that have a numerical basis. More complex map and atlas skills can be added. For example, students can find and record the elevations at different points along the trail and compare this in a graph with other information such as average rainfall or average temperatures. Again, a spreadsheet approach, especially an electronic spreadsheet, allows one to look for patterns and relationships among the different climate and terrain variables. Indeed a link from the travel on the rail to science can be made with a discussion of weather conditions along the trail at different times of the year and the relationship of those factors to problems students encountered in the simulations, such as drought, lack of grazing grass for animals, and diseases that the travelers sometimes encountered such as dysentery and cholera.

Shopping Along the Oregon Trail

One of the easiest lessons to derive from the Oregon Trail activity is to create a country store of the era and use old-fashioned and modern scales for measuring and weighing products such as flour. Students can take a shopping list from the days of the settlers and try to convert it to a modern day equivalent and bring in grocery store advertisements for comparison pricing. Students typically enjoy role play such as being cashier/storekeeper and adding up a shopping bill and making change, adding tax or discounts, using coupons with discounts, and so forth. Simulations can range from the simple ones with worksheets to fairly elaborate simulations, depending on how much time can be devoted to shopping and measuring activities. For example, a learning station can be created to resemble a general store with empty containers labeled with old-fashioned prices, and measuring cups, spoons and scales can be available for use with "fake" food.

A less ambitious project involves grouping students to form families to simulate traveling to Oregon. A newspaper with advertisements of supplies for settlers can be created, and each family can be given shopping guidelines and a budget in order to purchase the food they will need for the trip. A variation is to have a game where families could earn opportunities to pick wild berries along the trail or hunt for deer and rabbits by solving math problems related to the tasks. Some sample problems might be as follows:

If a buffalo is shot and has 200 lb. of edible meat, and there are five people in your wagon, what fraction of the buffalo could each person have? How many pounds would this be? (Vegetarians could have problems dividing barrels of water into other containers.)

If you start out with two yokes of oxen and one dies, what fraction of the oxen died? What percentage died?

Reading and Writing Along the Oregon Trail

In the above examples, reading and writing are essential parts of the activities. Reading in the content areas of social studies and history, for example, may become necessary for information gathering that is incorporated into designing a country store or learning about the food, clothes, and climate along the trail. Many of the activities that are heavily mathematical, such as creating a country store, can also be expanded to emphasize the importance of reading for problem solving in the content areas. Newspaper advertisements for grocery stores can be used and discussed. Word problems can be written with prices from *then* and *now*. For a middle school group, a country store simulation might lead to discussions and readings on basic concepts of economics, such as supply and demand.

Teachers who prefer more traditional reading activities can find many books for children at different levels, both fiction and nonfiction. Indeed, preservice teachers do not necessarily know much about the Oregon Trail and can be encouraged to learn about the trail to aid in developing lesson plan ideas. For preservice teachers two sources are used: children's books, both fiction and nonfiction, and Internet. A sample of books is brought to class for students to look at and they are given lists of other books to locate in the library. A good fiction choice is *Bound for Oregon* (Van Leeuwen, 1994). A popular nonfiction choice is *The Oregon Trail* (Fisher, 1990), which has copies of paintings and original photographs of Oregon and places along the trail such as Fort Laramie dating as far back as 1858. In addition, while in the computer lab, students can use the Internet to find the World Wide Web pages that relate to the Oregon Trail. (See the chapter by Deborah Thompson in this volume for descriptions of different types of children's literature related to this topic.)

One criticism of the CD-ROM version of *Oregon Trail* is that it ignores the role of women and distorts historical truths in some versions by including more ethnic diversity in the characters and depictions along the trail (Bigelow, 1995). While this may be true, it also can lead to some interesting reading and discussion sessions about the

roles of women in those years, their contributions to the settling of the west, and the history of African- and Asian-Americans in those years to the present. Thompson (1995) suggests many children's books which can be used to provide multicultural perspectives, including gender issues.

There are many ways to incorporate more traditional writing activities into lessons as well. A culminating activity or one that could be ongoing throughout the Oregon Trail unit is the creation of a newspaper. Interviews with travelers, weather forecasts, maps, and discussions of possible short-cut routes being blazed could be included. Mathematical problem solving and reading in the content area as well as history and science can be worked into the writing assignments for different "reporters" on the trail. For example, articles could tell about how to quadruple a recipe or cut it in half. Biographical information on early pioneers could be incorporated into eye-witness news stories.

Conclusions

If today's teachers are to create and teach thematic lessons, these techniques must be modeled in the college classroom for the preservice teacher, not just described in textbooks and research articles. This paper describes one attempt to teach preservice teachers how to develop thematic lessons that link reading, social studies, and mathematics by modeling that approach using the simulation software *Oregon Trail*, cooperative learning, and the multiple intelligences model. Although thematic teaching does not require the use of microcomputers, it can be enhanced by the use of this technology. Computer software can provide visual stimulation and the excitement of gamesmanship to motivate student participation. When preservice teachers have the opportunity to role play and experiment with interesting software such as *Oregon Trail*, it allows them to experience learning this way themselves. This can greatly enrich their understanding of how to create and implement thematic lessons in which skills and content from reading, mathematics, and social studies are authentically intertwined.

New technology such as microcomputers and the Internet should encourage creativity and experimentation through simulations in the college classroom for preservice teachers. The examples of lessons presented here with just one simple software simulation game suggest just a few of the possibilities for making the teaching of mathematics more exciting for preservice teachers by helping them find linkages between mathematics and children's literature and between math-

ematics and reading in the content areas. Preservice programs for teacher preparation can be strengthened by more practice of what is preached.

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Learning from a Distance: Triumphs and Challenges

Jane Meeks-Hager, Marilyn Eanet

Distance education is a reality for many teacher preparation programs, while for others, the potential is still being explored. Institutions such as Old Dominion University, Eastern Oregon, University of Virginia, Drexel, and others are developing distance education initiatives with differing levels of sophistication. Distance learning programs can range from a simple televised course to whole degree programs televised using interactive video and audio, or even more revolutionary asynchronous learning in which a student may never come face to face with the professor. The use of distance learning was chronicled in 1939 by D. C. Cook and C. L. Nemziek in the *Journal of Education Research*, "The effectiveness of teaching by radio." Historically, many children have been taught using two-way communication when their homes were inaccessible and neighbors not close enough to support a teacher and/or school. Even though distance learning efforts are not new, rapidly changing technology is reshaping our classrooms and teacher preparation programs.

Teaching environments are changing so dramatically that many assumptions about teaching and learning need to be challenged, expanded, or revised. Zvacek (1994) poses some questions that we believe need to be addressed. Such questions include "What must occur cognitively for students to ensure true transferable learning? What is it about proximity that encourages a presupposition of our student's attention? How does a student's attitude toward distance education influence his or her achievement?" (p. ii). With these questions in mind, this paper will examine our triumphs to this point and future challenges in learning from a distance.

Triumphs

The redefinition of teaching and learning--time and space are no longer factors. Many of us have spent hours driving to off-campus locations in an effort to teach students in remote sites. Now through technology, some professors have the luxury of teaching those same students from a campus television studio. Students can interact with others across the state taking the same course and working on the same projects. Burge and Howard (1990) used a case-study methodology to examine audio technology with three models of participation: (a) whole-class work guided by the instructor, (b) whole-class work without faculty participation, and (c) small-group work with the instructor. Students reported being satisfied with the use of technology in each of the teaching formats. Interestingly, a common complaint was the verbal communication skills of the "other" students in the class. Students claimed that others did not take turns and continually interrupted each other.

A more sophisticated course format is asynchronous learning networks--ALN--a computerized course that can be used on personal computers at home versus a formal school setting. Students are expected to participate in topic and subtopic discussions, prepare written responses to series of questions, and prepare models using application software. Andriole, Lytle and Monsanto (1995) evaluated an engineering course offered by Drexel University. They found that (a) 80% of the students would take another ALN course, (b) students thought there was more access to the instructor than in conventional course delivery, and (c) 80% felt that conventional courses were *more* boring than the ALN course. One of the most interesting findings was that 36% of the total interaction occurred between 8:00 p.m. and 12:00 midnight, 22% between 4:00 and 8:00 p.m., and 14% between 12:00 and 4:00 a.m. Attending a university may no longer entail being physically present on a given campus (Barson, Frommer, & Schwartz, 1993), or taking classes during traditional campus hours.

The accountable curriculum--on television, it is hard not to be prepared. One of the findings of Old Dominion University's TELETECHNET distance learning initiatives is that course organization is significantly more important to distant students than their on-campus counterparts (Anne Raymond-Savage, address delivered on November 10, 1995).

Instructional design principles become paramount as faculty rethink course content and objectives. Especially within an ALN environment, there is an enormous need for structure and a completely predictive course schedule (Andriole et al., 1995). The cost of air time

prohibits early dismissal, make-up classes, or even uncovered absence to attend a conference. The upside is that faculty are able to showcase instruction, make use of videotapes of K-12 classrooms, and stage events such as a test administrations, live discussion with a fourth grade classroom, or sharing a Reader's Theatre presentation with colleagues outside traditional university boundaries.

Faculty realize the importance of meeting objectives as every class and lecture is taped. Curriculum design, both now and in the future, will need to address the full integration of network resources and multimedia into new course designs--specifically, text, video, hypermedia, and graphics accessed through the network and delivered spontaneously rather than ordered or prepared in advance. In distant learning programs, e-mail is a standard means of communication (Barson et al., 1993).

The interaction of students outside the traditional classroom--Computer collaboration and participatory learning. Findings of the Andriole et al., (1995) asynchronous learning project at Drexel suggest that students perceived that they had more communication with fellow students than in conventional courses. In a distance learning advanced placement class in a secondary school, Fyock and Sutphin (1995) observed students naturally engaged in cooperative activities, and these students reported that they took more responsibility for their own learning. Students also reported that the project was an opportunity to "extend their circle of acquaintances and friends" (p. 91).

A foreign language collaborative project began in 1988 among Stanford, Harvard, and the University of Pittsburgh promoted sharing of documents and course work. Emphasis was placed on group work, collaboration, and peer critiquing. Copies of student work (using e-mail capabilities) allowed the instructor to be aware of the exchanges taking place and provide reaction and feedback (Barson et al., 1993). The findings are consistent with the Drexel Study (Andriole, et al., 1995) in that students felt that they received more individual attention from the professor, worked more collaboratively than in traditional classrooms, and learned more difficult information than in other classes.

The stimulation of new research agendas on teaching and learning. The face of the classroom is changing--we recently saw a chalkboard standing in a hall that bore a prophetic message "I AM EX-TINCT." And indeed, as Dede (cited in O'Neil, 1996b) states,"Some educators seem tired of the hype about new technologies. They wish they could get their hands on some old technologies like a copier or a

phone." (p. 7). But the reality is that technology is moving the classroom to new dimensions. The effect of these changes in instruction, staff development, and assessment is not being quantified with rigorous methodology. The research experiments that are occurring at this point are not in colleges of education, but in departments of computer science or psychology. Teacher educators need to design controlled and widespread investigations to examine both short-term and long-term effects of distance learning. Collaborative efforts across universities could spark many researchable questions with diverse populations and programs.

Challenges

Our challenges appear to be clear in distance learning initiatives. Ken Smith, in his presentation at the 1995 American Reading Forum, outlined many of the same issues identified in this paper.

Challenge # 1 - To make distance learning more cost effective. It would appear from the outside that television could reach more students and could increase enrollment, thereby winning administrative support. But the price tag is high, not just in dollars, but in faculty incentive and time--time for faculty to develop new methodologies and to master the medium. O'Neil (1995a), speaking of K-12 teachers and time writes:

> Perhaps the biggest barrier to technology use is time: time for training, time for teachers to try out technologies in their classrooms, time to talk to other teachers about technology. If teachers aren't given more time to explore the uses of various technologies, and if the help they need in terms of training and support isn't available, progress toward the vision held by proponents will be slow indeed, (p. 11)

This is equally true for teacher educators. Not only does time cost money, but the constant demand for updated equipment and more air time to offer more courses is a high cost factor. All of these costs need to be weighed when considering expansion of distant educational programs.

Challenge # 2 - To adapt performance measures to the distant curriculum. This is in a beginning stage--at least with teacher education. The use of technology will enable researchers to create virtual classrooms, thus allowing students to experience teaching situations that could approximate the real thing. Performance in teaching could become an integral part of every course before a student ever stands in front of a live classroom. In fact, testing could become obsolete. Bill

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Gates (1995), Microsoft guru and author of *The Road Ahead* claims that interactive networks will allow students to quiz themselves any time so that testing will become a positive part of the learning process. This needs to be addressed through assessment initiatives within universities.

Challenge # 3 - To create readers, writers, and thinkers in the real world. Clifford Stall (1995), in his book *Silicon Snake Oil* admonishes educators to be cautious with the "world of virtual." A major premise is that learners may be able to access maximum information but not have the practice or the insight to use that information to think critically. Toffler (1990) puts this challenge in a more positive light: "We are creating new networks of knowledge, but more important, we are interrelating data in more ways, giving them context, and thus forming them into information. That information is assembled into larger and larger models. Nothing is going to look the same." (p. 82).

Conclusion

In the next decade, teachers and professors will be teaching in different classroom settings, at different times, and with different ways of interacting with students other than traditional face-to-face instruction. One triumph of the new technology consistently cited in the literature is that students seem to like the medium of distance learning. The challenge confronting all educators is for the medium not to become the message, and for teacher training programs to continue to use and develop state-of-the art curriculum using technology for effective teaching and learning.

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"Black Milk of Daybreak": The Literacy of Testimony and Witness

Ray Simmers-Wolpow

Black milk of daybreak we drink it at evening

we drink it at midday and morning we drink it at night

we drink and we drink it . . .

Paul Celan, "Death Fugue"

Introduction

Speaking to a group of educators and students at Northwestern University in 1977, Holocaust survivor, professor and Nobel laureate Elie Wiesel (1977) asserted, "If the Greeks invented tragedy, the Romans the epistle, and the Renaissance the sonnet, our generation invented a new literature, that of testimony" (p. 19). What role do we, as academics and teachers of literacy, have in helping to define this new literature? How might we best help our students access and respond to this new genre?

Those who work with survivors know the timeliness of these questions because our generation will be the last to witness living testimony from humans with numbers tattooed on their arms and

irreparable sadness etched in their hearts. Soon there will be none who may rise up to those who deny the Holocaust to ask, "If what you say is true, then where are my loved ones?" (Ban, 1996).

Do not the exigencies of our colleagues and students, many themselves victims or witnesses to psychological abuse, dismemberment, violence, and death within their families and communities, oblige educators to investigate this literature of traumatic memory for its potential support to those who are recovering from psychic sorrows impairing their learning?

This paper will explore the literacy of testimony and witness as manifest in the writing of survivors of the Holocaust. Implications for the teacher of students at risk for school failure due to post-traumatic effect will then be discussed.

Testimony and Witness

The story of literacy of Samu Schonberger and one of his poems, "Why, and For How Long?" provides a concrete example of "testimony and witness." While serving in the Austro-Hungarian army during World War I, Schonberger was captured by the Russians and shipped to a prison camp in Siberia. To survive, he and his fellow prisoners studied modern Hebrew. One night he composed the poem "Why, and For How Long?" for his sweetheart, Juliska, back in Hungary.

At the end of the war, Schonberger returned to Hungary, married Juliska, and they started a family in Debrecen. Schonberger taught school and eventually became a principal. But his nightmares were not over. Two decades later the Nazis marched into Hungary. Along with all the other able-bodied Jewish men, Schonberger was deported to work in a slave-labor camp leaving behind his wife, aging mother-in-law, and three children ages 20, 13, and 6 months. Shortly thereafter, they themselves were transported to Auschwitz.

When the war ended Schonberger was liberated. He returned home, to ruins and rumors, to learn that not all Debrecen Jews had been sent to Auschwitz, but that some were shipped to Austria. Futile as his efforts were, Schonberger relentlessly tried to learn of the fate of his dear ones. Tormented by nightmarish imaginings of gas chambers and crematoria, he kept a small diary in which he vented an unending anguish of uncertainty and sorrow.

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Months passed before Schonberger was reunited with his oldest daughter, Noemi, the only other person in his family to survive. Noemi wrestled to find words, the words to describe for her father the fate of their loved ones in their final days.

Fifty years have since passed. Seated at her dining room table with her father's diary in her hands Noemi tells me, "When I think of my mother helplessly watching her children and her own mother die from poison gas, I pray that their death came swiftly." Noemi then opens the tear-stained pages and turns to her father's poem "Why, and For How Long?" which she translates from Hungarian:

Why? And for How Long?

Do you know?

You the beauty of my world,

Do you feel it?

You the most beautiful on this earth,

Why? The yearning hurts, it is burning.

Why? And for how long?

Did you notice, dear soul?

Did you comprehend, you, the wish of my heart?

Do you feel the hope, my yearning?

Why? And for how long?

I will always wait for you

My yearning is limitless

Where is the end of my sorrow?

Why? And for how long?

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On the wings of my yearning

I fly towards you

But to arrive, to get to you

I have not the strength any more

Maybe you have forgotten me?

Why? And for how long?

My soul is tired

My body is weak

I am standing at the edge of my grave

My grave is waiting for me with its Peace

Without you, why would I want to live?

Why? And for how long?

In 1996, Noemi's father's words have acquired new meaning. Forty-seven years of loving marriage took Noemi to another Auschwitz. Her husband, Earnest, a survivor, teacher of mathematics and synagogue cantor, has had his memories robbed by dementia, his intentional movements purloined by Parkinson's disease. Noemi's eyes are tired, her face long. Of his condition she remarks, "There is no barbed wire or watchtowers, but there is little to look forward to except death itself."

Testimony

"Why, and For How Long?" is more than words, a poem or a story: it is a literature about not forgetting, a literature which is healing. Through words and silences, Samu and Noemi attempt to give voice to the *unspeakable*. Many great writer-survivors have wrestled with words to communicate the essence of the ineffable which they felt compelled to remember:

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Ask any survivor and he will tell you, and his children will tell you . . . . Between our memory and its reflection there stands a wall that cannot be pierced. . . We speak in code, we survivors, and this code cannot be broken, cannot be deciphered, not by you no matter how much you try. . . . How can one write about a situation which goes beyond its very description? . . .

[It was] a matter of worlds . . . Language had been corrupted to the point that it had to be invented anew and purified. This time we [survivors] wrote not with words but against words. Often we told less so as to make the truth more credible. Had any one of us told the whole story, he would have been proclaimed mad . . . . (Wiesel, 1977, pp. 7-8)

A code that cannot be broken, context without words, words without context, words with meanings lessened for credibility, even words against words--it is as if writing or reading testimony is an impossible task. Whether possible or impossible, testimony which is *witnessed* has healing qualities, and, as such, is restorative.

Witnessing and Silence

Witnessing is the personal process of grasping and responding to the testimony and the meanings its words attempt to communicate. This process takes place when the survivor perceives his or her listener participating in an event he or she has never actually experienced. When this happens, a new and common knowledge results. Survivor-psychiatrist Dori Laub explains:

The listener to the narrative of extreme human pain, of massive psychic trauma, faces a unique situation. In spite of the presence of ample documents, of searing artifacts and of fragmentary memoirs of anguish, he comes to look for something that is in fact nonexistent; a record that has yet to be made . . . .

Massive trauma precludes its registration; . . . The victim's narrative . . . testifies to an absence, to an event that has not yet come into existence . . . .

The emergence of the narrative which is being listened to--and heard--is, therefore, the process and the place wherein the cognizance, the 'knowing' of the event is given birth to. The listener, therefore is a party to the creation of knowledge *de novo* . . . (Felman & Laub, 1992, p. 57)

Most often, bearing witness to testimony includes the hearing of silences. "Not a silence as a vacuum or emptiness, but as a presence . . . of memory, of the dead, of an evil so overwhelming and unspeakable that only silence, in its infinitude, can begin to represent it" (Des Pres, 1979, p. 55). Such silence refills the words of Samu Schonberger's poem, and his daughter's translation, with meaning.

Testimony, Witness, Complicity and Belief

Creation of "knowledge *de nova*" is inherently restorative because it is binding and mutual. The victim needs to tell the story of his or her trauma in such a way that it will be remembered and in putting these memories into narrative, he or she moves towards survivorhood.

However, the process of testimony and witness is not merely an unburdening by the victim. For the listener, events to which testimony have not yet been witnessed do not exist. Even today, there are those who say that the Holocaust never happened. How is this possible? Is it that the listener is unaware of the fact or is it that he chooses not to listen? Wittingly or unwittingly, denial of the existence of a breech of social contract is a complicit act. Bearing witness to testimony allows the listener to come to terms with this complicity. This act is restorative for the listener as well as the survivor. Wiesel (1977, 1995) has argued that it is insufficient to punish the perpetrators of crimes against humanity. Either we actively remember the victims or by omission we obliterate the memory of millions, thereby fulfilling the Nazi's very plan!

Listening to testimony of the incomprehensible is difficult. Who can or even wants to believe that in this century, in a civilized Europe, human beings committed such heinous acts against humanity? It is painful to imagine Samu at the end of his grave, even more tormenting to try to imagine Noemi's mother, sister, baby brother, and grandmother in a shower room with hundreds of others, choking on insecticide gas, dying before each others' eyes.

What is the alternative? Avoid the topic? Not listening? Not believing? Primo Levi (1988), survivor, scientist, and author explains the harmfulness for the victim to live in an atmosphere of inattentiveness or disbelief:

> *Almost all survivors, verbally or in their written memoirs, . . . remember a dream . . ., varied in its detail but uniform in its substance: they had returned home and with passion and relief were describing their past sufferings, addressing themselves to a loved person, and were not believed, indeed, were not even listened to. (p. 2)*

This fear of speaking to the incredulous and not even finding ears willing to listen was exploited by the tormentors themselves, the SS prison guards who admonished their prisoners:

However this war may end, we have won the war against you; none of you will be left to bear witness, but even if someone were to survive, the world would not believe him . . . we will say that the events you describe are too monstrous to be believed . . . . [They] will believe us, who will deny everything, and not you . . . . We will be the ones to dictate the history of the Lagers" (Levi, 1988 p. 1)

Of Literacy, Courage and Guarantees

Reading and writing, teaching and learning about the trauma of atrocity and broken social compact require courage. "It is easier to deny entry to a memory than to free oneself from it after it has been recorded" (Levi, 1988 p. 18). Courage is found among those who choose to tell, to listen, to believe, and to remember. Courage is in choosing to face and accept anguish and grief. Perhaps we have to accept the pain of reality so as not to lose touch with it.

Poet Paul Celan used *words against words* to create for the reader an approximation of what cannot be described by words. What is *black milk of daybreak*? Is it the choking smoke and ash belching from the chimneys, the pervasive conditions which nurtured their hopelessness, or a literacy device to capture our sense of disbelief? Crimes committed by the Nazis were of immense proportions, their consequences beyond imagination. Yes, words such as *genocide* were invented, numbers reported; but like a black milk of daybreak, understanding remains impossible.

Furthermore, we learn from the writers of the literature of the Holocaust that a literacy of testimony and witness has not guarantees. Both Celan and Levi had witnesses; their work was published and quoted extensively. Notwithstanding, both chose to take their own lives. Not so for Samu Schonberger, who remarried and wrote until he died of natural causes in his eighties. Elie Wiesel and Noemi Ban are still telling their stories to those willing to listen.

Black Milk in the Classroom

Wiesel (1995) and many other survivors argue that "the Holocaust is unique in recorded history" (p. 19). This is not to discount the 10 million kulaks and their sympathizers killed by Stalin's cohorts, or the murder orgy that erupted in Cambodia under Pol Pot, or the deliberate destruction of the indigenous peoples of North America. Unique but

alike, the telling of the abjectness and torment of each of these atrocities can bind the traumatized and those who will listen, irrevocably. The lesson that we are all ultimately responsible for each other has profound implications for teachers of students who are themselves victims or witnesses to a trauma that has interfered with their learning (Browne & Finkelhorn, 1986; Courtois, 1994; Gardner, 1971; Pynoos & Nader, 1990; Terr, 1990; van der Kolk, Perry & Herman, 1991).

An example of these implications may be seen in the wake of the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, when Oklahoma teachers stopped teaching their planned lessons and took the time to talk, cry, read, and write about this disaster. Time to talk was needed by the witnesses of the atrocity as well as those who were directly victimized. Many educators, some in classrooms thousands of miles away, realized that television images of death and dismemberment were affecting student learning. Makeshift lessons were devised to contextualize these unspeakable events.

Unfortunately, not all traumatic events become explicit content in our curricula. Domestic abuse, rape, homicide, suicide, juvenile gang violence, vehicular-related death and dismemberment, and physical and sexual abuse are atrocities occurring commonly in America's communities. These events are becoming more commonplace in the lives of children and youth (Simmers-Wolpow & Askov, in press). However, in the words of psychiatrist Judith Herman (1992), there are "commonalities . . . between survivors of vast concentration camps created by tyrants who rule nations and the survivors of small, hidden concentration camps created by tyrants who rule their homes" (p. 3).

Like the events of the Holocaust, it is easier to deny such memories than to free oneself from their reality. Teaching and learning require a courage found among those who choose to tell, listen, believe, and remember.

Recently, Samu's daughter, Noemi Ban, herself an award-winning teacher, spoke to a large audience about the lessons of the Holocaust and explained why it was important for her to continue to tell her story:

As a survivor and a witness to the unspeakable horrors of the Holocaust I need an assurance, that the memories of my dear ones, and the memories of millions of other innocent dear ones, will never be forgotten.

It is important for me to know that wherever there is a child, boy or girl, a young adult, mother or father, grandmother or grandfather who has a terrible hurt, such as a death in the family, domestic violence, physical

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or sexual abuse, acts of bigotry and hatred, that there will be people like you and me who will listen, who will believe in them, who will believe what they have to say, remembering them with love, and give them hope.

As a free woman and a survivor who lived under two dictatorships, I hope you will never take your freedom for granted. Freedom comes with responsibility. I ask that you please remember my story and think of it as a stop sign whenever you are witness to acts of hatred.

Finally, my hope for each of you listening to me tonight, is no matter how horrific a memory, or haunting a feeling to which you may be asked to bear witness, that in your heart, you will know that there is the strength to go on, and the strength to give hope. (Ban, 1996)

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Reaction Paper: "Black Milk of Daybreak": The Literacy of Testimony and Witness

Eunice N. Askov

Simmers-Wolpow explores a new genre of literature--that of testimony and witness. He describes the reactions of families and friends to survivors of the Holocaust; the stories were too horrible to be believed. While the survivors tried to lighten their burdens by telling some of the atrocities, much more could not be expressed because of the horror. Furthermore, listeners stopped listening because they could not comprehend the magnitude of the atrocities.

Simmers-Wolpow points out that when a true listener does partake of the testimony, he or she also becomes a witness, albeit second hand, of the event. The great value of the Holocaust survivors is to share their testimony so that we too may become witnesses to the atrocities that were suffered to prevent them from occurring again. Unfortunately, as Simmers-Wolpow explains in his paper, this genre is becoming increasingly more commonplace due to the atrocities occurring every day in modern life, including those that are displayed on our television sets every night.

The reader may be wondering what this paper has to do with reading education. While it is interesting to contemplate a new genre of literature, how does it relate to literacy instruction, teacher education, or research?

What is our response as educators when our students--whether children or adults--come to class showing signs of abuse? Do we listen

to that person's testimony? Do we become witnesses to their atrocities? Or do we instead choose not to notice--not to believe the atrocities that are occurring in that person's life? We have become complicit in the deed if we choose not to listen, just as the Nazis predicted that no one would believe the testimonies of the survivors of Auschwitz.

If we are teacher educators, we have an additional responsibility. Not only do we need to serve as witnesses to the stories of our students who are future or inservice teachers, but we also have to model for them how they should respond to their students. If we ignore their testimonies, or if we send a message that we choose not to hear them, then we are perpetuating an ever-growing cycle of violence. By witnessing to the atrocities of the student's life, whatever they are, we not only help that individual but also the others that the student teaches in the future.

As researchers, we need to study the emerging genre of testimony to identify its unique characteristics. Does it belong in the curriculum of elementary, secondary, or adult education? How can it be used to expand the literacy practices of our students?

While we can never fully understand phrases like the "black milk of daybreak," seemingly contradictory phrases that are part of testimony and witness, we do understand the role of literacy in this emerging genre. We agree with *The Voice of the Silence* (Blavatsky, 1992) which seeks the truth for the well-being of mankind--truth that is being told through testimony and witness.

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Response Paper: "Black Milk of Daybreak": The Literacy of Testimony and Witness

Noemi Ban

Between 1944 and 1945 I ceased to be a member of the human race. I was in Auschwitz. After I got liberated and rejoined the living, I set goals for myself. With a burning desire I hungrily searched, collected, and read all the data, books, and articles I could find to answer two questions: (a) How could this have happened in the middle of the twentieth century? and (b) how could I, as a teacher, use my horrific experiences to help youngsters? Since my retirement from the regular classroom in 1989, I have devoted my time to visiting students and teachers in classrooms as well as civic and church organizations, to teach "the lessons of the Holocaust."

In August of 1995, with friend and Professor Ray Simmers-Wolpow, I returned to Auschwitz-Birkenau. My experiences there affirmed for me that I have special qualifications to speak of the uniqueness of the Holocaust: unique in its unspeakable terror, in its magnitude of horrors, and in its cruelty. However, my message of hope, love of life, the joy of survival, and the value of standing up for what is right is especially relevant to the many children in our society who experience pain, abuse, bigotry, discrimination, neglect, and hatred.

Dr. Simmers-Wolpow has shared with me that there are professors who may question the connection between the traumatic experiences of a Holocaust survivor and the experiences of an "at-risk" student. These professors claim that it is a "stretch" to compare the traumatic

reasons a student might fail in school to the traumatic affect of those who survived the Holocaust. My experience shows differently.

When I visit classrooms to tell my story, students who I have been warned might be unable to concentrate, or who might exhibit behavior that disturbs others, have responded that they identified strongly with what I had to say. During the question period these students were among the first to ask meaningful questions. I do not want the reader to think I have a miracle cure for these students' problems. But I hope you will please consider that when I give testimony, I provide students with an opportunity for them to empathize, show love and respect, and act appropriately. In the words of one teacher, ". . . the students you affected the most deeply are those who seemed the least connected to what we ordinarily do in the classroom. Perhaps this is because you offered them a story and an example they will never forget."

I am not the only one who has a story that needs to be told, a story we must never forget. I have received hundreds of letters from students. Here is an example from one of these letters:

Telling about that part of your life must be hard. My life from the beginning was not easy either. . . . You kept such a will to live and stayed mentally strong with so many horrible and traumatizing situations happening around you. I also have problems, not like yours, but problems. I have thought more than once about suicide. But I promise you, I will remember your story and your love for life. There is another way. There is always hope.

In his letter, this student went on to tell me that he had never heard of the Holocaust. How could this be possible? And how is it possible that this young man is thinking of taking his life? Something terrible must have happened to him. He too needs to tell his story, to be heard, to be given hope. He identified with my pain. And I can identify with his. This is what Dr. Simmers-Wolpow means when he says that through testimony and witness stories become mutually binding. Those of us who are survivors understand that vilifying words precede abuse. We understand that even when terrible things happen to you and your loved ones, there will be those who deny that it ever happened. We understand that there will be those in power who will exercise their authority to make sure you stay quiet. We understand what it is like to not be able to concentrate because we are hurting so much. We understand what it is like to be ashamed to admit that we have experienced "hell" on earth. We understand that hatred and bigotry left unchecked leads to destruction and death.

Those of us who survived the Holocaust also understand that the remedy for hate is love. This is why it is not a stretch to say that young people today, who are dealing with the trauma of abuse, violence, homophobia, bigotry, and hate, are experiencing the same type of hurt as those of us who survived the Holocaust. That is why it is important that professors teach teachers to listen. I have listened. And the lesson I am trying to share with you in this response paper is one that my students have taught me. Here is another lesson from a student's letter:

I am a black student and I know about the hatred and bigotry which is killing my people. After listening to you I realized there are others who are the victims of discrimination. I thank you for opening my eyes.

It is important to me that the memory of my family and the millions of other dear ones who were murdered never be forgotten. But memory comes with responsibility. All teachers have the responsibility to look out for the well being of their students. How do we do this?

In his acceptance speech for the 1986 Nobel Prize, survivor and author Elie Wiesel said:

We know that every moment is a moment of grace, every hour an offering; not to share them would be to betray them. Our lives no longer belong to us alone; they belong to all who need us desperately.

The process of giving testimony and bearing witness belongs to all who need to be heard, trusted, loved, and remembered. All who suffer terrible pain are entitled to give testimony. All who want to bring healing and hope back into our world can benefit from bearing witness.

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A Survey of Teachers' Reading Habits

Jerry L. Johns, Peggy Marciniec

We know that reading to children promotes an interest in and affinity toward books. We know that children who see adults reading have positive role models. We know that a major goal of teaching reading to children is to create in them a life-long love of reading (Johns & VanLeirsburg, 1994). We accept this wisdom as basic information when we plan our daily classroom activities to enhance the literacy of our students. A larger question becomes, do we as teachers practice what is preached? And if we don't read to students on a regular basis or choose reading as a pleasurable activity for ourselves (let alone model reading enjoyment for students), why don't we?

In addition to reading for pleasure, do teachers avail themselves of the opportunity to read professional books and journals? There are many sources of information published with sufficient frequency to keep us up to date on the latest theories and best practices for our classrooms. Which ones do most teachers turn to for updates in the discipline of reading? And, again, if we don't read professional materials, why don't we?

The personal and professional reading habits of teachers have been investigated, although not extensively, in recent years. That limited body of research reveals that teachers have a less-than-favorable disposition toward choosing reading as a recreational activity. The interest of teachers in personal reading has been characterized by Cardarelli (1992) as tepid, less than avid, and discouraging. Mueller (1973) administered a survey to graduate and undergraduate students

in an effort to determine leisure time activities. Reading was only valued "mildly," ranking fourth in a list behind watching TV and going to movies. Searls (1985) reported that slightly under half of the teachers she surveyed chose reading first as a recreational activity. In addition, Searls found that about one-third of the respondents felt that reading could be effectively taught by teachers who do not love reading themselves. Manna and Misheff (1987), however, found that preservice and inservice teachers suggested that enthusiasm for reading is "caught not taught.... Teachers should serve as models for the kinds of benefits and rewards that reading promises" (p. 166). Mour (1977) discovered that the bulk of personal reading by teachers was done by 25% of a stratified random sample of 224 graduate students who were employed in education. Gray and Troy (1986) found that only 29 future elementary teachers out of a total of 80 questioned were currently reading a book for pleasure.

It has been argued that reading professional journals affords teachers and schools a cost-effective means of inservice, but that teachers are often overwhelmed by the amount of professional materials available and discouraged by technical language that is frequently used (Stopper, 1982). Teachers, it seems, could share ideas and information with one another, but research suggests that teachers seldom talk shop with their colleagues (Pearce, 1984). Another reason cited by teachers for not reading current journals is that articles do not offer suggestions that have direct and immediate value to them in the classroom (Cogan & Anderson, 1977). Lack of time for reading is an issue that leaves professional reading wanting. Bell and Roach (1989) surveyed over 1500 teachers in Arkansas and found that more than one-third had second jobs and another one-third wished they did because of the need for supplemental income to their teaching salaries. Womack and Chandler (1992) evaluated the results from a survey they did of 64 elementary, middle, and high school teachers and noted that society overburdens teachers. They simply do not have time for professional reading in addition to the increasing demands of their career and the personal need for family time, both of which take precedence over professional reading.

Studies of preservice and inservice teachers, from elementary through high school, show a common thread of agreement. Teachers, for whatever reason, simply have not been found to be prodigious readers of either personal or professional materials. It is not enough to observe that teachers are apparently not avid readers. There is a need to know why. Our investigation was guided by several questions. Are teachers readers of both personal and professional materials? What are some of the things that teachers believe enhance opportunities to read, and

what do they perceive as some of the detractors to reading? Knowing what enhances and detracts--the why--from opportunities to read may help us suggest possibilities to enable teachers to choose reading for recreation and information.

Method and Procedure

Womack and Chandler (1992) created a 40-item Survey of Professional Reading to determine the reading habits of 64 teachers. We adapted a portion of it and also included demographic items and personal reading habit items to achieve the purpose of our investigation. Major areas included professional reading, personal reading, enhancers to reading, and detractors to reading. Our 32-item survey, Reading Habits: A Survey for Educators (see Appendix), used a Likert scale in which 1 reflected a statement that was true of the respondent, 3 meant neutral, and 5 reflected a statement that was untrue.

Reading Habits: A Survey for Educators was administered to 204 educators who were enrolled in classes or a for-credit reading workshop in the northern Illinois area during the first six months of 1993. Of the 204 respondents, 64% were elementary teachers, 13% were middle school teachers, 7% were high school teachers, 9% were special reading teachers (Title 1, Reading Recovery, reading specialists), and 7% were administrators. Nearly half of the total group had earned a bachelor's degree and 40% had earned their master's degree; 1% had finished a doctorate, and 5% reported they had completed a K-12 reading specialist certificate.

In terms of experience, about 60% of the educators had 6 or fewer years of experience, 26% had between 7 and 15 years of experience, and 13% had 16 or more years of experience in their current position. When asked the number of courses they had taken that related specifically to reading, 4% said they had no reading courses, 65% had from 1 to 6 reading courses, and 30% reported they had taken 7 or more courses in reading. To summarize, over half of the individuals surveyed were elementary teachers who had taken from 1 to 6 courses in reading and had 6 or fewer years of experience in their current position.

Results

Professional Reading Habits

The survey results revealed that 46% of the respondents reported reading a minimum of three articles from professional journals each month and 54% read at least two professional books each year. About

40% reported not reading three journal articles each month and 26% had not read at least two professional books during the last year.

Over one-third of the respondents said they enjoyed reading technical or scientific research articles about the teaching profession while about the same number did not enjoy technical reading about teaching. The vast majority of the 204 respondents (85%) preferred practical professional reading that had direct application to teaching.

The impact of taking college courses on the respondents' professional reading was also explored. Only 30% said that they do just as much reading while taking a college course; about half of the group responded that they do not.

Respondents were also asked to list three professional journals that they read most frequently. The overwhelming choice was *The Reading Teacher*. Other journals chosen with nearly the same frequency as each other were *Instructor, Educational Leadership, Journal of Reading, Language Arts*, and *Phi Delta Kappan*.

Personal Reading Habits

Daily newspapers were read by 75% of the respondents every day. Respondents also read magazines that were not considered professional or directly related to teaching. Again, the results were positive: 85% of the group reported reading at least one magazine for pleasure each month.

Knowing the time constraints and curricular demands, over 90% of the respondents surveyed read aloud to their students. Given the fact that time demands are many, would teachers choose pleasure reading over professional reading? Nearly three-fourths of the respondents to the survey chose reading for pleasure over reading professional materials.

Enhancers to Reading

In the workplace, the administrator often sets the tone for what is professionally acceptable. Therefore, some of the survey questions explored whether building administrators perceived reading as important to professional development. About 70% reported that they perceived their administrators as supportive in this area, but about 20% marked "neutral" and 10% did not perceive that their administrator felt professional reading was important. Nearly half of the group, however, reported that their administrator cited research findings during communications with staff.

Journal articles and professional books appear to have an impact in about 60% of the professionals surveyed, although 16% reported that written professional thought did not impact their work. A little more than half of the respondents reported that their colleagues did not discuss professional readings. However, about the same number felt that they stay abreast of changes in the teaching profession by reading. Nearly two-thirds reported that their colleagues shared personal reading suggestions like enjoyable books or magazine articles.

An enhancer to reading frequently cited is time. Nearly one-third of the respondents reported that they had enough time to read for themselves and to others for pleasure. However, 52% felt they did not have enough time for reading.

An open-ended questions gave educators further opportunities to respond to the issue of enhancers to reading. The ideas given by professionals centered around things they can do to spend more time as readers, given the constraints of job and the need to spend quality time with family. Educators suggested using silent reading time and suspension room duty as times during the work day to read. Several respondents suggested a slight adaptation of lifestyle to include reading by having a book or journal along at all times and by keeping reading materials in the bathroom and car so that unexpected delays in places like traffic or the doctor's office could be turned into an opportunity to read. Other teachers told us that taking college courses demanded extra professional reading. Time away from school as well as summer or vacation breaks were also listed. Teachers who were also parents mentioned reading to their children as a real enhancer to reading. It was also perceived as a time to become familiar with many excellent children's books.

Detractors to Reading

The survey results revealed numerous factors that kept teachers from reading as much as they desired. Time is perhaps the biggest of these; 80% of the respondents have to make time for professional reading and 62% actively set aside time for pleasure reading. Three-fourths of the respondents reported that there is not enough time in the work day to read. Nearly two-thirds felt that there is not enough reading time without giving up family time. About half of the respondents related that taking a college course detracts from their reading time.

Half of the respondents perceived that their colleagues and administrators supported their professional reading, but over 10% reported that colleagues and administrators were not supportive of their profes-

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sional reading. Only about 20% of the group surveyed had a second or part-time job. Of the group that reported "moonlighting." over 12% felt that the extra work hours detracted from their opportunities for reading.

Respondents were given a further opportunity to share additional detractors from reading in their lives. They listed responsibilities and obligations of job and home as the biggest reasons why reading could not be given more time in their daily lives. Some respondents also explained that they were just too tired from a full day of teaching. One teacher felt that teaching involved too much reading and the result was a need to exercise. These detractors represent valid reasons why teachers cannot spend more time as readers.

Summary and Conclusions

Reading Habits: A Survey for Educators was administered to 204 professionals enrolled in a reading course or a workshop to determine if they valued personal and professional reading and had opportunities for reading. The group surveyed was predominately elementary teachers who had earned at least a bachelor's degree (40% had master's degrees), had taken several (between 4 and 10) courses in reading, and who had 6 or fewer years of experience in their current position. Contrary to many previous research findings, the group of teachers in the present study were active readers. Over half read at least three journal articles a month and two professional books each year. In addition, at least three-fourths read the newspaper daily, one magazine that was not a professional journal, and one book for pleasure monthly.

Perhaps the group we surveyed had unusual characteristics. They were all enrolled in a college course for credit. Although not indicated on the survey directly, a large percentage of the respondents were female. It is not readily possible to determine specific demographic differences between the 204 respondents in the present study and other groups reported in the few studies of reading habits over the past 20 years. It may be that teachers in the 1990s have found a way to save time for professional and personal reading.

Although the findings rely on self-report data and are restricted to one geographical area, they reveal that the educators surveyed are readers of professional and personal material. On the other hand, there are some disturbing results. First, only half of the respondents reported that the administrators where they worked shared research and other professional writing at meetings and in their interactions

with staff. Administrators, as the instructional leaders of their build-
ings and districts, would seem to be in a favorable position to share
important research and implications for teaching.

Second, only about 40% of the respondents felt that their colleagues
frequently referred to ideas and research from professional readings.
Many more, about two-thirds of the group, related that their colleagues
shared personal reading suggestions. It would seem that teachers are
more inclined to share reading that is purely recreational as opposed
to sharing research or professional writings. Only about half of the
respondents felt that their colleagues approved of their efforts to keep
current by reading professional books and journals.

Third, the educators surveyed responded that they do not have
enough time for personal or professional reading either on the job or at
home due to responsibilities and desire to spend time with family.
With growing responsibilities for many educators in the workplace,
time management seems an issue that is difficult to resolve.

Recommendations

Educators and parents serve as strong role models in the lives of
children. Adults who choose to read for enjoyment and information
give students powerful and positive messages about reading. The
present study reveals that many educators are indeed serving as
powerful role models for life-long literacy. However, certain aspects
detract from the luxury of choosing to read for pleasure and to update
professional knowledge. Perhaps some of the following ideas may be
helpful in the way educators perceive themselves as readers.

Literacy Models

Much of the research on teacher attitudes and interests relative to
reading over the past several years points out that teachers, for
whatever reason, do not choose to read; however, programs to entice
teachers to read have been effective. Cardarelli (1992) described a
program. Teachers Under Cover (TUC), designed to provide middle-
grade teachers with the opportunity to read and discuss contempo-
rary, best-selling books. The program focused on increasing teachers'
personal reading and developing awareness and appreciation of col-
leagues through regular meetings to talk about books read. Success
was evident because the 350 teachers who participated across the state
of Indiana had a renewed love of literature, developed a new apprecia-
tion of colleagues, and generated enthusiasm that was carried over into
the classroom.

TUC required teachers to set aside time for themselves to enjoy and discuss specific novels. Other groups like this could be formed to read and discuss new children's literature or current articles of research and practice. The International Reading Association developed Teachers As Readers, a project designed to gather educators together to discuss children's books, adolescent literature, professional books, and adult books. Whatever the topic, the point of setting aside specific time to read and discuss with colleagues seems a key to promoting teachers as readers. Teachers who read and share are solid role models for their students.

Keeping Current

Burhans (1985) wrote that most teachers come from the lowest level of their graduating class and that the "quality and value of their teaching depends in large part on what they know and how well they keep abreast of changing developments in their fields" (p. 91). This is a disturbing, but thought-provoking statement. Consider the wealth of new information in just the past five years about assessment and strategy instruction. Technology, too, has advanced rapidly during this time. In short, unless we read, we are unlikely to keep pace with the most recent thinking of our professionals. "Keeping up with one's field is an essential element in professionalism" (Burhans, 1985, p. 95).

Teachers need to access information about what to teach and how to teach. Professional reading is a good way to gain this information. Although it may not be possible to read all the best and most respected journals and authors, discussions with colleagues and sharing pertinent information is vital to professional growth.

Support of Administration

Not many teachers in the present study reported that they set aside a specific time to read or discuss professional writings during their work day. This is an idea whose time may have come! School budgets of today do not lend themselves to dollars budgeted for teacher reading time. However, savvy administrators realize that sharing current professional literature is truly a cost-cutting means of inservice. Countless variations of grouping, presentations, and discussions could serve to keep teachers more current with research and professional writings. Creative ways to schedule time during the teaching day to share and critique current professional writings would likely be more cost-effective than hiring outside speakers and allotting an entire day for teacher inservice, although speakers will probably remain an integral part of staff development programs. Pearce (1984) described a program of sharing current journal information among classroom

teachers. He commented on the payoff of such a system because "people learn more, are more confident, and communicate more accurately if they have credible background knowledge" (p. 1). Educators who want to read more professional materials may design possible ways to use time creatively. Administrators would surely agree to ideas that are cost-effective and promote professional growth.

Teachers who keep current with professional reading and who enjoy personal reading are role models who promote life-long literacy. Ingenuous time management and supportive administrators and colleagues will enable teachers to have opportunities to read. Teachers who avail themselves of these opportunities are the readers we need in the classroom.

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Appendix

Reading Habits: A Survey for Educators

Thank you for participating in our survey. We want to gain some knowledge about the reading habits of educators.

But first, a little information about yourself. Please mark the best descriptor.

1. Profession:
   a. elementary teacher
   b. middle school teacher
   c. high school teacher
   d. special reading teacher (Chapter 1, Reading Recovery, reading specialist, etc.)
   e. administrator or other

2. Degree earned:
   a. bachelor's
   b. master's
   c. doctorate
   d. K-12 reading specialist
   e. other

3. Years of experience in your <u>current</u> position:
   a. 0-3
   b. 4-6
   c. 7-10
   d. 11-15
   e. 16+

4. Number of reading courses taken:
   a. 0
   b. 1-3
   c. 4-6
   d. 7-10
   e. 10+

Please mark the truthfulness of each statement for you with a rating of 1 (almost totally true) to 5 (almost never true) with 3 being neutral.

PROFESSIONAL READING

		true			untrue	
5.	I read a minimum of three articles from professional journals each month.	1	2	3	4	5
6.	I usually read at least two professional books each year.	1	2	3	4	5
7.	I enjoy reading technical or scientific research articles about my profession	1	2	3	4	5
8.	I prefer reading practical or application articles over theory and research articles.	1	2	3	4	5
9.	I do just as much professional reading when I'm taking a college course as when I'm not.	1	2	3	4	5

*On the back of your computer answer sheet, please list the three journals you read most frequently.

PERSONAL READING

	true			untrue	
10. I read a newspaper every day.	1	2	3	4	5
11. I read at least one magazine each month that would not be considered a professional or teaching journal.	1	2	3	4	5
12. I enjoy reading at least one book for pleasure each month (including novels, short stories, collections of poetry, etc.).	1	2	3	4	5
13. I share literature, reading aloud to children at least once a week.	1	2	3	4	5
14. I prefer reading for pleasure rather than professional reading.	1	2	3	4	5

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ENHANCERS TO READING

	true				untrue
15. The administrators where I work see reading as an important part of professional development.	1	2	3	4	5
16. The administrators where I work frequently cite research and other professional writing in meetings and other interactions with staff.	1	2	3	4	5
17. Written professional thought has an impact on the way we do things where I work.	1	2	3	4	5
18. Administrators/Leaders post or share current literature that is interesting and applicable.	1	2	3	4	5
19. My colleagues frequently refer to ideas and research from professional readings.	1	2	3	4	5
20. There is no specific time daily or at least weekly when part of my job is to read from or apply knowledge gathered from professional writings.	1	2	3	4	5
21. I feel that I stay abreast of changes in my professional because of these reading opportunities.	1	2	3	4	5
22. My colleagues share personal reading suggestions such as magazine articles and books they have enjoyed.	1	2	3	4	5
23. I have enough time to read to myself and others for pleasure.	1	2	3	4	5
24. Pleasure reading materials are readily available to me.	1	2	3	4	5

*Any other enhancers to reading? If something makes it easier for you to have the time and opportunity to read, please write it on the back of your computer answer sheet.

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DETRACTORS TO READING

	true				untrue
25. I must set aside time for professional reading.	1	2	3	4	5
26. I set aside time for pleasure reading.	1	2	3	4	5
27. There is enough flexible time at work to include reading in my work day.	1	2	3	4	5
28. Colleagues approve of my efforts to keep current by reading professionally.	1	2	3	4	5
29. Administrators are supportive of my professional growth through reading.	1	2	3	4	5
30. I have enough time to read without giving up family time.	1	2	3	4	5
31. Taking college courses prevents me from reading as much as I would like. (If you are not currently taking a course, please do not mark this questions.)	1	2	3	4	5
32. My after-hours job does not interfere with my opportunities for reading. (If you do not "moonlight" please do not mark this question.)	1	2	3	4	5

*Any other detractors to reading? Please share those things that inhibit you from having the time or opportunity to read on the back of your computer answer sheet.

THANKS FOR READING THIS SURVEY AND PARTICIPATING!

Adapted from:

Womack, S. T., & Chandler, B. J. (1992). Encouraging reading for professional development, *Journal of Reading, 35,* 390-394.

Factor Analysis of Teachers' Responses to Why They Don't Use Published Reading-Teaching Methods and What Would Cause Them to Do So

Anthony V. Manzo, Ula C. Manzo

Problem

This study seeks to explain why many practicing teachers do not use the largely research-based teaching methods of reading and language arts that are found in most professional texts and courses. The question is important because these methods represent a tangible part of education's knowledge base and acquired technology. Importantly, too, these methods tend to represent our best cumulative understanding for achieving such goals as fostering interactive teaching and systematic release of responsibility to students for becoming strategic readers and learners.

Force Field Analysis

The study is both descriptive and exploratory in that it attempts to achieve insights into this problem by uncovering the restraining factors that support the current situation as well as those that might facilitate change. This essentially "force field analysis" (Schmuck & Runkel, 1985), as illustrated in Figure 1 encourages exploration more so than hypothesis testing, although support for hypotheses may be found incidentally.

Figure 1. Force Field Analysis

Current State of Affairs

Restraining Factors   **Facilitating Factors**
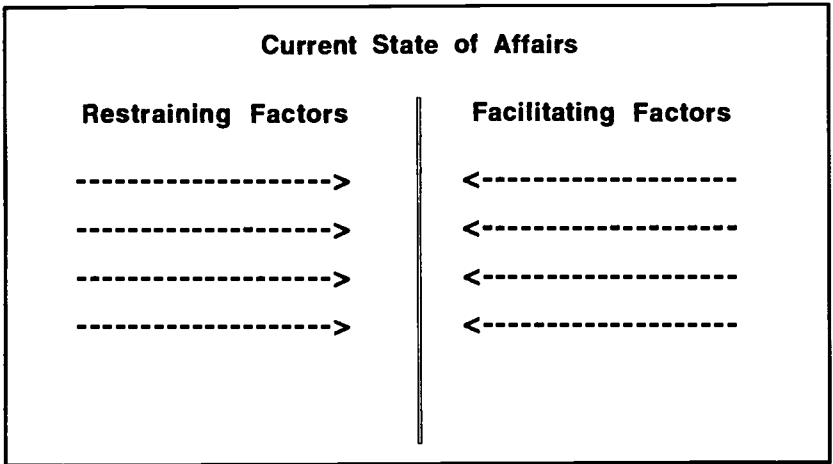
Background

Several empirical studies in reading (Conley, 1986; Durkin, 1978-79; Grote, 1989; Ratekin, Simpson, Alvermann, & Dishner, 1988; Tefler, Jennings, & Mottley, 1989) and general professional education (Rogers, 1962; Rogers & Shoemaker, 1971) have indicated that teachers' levels of knowledge and use of strategic teaching options in reading and language arts are far below desirable levels. This finding was fully confirmed by ethnographic observations of one of the authors of over 50 high school English classrooms in an urban school district that provided considerable (court-ordered) inservice education for which participants also received an hourly stipend (Manzo, 1988).

Several of the above-mentioned studies have attempted to offer incidental explanations for why teachers may not practice what they are taught in professional education courses and workshops. Two of the most popular explanations also seemed to be the most prophetic in terms of the outcomes of the current study. One is that teachers tend to construct simplified approaches to instruction that fit the constraints of the workplace (Manzo, Morgan, & Ellis, 1991; O'Brien, 1988). The other popular explanation says that teachers deliver instruction so as to "cover material." This limits them to approaches that will keep students in a passive and "managed" mode (Jackson, 1983). This style of management is the antithesis of the interactive nature of most strategic teaching procedure and has led to the suggestion that too much of "reflective teaching" is being done from a defensive-reactive posture (Manzo & Manzo, 1990, 1997).

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Current Research

This study used a self-report survey instrument that teachers helped to construct over a semester of conversations and then a factor analytic design to sift through the many responses and factors that it seemed to touch upon. The term "published" teaching methods is used here to refer to the most common practices as found in college texts, such as *Reading strategies and practices: A compendium* (Tierney, Readence, & Dishner, 1990).

Questions and Procedures

Three interlocking research questions provided the structure for the investigation:

1. Do teachers know and are they inclined to use available teaching methods found in most college texts?

2. If they have knowledge of such teaching methods, why do they not use them?

3. What do teachers think would induce them to become more frequent and strategic users of published teaching methods?

Subjects

Eighty-five practicing teachers provided usable data. The preponderance were from midwestern urban area schools. Thirty-five percent were enrolled in, or graduates of, masters' programs in reading or elementary language arts. About a third were black minority, with approximately 18% coming from a cooperating northeastern university.

Instrumentation

A three-part questionnaire was used to survey teachers for their perspectives on the "restraining" forces that maintain the current state of affairs and on present and possible facilitating forces that might help alter it. The survey was organized around three paradigmatic questions:

1. Did teachers know, and were they using, available teaching strategies?
   Inventory A - 3 items

2. When teachers did not use available strategies, why did they not?
   Inventory B - 53 items

3. What would it take to have teachers use the strategies more frequently?
   Inventory C - 23 items

Data Analyses

In order to determine how items clustered into identifiable factors, each inventory was treated by a principal-components factor analysis (Hotelling, 1933). An additional transformation of the principal-components analysis was done which attempted an oblique, or "orthotran," solution (Hoffman, 1978). This type of analysis attempts to refine the simple factor structure by allowing the inclusion of factors that are correlated, as several of the items were expected to be. Inclusion of items in the factor structure was decided by a method default program (Feldman & Gagnon, 1989) that combines two frequently used criteria known as root curve (Cattell, 1966) and the 75% variance rule (Gorsuch, 1983).

Estimation of Validity and Reliability of Questionnaires

The survey instruments were, in a manner of speaking, self-validating. The items had been created in collaboration with 24 teachers attending a credit workshop conducted by the researchers at an urban school site. The teachers were fully apprised of the purpose of the investigation. The inventory evolved over a semester of discussions and journal entries related to the research questions noted.

Subsequently, these teachers were among the first surveyed with the inventory they helped to design. Correlations of the means for survey items among teachers from three locations (the off-campus site and two campus sites--a midwestern and northeastern) averaged .71. This seemed to suggest that the inventories were a reliable and valid representation of teacher concerns and that the data could be combined to create a sample size large enough to permit a factor analysis.

Construct validity was further strengthened by preliminary results of a comparison of responses of practicing teachers with preservice teachers being surveyed as part of a follow-up study otherwise not reported here. In this comparison the similarities and differences in teachers' responses were highly consistent with a stage theory articulating a developmental model of phases of concerns of novice and veteran teachers (Fuller, 1969; Fuller & Brown, 1975).

Finally, a certain measure of reliability and construct validity are built into factor analysis. Factor analysis groups items statistically. The resulting groups of items provide their own support for the data collection devices by showing how they cluster into logical response units, and conversely, where they do not.

Limitations and Considerations

The sample size of this study meets Cattell's (1966) requirements for a factor analysis—at least one subject for each variable, with each item in an inventory treated as a variable. However, this number falls short of the sample sizes reported in recent years, albeit largely in sociological surveys.

Another consideration in study designs of this type is the fact that, contrary to popular belief, factor analysis probably is more constructive than reconstructive in nature. In this sense, it can resemble qualitative as much as empirical research: the analysis produces data points that need to be connected, described, and named. This introduces a good deal of subjectivity into interpretation of findings from the very outset by the researchers and alternately by each reader.

Finally, this study tends to reflect more the conditions and perceptions of teachers in urban centers. This is at least marginally significant since suburban teachers, according to a recent news report on the annual survey of the Education Commission of the States, "are nearly twice as likely now as in 1985 to say their jobs pay a decent salary," that they are appreciated, and that they would recommend the profession to others ("Factoids," 1995). At this writing, we have been unable to ascertain what the baseline was that now has doubled.

Results

Findings of the study are presented along with brief interpretations. The descriptive data of Inventory A is based largely on the responses of teachers in graduate reading programs versus practicing teachers enrolled in various other course and work-shop situations.

Responses to Inventory A. Teachers in a master's program in reading were 68% more likely than other veteran teachers to say that they use teaching methods frequently. They were 33% less likely than other veteran teachers to say they did not tend to use teaching strategies and 52% less likely to say that teaching strategies were not part of their teacher training (See Table 1). The data from these two veteran groups were combined nonetheless, since correlations on all other items, with the exception of two directly bearing on the issue of training in reading methods, were sufficiently high to represent the larger population of teachers to whom we wished to generalize.

Table 1

Mean Responses of Reading and Non-Reading Majors to Inventory A: Use of Teaching Methods

In Reading Masters Program (N = 30)	Not in Reading Masters Program (N = 55)	Item
3.7	2.5	1. I use . . . strategies frequently
1.8	2.4	2. I do not tend to use . . . strategies
1.5	3.1	3. I (was not trained in) strategies

Note: 1 = low; 5 = high

Teachers' responses to Inventory B. Factor analysis of item responses to the paradigmatic question "When I do *not* use teaching strategies, my reasons are ..." were found to contain 13 oblique factors, an unusually large number and strong indication of the complexity of the dynamics and crosscurrents in this factor. Variables, or item clusters, in each factor are listed in descending order. See Figure 1 for a graphic representation of these.

Factor 1: "Unrealistic" Factor

Item Loading		Item	Interpretation
.922	5.	Most strategies don't seem to suit me.	Teachers perceived teaching
			strategies to be incompatible
.773	6.	Most strategies don't seem to suit my	with their style of teaching and
		student's needs	most students' styles of learning.

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Factor 2: Incentive Needed Factor

Item Loading		Item	Interpretation
.903	48.	It doesn't seem to matter much to my immediate supervisor(s) what I do.	Teachers are not finding sufficient incentive from students or supervisors
.861	50.	They conflict with what my principal/ administrator expects.	to make the effort to use interactive strategies.
.655	39.	Students just don't appear interested or motivated to do anything.	

Factor 3: Uncertainty (Fear of Change) Factor

Item Loading		Item	Interpretation
.618	8.	It makes me edgy.	Teachers are uncertain about which
.531	9.	I can't decide which ones to use.	strategies to use. This increases their level of fear and stress about whether they can succeed with them.

Factor 4: Classroom Management Factor

Item Loading		Item	Interpretation
.846	38.	My audience doesn't seem willing.	Teachers anticipate that interactive
.666	21.	I can't seem to get the class to. . .	strategies would not elicit student responses and would create further problems.
	26.	Doesn't make me feel stronger and more competent.	

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Figure 2.

Interpretative Representation of Reasons Teachers Don't Use Teaching Strategies

Factor 5: Energy Factor

Item Loading		Item	Interpretation
.903	2.	I guess I'm kind of lazy.	Teachers feel that using strategies
.715	3.	It takes too much thinking and	would require too great a drain on their
		planning before class.	thinking and energy in and outside
.636	1.	It feels like it would be too much	of class.
		work.	

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Factor 6: Technical Uncertainties Factor

Item Loading		Item	Interpretation
.584	45.	It's tough to even remember the next step in an actual classroom situation.	Teachers feel that they require some additional technical support in using
:549	42.	I'm uncertain of my own abilities at times.	strategies, and especially so during "in-flight" conditions.
.504	46.	I don't understand just when to do this or that.	

Factor 7: Imposition Factor

Item Loading		Item	Interpretation
.893	12.	I feel like I'm being told what to do.	Teachers, clearly, do not like being
.861	13.	I feel reduced to a programed machine	told what to do, especially when it is part of someone else's image of what
.625	13.	I just can't picture myself doing these things.	should be done.

Factor 8: Lack of Confidence Factor

Item Loading		Item	Interpretation
.775	35.	I can only do what I can understand.	Teachers seem to be saying: "I must
.426	36.	I feel that I already do most every-thing these methods require of me.	not understand these strategies because they seem to be no better than what I've always done."

Factor 9: Saturation Factor

Item Loading		Item	Interpretation
.741	7.	Keeping the materials I must teach in mind leaves me too distracted to also think about how to teach it.	Teachers feel overwhelmed. They seem to believe that teaching strategies could further increase their level of
.664	49.	It will disrupt procedures—a quiet classroom is important.	distraction and reduce their control over a class that can easily become unruly at any time.

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Factor 10: Misalignment Factor

Item Loading		Item	Interpretation
.607	51.	They aren't suited to the textbook(s) I use.	Teachers don't see any alignment of teaching strategies with their classroom
.537	36.	I feel that I already to most every-thing these methods require of me.	materials or their personal priorities.
.528	24.	They don't seem natural.	.

Factor 11: Isolation Factor

Item Loading		Item	Interpretation
.906	18.	There's no one to talk to about my efforts, successes, and failures.	Teachers seem to be saying, "It's very lonely out here. I feel the need for someone to confer with and to validate me before I can truly be concerned about the validity of methods being presented to me."

Factor 12: Ego Protection Factor

Item Loading		Item	Interpretation
.879	27.	Makes me wonder why I didn't think of this before, or on my own.	Some teachers feel that hearing about new methods that might work can be ego-deflating, since they feel that they should have thought of them first.

Factor 13: Hopeless Situation Factor

Item Loading		Item	Interpretation
.378	33.	The effects on learning are not apparent fast enough.	Teachers find it hard to believe that strategies could have a real and visible impact on learning outcomes, especially
.345	36.	I feel that I already do most every-thing these methods require of me.	since (again) they feel that they have tried everything that reasonably can be done.

Teachers' responses to Inventory C. Inventory C asked teachers for their solutions to the problems they raised in Inventory B. Inventory C was constructed on the paradigmatic prefix: "I would use teaching strategies more frequently if..." This inventory yielded eight oblique factors. These have been compressed into six since the last two were very weak and essentially redundant ways of saying the same thing as the sixth factor. These are graphically represented in Figure 3.

Factor 1: Relief and Support Factor

Item Loading		Item	Interpretation
.966	13.	I had some relief following this great effort.	Teaching strategies would be more attractive if they didn't (appear to)
.795	12.	I had some prompts to remind me of what to do while I was doing it.	require more work prior to use, there were prompts to keep teachers on target
.722	10.	It didn't take so much planning and forethought.	during use, teachers could self-discover value while using them, and, mostly, if
.648	18.	I had a better idea of when, for how long, and how often to do it.	there were some promise of *relief* as an incentive before following the
.624	22.	I could discover their value on my own.	exceptional effort strategic teaching seems to require.

Factor 2: Feedback Factor

Item Loading		Item	Interpretation
.846	4.	I could receive constructive feedback when I try it.	Before teachers would use teaching strategies, they feel they need more
.531	14.	I had more counseling and planning time.	time for planning and personal feedback.

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Figure 3.

Interpretative Representation of What It Would Take for Teachers to Employ Published Teaching Strategies

Greater incentive to do; largely in the form of relief from current burdens & technical support in mastering these methods
1

Constructive feedback, consultation, & more planning time
2

More careful training & an opportunity to adapt methods to personal syle and fit
3

Demonstrations & more time to incorporate
4

Greater participation & control over objectives & methods, as well as greater appreciation & commiseration along the way
5

Earlier & better training in strategy options & reinforcement from students for using them
6

Factor 3: Mastery and Safety-Net Factor

Item Loading	Item	Interpretation
.856	5. I could get more careful training in doing it until I really had it down.	Before teachers are willing to try something new, especially in an
.775	6. I could practice it in a controlled situation.	unpredictable classroom situation, they need to feel confident that they can
.515	7. It fit me, personally, better.	perform flawlessly; they also would
		like for the methods to suit them better
		so that they have a safety net to fall
		back on in the form of their own
		natural style of operating.

Factor 4: Imaging and Time Factor

Item Loading		Item	Interpretation
.684	3.	I could see them done.	Before teachers do something new,
.667	14.	I had more counseling and planning	they would like to see it done and have
		time.	some counseling in determining how
			they might do it.

Factor 5: Participation/Control Factor

Item Loading		Item	Interpretation
.943	16.	People would just stop telling me	Teachers would be more encouraged to
		what to do and when.	try new strategies: if they weren't so
.697	9.	Administrators and supervisors were	anguished and confused by their sense
		more aware of my efforts.	that everyone tells them what to do: if
.601	20.	I would if I were sure when and	they could anticipate more
		where to use them.	appreciation: if they could commiserate
.496	19.	Students only would respond	with a partner: and generally: if
		more favorably.	conditions were more within their
			control.
.496	12.	I don't know what it would take.	
.449	17.	I had an assistant or partner.	
.428	7.	It fit me, personally better.	

Factor 6: Knowledge, Preparation, and Reinforcement Factor

Item Loading		Item	Interpretation
.853	21.	I was not taught about them in my	Apparently, some teachers have
		initial training.	little knowledge of strategy options
.456	19.	Students only would respond	and have a corresponding lack of
		more favorably.	confidence in these options.

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Summary of interpretations. Several plausible answers and further hypotheses were generated to the three research questions: are teachers using published teaching methods?; where they are not, why not?; and what, in their view, would help them to do so?

Regarding the first question, responses to Inventory A indicated that practicing teachers involved in graduate programs in reading were more knowledgeable about and inclined to use published teaching methods than non-reading majors taking inservice courses. Notably, a large proportion of practicing teachers say that they were not trained in, and therefore were not able to select or use, established teaching strategies. Several of these, we learned from discussion and interview, had masters' degrees in elementary education. This seems to translate into a need for more practice-oriented training in these basic methods in professional education programs. Notable, however, is the fact that most of these teaching methods did not begin to appear in reading textbooks until the early to late 1980s and hence may not have been widely known when many of currently practicing teachers and teacher-trainers were themselves in training. Important, too, is the fact that more recently there has been a strong increase in disbelief in direct teaching methods as compared to more whole language methods that rely largely on an incidental learning model. However, since the survey did not specify this difference, it probably is best to assume that teachers' responses are pointed at both direct and incidental teaching methods; the two types do appear alongside one another in most college texts.

The second research question, probed through Inventory B, solicited teachers' perceptions as to *why* they were not using published reading teaching methods. Responses of teachers to this query seemed to be based in large measure on insecurities about knowledge, training, and competence in their use, though this often was expressed in terms that would make it appear that teaching strategies were unrealistic. The charge of "unrealistic" does not seem logically supportable, however, since most published teaching methods are the products of the experience of teachers who became professors and of teacher-scholars who publish; hence *most* methods are conceived from classroom experience, and then tested and disseminated based on their predictability and empirical efficacy. Therefore, teachers' reservations about using teaching methods require an alternate interpretation. One possible interpretation is natural defensiveness, perhaps resulting in part from inadequate access to knowledge and training. If this is true, then reservations about the use of teaching strategies should diminish with greater access and training, as indeed was shown to happen

among reading majors. Logically, more and better training also should reduce the effects of uncertainty and fear (Factor 3), anticipated resistance from students (Factor 4), loss of esteem due to perceived mismatch with personal style (Factor 7), and two other natural defensive reactions found in Factors 8--the rationalizing, or perhaps more correctly the *realizing*, that teachers are limited by what the situation allows, and that they are too saturated by current demands to take on new ones (Factor 9). Taken together, this sounds like the "constraints of the workplace" hypothesis suggested in the literature.

Responses to Inventory C, or "what would cause me to use teaching strategies more often," is best represented by the complexity of Factor 1. It seems to be saying, "While teaching strategies probably have impact, they require greater intensity, but where can a teacher find relief following this huge, expenditure of energy?" Teachers further suggest in Factor 1 that they would be more inclined to use such methods if there were at least these elements of support: (a) the presence of some form of prompts to remind them of the steps of a strategy under "in-flight" conditions--after all, surgeons, pilots, and T.V. commentators all rely on these; (b) more expressions of concern from supervisors in favor of such instruction; (c) more technical assistance in mastering such methods; and (d) relief from isolation, perhaps by increased opportunities for collaboration and commiseration with colleagues.

Regarding inservice training, practicing teachers further say that they need more feedback (Factor 2) and careful training with time to internalize and personalize strategy options (Factor 3) before they can feel comfortable in conducting a prescribed strategy-based lesson in a typical, and often distracting, classroom. They also clearly want to see some strategy options demonstrated so that they might realistically appraise these and visualize themselves conducting them (Factor 4). Teachers additionally would like such methods presented to them in some more heuristic and hands-on fashion that would permit them to self-discover and assert some ownership over these methods (Factor 5). Finally, practicing teachers feel that preservice teacher education programs should provide a greater level of knowledge and practical training in the use of strategies before one assumes responsibility for a real class (Factor 6). This call for more *training*, as differentiated though not distinct from education, seems to reflect the long standing realization and point of consternation between practicing teachers and professors, that teaching is part of a craft as well as a technical-cerebral culture (Aquila & Parish, 1989).

Discussion

Overall, practicing teachers did not seem to reject published teaching methods. They do seem to be saying, though, that they are not adequately prepared, cognitively and/or behaviorally, to reflectively select and use them. There also is a theme running through all responses that more or less says that a teacher's lot is not a happy one. Accordingly, teachers are requesting that they be schooled in published methods earlier, that they be led to a greater sense of ownership of them, and mostly that attention be given to the pragmatic concerns facing those who teach: how to keep students motivated, administrators happy, the curriculum unfolding, and oneself from exhaustion at the least, and personally motivated and growing at best.

It was with the latter concern in mind that the researchers, and others, have attempted to refine *heuristic* methods of teaching--or self-discovery, learn-by-doing approaches (Manzo, 1991; Manzo & Casale, 1985; Manzo & Manzo, 1990, 1993; Marzano, 1991). Heuristic methods attempt to restructure what happens in classroom teaching that permits teacher and students to reciprocally influence and learn from one another. Ideally, *using* such strategies would tend to result in ongoing training and a greater sense of self-efficacy and personal control. This, however, still is a methods answer, and hence, not equal to teachers' deeper concerns.

Comment

Overall, teachers seem to be asking for help in making school a more agreeable place in which to work and study. For all the talk about restructuring, urban schools remain underfunded, while they continue to carry the weight of promoting social change and equity. Additionally, teachers still are obliged, much as they were over 50 years ago, to work with the willing and the unwilling, often in the same room, for about 7 hours per day, 190 days per year, while receiving minimal help with management and differentiation of instruction, and with no relief or incentive for exceptional efforts.

We tend to believe that professional schools and learned societies can help by temporarily sidelining some of our more cherished quibbling over lesser matters and adapting a greater concentration of effort into distilling what we know, through some kind of consensual process and dissemination of that to professional schools and accreditation agencies (Manzo, 1982). With greater agreement on our "knowns" as a backdrop, we probably would progress to a more informed type of eclecticism (Manzo & Manzo, in press). This, in turn, could reduce the number of fads and "buzz" terms that seem to regularly turn practicing teachers into dinosaurs who feel as if they do not know which end is

up. Such insecurities and pendulum swings tend to further weaken public faith in educational process and in the value of professional schools of education.

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Student Readiness to Learn: Judgments of Prospective Teachers About Background Based on Language Usage

Richard Telfer, Reed Mottley, Robert Jennings, George McNinch

As we approach the year 2000, the need for all students to come to school ready to learn becomes increasingly important. Goals 2000 (United States Department of Education, 1993) underscores this importance by making its first goal that all children enter school ready to learn.

Unfortunately, this seemingly simple goal raises a set of complex issues. The first is whether the view of readiness suggested in Goals 2000 is really appropriate. This view seems to see readiness as a characteristic of the child, while newer views (Graue, 1993) identify readiness as related to the interaction of the child with the learning situation. Second, increasingly different backgrounds of teachers and their students make it potentially more difficult for teachers to understand and accurately interpret students' readiness for school. Heath (1983) and others (Graue, 1993; Lareau, 1989) have highlighted language-related differences in students' backgrounds and stressed the potential consequences that can result from misunderstanding and specifically from underestimating the student's ability or readiness based on language-related differences. The third is how teachers and schools can work with children and families to ensure that the aim of Goals 2000 is achieved.

This paper examines readiness to learn as viewed by prospective teachers. Since these individuals will soon be working in schools, it is important to understand the perspectives they bring to bear on the topic of readiness.

Specifically, this study looked at the judgments that preservice teachers, junior education majors who are taking their first course in reading/literacy, made about students' readiness to learn. The preservice teachers were asked to read five scenarios and respond by (a) identifying the factors that they deemed most important and (b) describing the actions they would consider, based on the information provided.

Objectives

This study looked at the judgments of prospective teachers about students' backgrounds, based on the children's language usage. Specifically, the study had the following two objectives:

1. To examine prospective teachers' judgments about students' readiness to learn based on the students' language usage.

2. To compare prospective teachers' judgments about students' readiness to learn and the teachers' proposed instructional actions.

Prospective or Theoretical Framework

Readiness for school has been defined in a variety of ways. Graue (1993) refers to three specific policy issues related to readiness: kindergarten entrance age, readiness screening, and extra-year programs. Briefly, kindergarten entrance age became important when it was observed that younger children in a group tended to do less well than older children in the same group. Readiness screening rejected the idea that chronological age was a sufficient indicator and attempted to ascertain something related to developmental age. Extra-year programs allowed students to develop in an appropriate situation for an additional year and then move into the regular school program.

While Graue (1993) discusses the three policy issues above, she goes further, attempting to reconceptualize the issue of readiness. She observes that readiness has been "almost always conceptualized as a characteristic of an individual child that develops as the child grows" (p. 4). Instead, she urges a social constructionist perspective, suggesting that readiness is a socially constructed concept; the meaning of

readiness is constructed within the context of a given community. Consequently, the definition of readiness will vary from community to community.

Given the perspective suggested by Graue, different communities may have different models of readiness operating. In her book *Ready For What?*, Graue (1993) looks closely at three schools with quite different models of readiness: environmental, maturational, and interventionist. As a result of the different models that have been developed, these schools approach readiness issues quite differently.

Readiness as a characteristic of the child leads to some unintended negative consequences. O'Brien (1993) notes a connection between the current view of school readiness and the proliferation of the "at-risk" label. Others (May et al., 1994) have suggested that current readiness practices prevent schools from providing developmentally appropriate programming. The idea that readiness resides solely with the child suggests that the child must accommodate to fit the school.

Goals 2000 (U.S. Department of Education, 1993) seems to take the perspective that readiness is in the child, urging that all children come to school ready to learn. Crosser (1993) indicates that all children do come to school ready to learn. Instead, she suggests that the goal should be rephrased, "All American schools will start ready for children to learn" (p. 395).

The issue of how readiness is defined is particularly important as we approach the year 2000. With increasing diversity in the schools and growing differences between the backgrounds of students and of teachers, efforts must be made to help bridge the gaps. Yet, operating with a model that suggests that readiness is a characteristic of a child tends to increase the differences, suggesting that all children must conform to one view of readiness. We then operate with a deficit model of education. Coney (1995) describes the deficit model as one "in which children and their families are blamed for having deficient skills upon school entry" (p. 164).

By contrast, Graue's constructionist model suggests that readiness is a function of the interaction of the child, the family, the school, and the community. Rather than trying to fix the child, the constructionist model would encourage building upon the situation. May et al. (1994) notes that "the National Association for the Education of Young Children has recommended moving to more developmentally appropriate programming, particularly in the lower primary grades" (p. 292). O'Brien (1993) suggests that the term "at promise" replace the term "at risk."

This issue is particularly important for teachers because their views of readiness are likely to color their approaches to teaching. Smith (1989) notes that teachers' instructional practices are influenced by their beliefs about development. The issue is also important because teachers will have to be able to explain their views on readiness and help parents understand issues related to readiness. Goldenberg, Reese, and Gallimore (1992) note that parents' views of readiness may not fit with the new views of how students learn to read. As a result, teachers may be called upon to help all involved to move away from the view that readiness is a characteristic of a child.

Methods

The subjects in this study were 60 undergraduate elementary education majors (20 at each of three universities in three states: Georgia, Mississippi, and Wisconsin). These prospective teachers were primarily juniors taking their first reading methods course.

Five short scenarios (see Appendix), each approximately 150 to 400 words long, were prepared. The scenarios were developed to present a variety of information about young learners and to allow for varied interpretations. Specifically, each scenario contained information that could be used to support a view of readiness as a characteristic of the child as well as information that could be used to support a view of readiness as embedded in the child's interaction within the learning situation.

Three of the scenarios (#1, #2, & #5) were descriptions of situations that the researchers and their colleagues had encountered. These written scenarios were prepared and then revised to ensure that sufficient information was presented to support either a child-focused view of readiness or a situation-based view of readiness. Scenarios #3 and #4 presented similar types of information, but were constructed somewhat differently. Scenario #3 used a story developed by Gee (1990). Scenario #4 was developed based on the work of Gee and designed to present a contrast to Scenario #3.

Scenario #1 describes a 5 ½-year-old child taking a kindergarten screening test. The scenario presents some dialogue about the child's name and then gives his response to various testing cues. Scenario #2 describes a 6-year-old kindergartner, giving some background information and then describing the child's response to a request that he make up a story using some figurines. Scenario #3 (from Gee) describes a 5-year-old child who tells a story about her grandmother's birthday on "Bad Luck Day." Scenario #4 details a story about a 5-year-old

Hispanic child who has limited English speaking proficiency. The scenario focuses on her interaction with a computer program as well as those around her in the classroom.

Data Analysis and Results

The prospective teachers were asked to read each scenario and then respond to two questions based on the scenario: (a) What factors do you see as important? and (b) What actions would you consider because of the evidence you've seen here? The prospective teachers were given as long as they needed to read the scenarios and respond. Typically the respondents took from 20 to 30 minutes to complete the task.

The responses to each question were then analyzed in two ways. First, responses to the first question for each scenario were examined to identify the factors identified by the prospective teachers as most important. Initially, all the factors mentioned in the responses were listed. Then categories were developed to group similar responses. Once a set of categories was established, the responses were reread and categorized. Second, the responses to both questions were read and then each response was assigned a score based on the degree to which the response reflected the respondent's focusing on a deficit in the child or the child's capabilities within the situation. If the respondent focused exclusively on a *deficit* in the child, a 1 was assigned. If the respondent focused exclusively on the *child's capabilities* within the situation, a 5 was assigned. Scores of 2, 3, and 4 were assigned for intermediate responses. Originally, the intent had been to have the continuum range from *readiness as a characteristic of the child* (1) to *readiness as a social event* involving at least the child, the school, the teacher, and the parents (5). Because responses suggesting that readiness was a social event were not found, the continuum was adjusted to describe more of a contrast between *deficiency* and *capability*.

Factors Identified as Important

Scenario #1 described a 5 ½-year-old kindergarten child taking a kindergarten screening test during the week before school started. The scenario presents a brief dialogue in which the child, Milton, gives his name as Patrick and Andrew. It also presents his responses to several of the screening test tasks. The factors most often identified as important are shown in Table 1. Those most commonly identified included his name, his restlessness and/or lack of attention, and his inability to follow directions.

Table 1

Percentage of Respondents Identifying Specific Factors Identified as Important in Scenario #1

Factor	Percentage*
Name	43
Restlessness/Inattention	43
Inability to Follow Directions	40
Locational/Directional Skills	27
Concept of Coloring	22
Understanding Language	22
Knowing Shapes/Colors/Body Parts	20
Test taking Attitude/Responsiveness	15
Age	3
Other	15

*Percentages do not total 100 because respondents generally identified more than one factor.

Scenario #2 involved a 6-year-old kindergartner who was asked to construct a story using small plastic models of people, farm animals, farm equipment, and farm buildings. Factors most often identified as important are shown in Table 2. The most commonly noted factors were the child's background or lack of background, the child's concept of story, the child's understanding of the concepts of farm and zoo, and the child's understanding of animal names.

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Table 2

Percentage of Respondents Identifying Specific Factors Identified as Important in Scenarios #2

Factor	Percentage*
Background	40
Concept of Story	38
Concepts of Farm and Zoo	30
Understanding of Animal Names	28
Confusion of Dog and Horse	18
Age/Size	17
Ability to Use Language	17
Imagination	15
Day Care	13
Other 15	

*Percentages do not total 100 because respondents generally identified more than one factor.

Scenario #3 focused on a 5-year-old girl who for "show and tell" told about her grandmother's birthday on Bad Luck Day, Friday the 13th. The story told of visits to relatives' homes and cakes at each house. Factors most often identified as important are shown in Table 3. By far the most often mentioned factor was the girl's understanding or lack of understanding of story structure.

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Table 3

Percentage of Respondents Identifying Specific Factors Identified as Important in Scenario #3

Factor	Percentage*
Understanding of Story Structure	55
Understanding of Sentence Structure	25
Family/Background	20
Age	18
Understanding of Friday the 13th	18
Responses to the Story	15
Number of Cakes	13
Appropriateness to Show and Tell	8
Other	30

*Percentages do not total 100 because respondents generally identified more than one factor.

Scenario #4 described a 5-year-old preschool child who for show and tell described a family trip to a water park. Table 4 shows the factors most often identified as important. The two factors most often noted were the girl's understanding of sequence and her understanding of story structure.

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Table 4

Percentage of Respondents Identifying Specific Factors Identified as Important in Scenario #4

Factor	Percentage*
Understanding of Sequence	50
Understanding of Story Structure	41
Understanding of Sentence Structure	15
Age	13
Ability to Recall Events	13
Background	12
Verbal Ability	12
Other	25

*Percentages do not total 100 because respondents generally identified more than one factor.

The fifth scenario described a 5-year-old Hispanic kindergartner who seemed to have better receptive than productive abilities in English. The scenario focused on her work with a computer program and her interactions with the program and with those around her. The factors most commonly identified as important are noted in Table 5. Those mentioned most often were the fact that she spoke Spanish rather than English, her communication ability, and her comprehension.

Table 5

Percentage of Respondents Identifying Specific Factors Identified
as Important in Scenario #5

Factor	Percentage*
Language (Spanish/English)	67
Communication Ability	45
Comprehension	32
Intelligence	15
The Girl is Hispanic	12
Computer Use	12
Age	7
Other	22

*Percentages do not total 100 because respondents generally identified
more than one factor.

Comparison of Important Factors and Proposed Instructional Responses

This section of the study looked at the relationship between the
factors identified as important and the responses (actions) the prospec-
tive teachers would consider because of those factors. Prospective
teachers had been asked to identify the factors that they found to be
important in each scenario and then indicate the actions they would
consider as teachers because of the evidence they had seen. Their
responses to both questions were read and rated on a scale from 1 to
5, with 1 indicating that the response focused on a *deficiency* in the child
and 5 indicating that the response focused on the *child's capability*
within the learning situation. These responses were then plotted on
scattergrams to show the patterns of responses. The scattergrams
represent ranges of responses from deficiency to capability on two
axes. The y-axis, running bottom to top of the page, represents the

factors identified as important. Those important factors that empha-size deficiency are lowest on the page while those emphasizing capa-bility are highest on the page. Similarly, the x-axis running from left to right plots the prospective teachers' proposed instructional responses. Responses that focus on deficiency are to the left, while responses that focus on capabilities are on the right.

Figure 1 shows the relative placement of the responses to scenario #1, which describes a boy who is taking a kindergarten screening test just before school begins in the fall. In Figure 1, 6 of the respondents identified capabilities, while 44 identified deficiencies. The pattern remained much the same in the suggested responses, with 4 suggesting responses to build upon the child's capabilities and 51 suggesting responses that involved trying to correct the child's deficiency. An illustrative response focusing on identifying capabilities in "Knowing his first name and whole name. Knowing his body party. Knowing his colors. Being familiar with shapes." An example of a response to capabilities is, "I would consider another test that isn't only verbal. With demonstrations and examples, Milton seems likely to complete the test correctly. I would ask his guardian how he/she asks his name."

Figure 1
Factors Identified and Actions Considered for Scenario #1
Deficiency vs. Capability

```
                        Identified
                        Capability

           1       1        |      4

Response to                 |                Response to
 Deficiency   5      ,2      |1               Capability

           5       4        |1

          32       1        |1

                        Identified
                        Deficiency
```
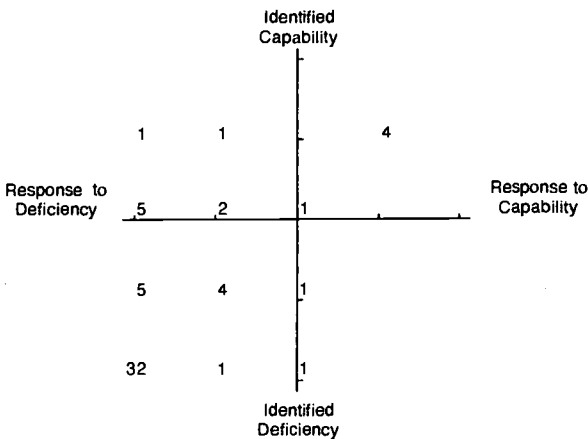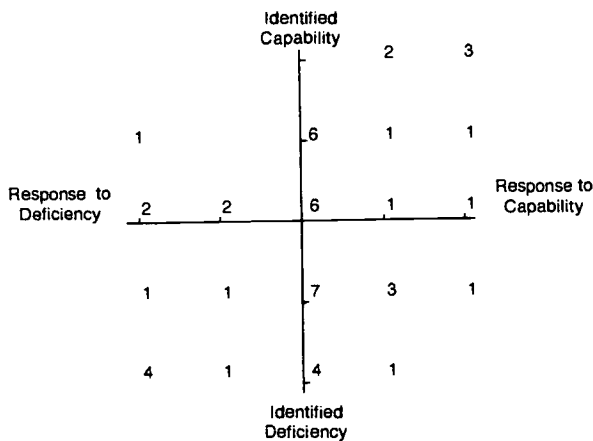
Responses emphasizing deficiencies tended to stress what the child could not do and then how the child's deficiencies could be fixed. For example, "The child is unable to interpret questions correctly, such as 'whole name' and 'coloring the triangle orange.' Concepts seem to be

his problem." As a result, the respondent suggested "I would specify that in kindergarten the child's teacher should teach 'concepts' to the child."

Figure 2 shows the relative placement of the responses to Scenario #2, which describes a boy telling a story using some small plastic models. In Figure 2, 14 of the respondents identified capabilities, while 23 identified deficiencies. The suggested actions were more balanced, with 14 suggesting responses to build upon the child's capabilities and 12 suggesting responses that involved trying to correct the child's deficiencies. In addition, eight of the prospective teachers indicated that nothing needed to be done.

Figure 2
Factors Identified and Actions Considered for Scenario #2
Deficiency vs. Capability

```
                              Identified
                              Capability
                                  |         2       3
                                  |
                                  |
                 1                | 6       1       1
                                  |
 Response to                      |                            Response to
 Deficiency      2       2        | 6       1       1          Capability
    |_____|_____|_____|_____|_____|____
                                  |
                 1       1        | 7       3       1
                                  |
                                  |
                 4       1        | 4       1
                                  |
                              Identified
                              Deficiency
```

An illustrative response focused on identifying capabilities is, "His family background, physical size, and he's been in school. Also he's able to construct a story with a beginning, middle, and end." The same individual suggested that instructionally "I would continue to work on stories with him and encourage him to become involved with other kindergartners."

By contrast, responses emphasizing deficiencies were similar to the following: "This child hasn't had many experiences to build on. His schema is not sufficient to build on." A suggested teaching response would be, "I think the child needs to be reviewed over animals." The prospective teacher was suggesting that the deficiency in the child (not knowing the names of animals) should be remediated.

Figure 3 shows the responses to Scenario #3, in which a young girl describes her grandmother's birthday. In Figure 3, 7 of the respondents identified capabilities, while 26 identified deficiencies. The pattern remained much the same in the suggested responses, with 14 suggesting responses to build upon the child's capabilities and 21 suggesting responses that involved trying to correct the child's deficiency.

Figure 3
Factors Identified and Actions Considered for Scenario #3
Deficiency vs. Capability

Identified
Capability

1			1
	1	3	1

Response to Deficiency   1   3   4   Response to Capability

1	2	2	1
16		5 3	1

Identified
Deficiency
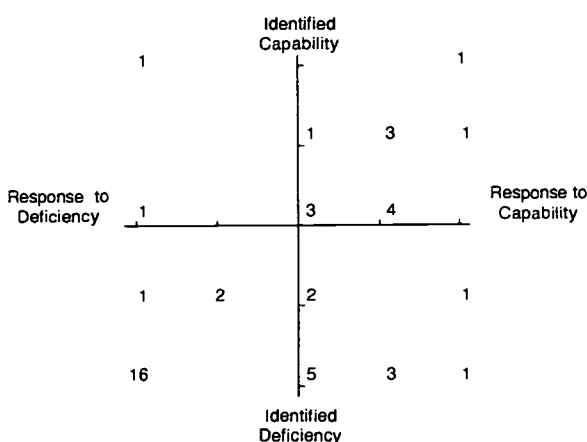
An illustrative response showing capabilities is, "The child can tell a story with a beginning, middle, and end. Her language seems appropriate for her age. She is willing to share with others in the groups, and because of the reaction of others in the groups, she told the story with some excitement and enthusiasm." The prospective teacher planned to build on those capabilities: "I would continue having time with 'show and tell' and would encourage her to maybe draw a picture to accompany the story."

Responses emphasizing deficiencies again tended to stress what the child could not do and then how the child's deficiencies could be fixed. For example "The way she structures her sentences doesn't make much sense. It is confusing and our of order." As a result, the prospective teacher said, "I would work with the structure of sentences and have her tell the story without repeating herself and [with the story] making sense."

Figure 4 shows the relative placement of the responses to Scenario #4, in which a young girl describes her trip to a water park. This scenario stands in marked contrast to the previous three scenarios. In Figure 4, 25 of the respondents identified capabilities, while only 6 identified deficiencies. The pattern remained much the same in the suggested responses, with 29 suggesting responses to build upon the child's capabilities and 3 suggesting responses that involved trying to correct the child's deficiency. A typical reaction follows: "She is very good at articulating details, as well as sequencing (first, then, after). She elaborates. For example, not only did she put on her bathing suit, but describes it as being purple, pink, and yellow." The prospective teacher went on to suggest that we should "Provide activities that promote these strengths."

Figure 4
Factors Identified and Actions Considered for Scenario #4
Deficiency vs. Capability
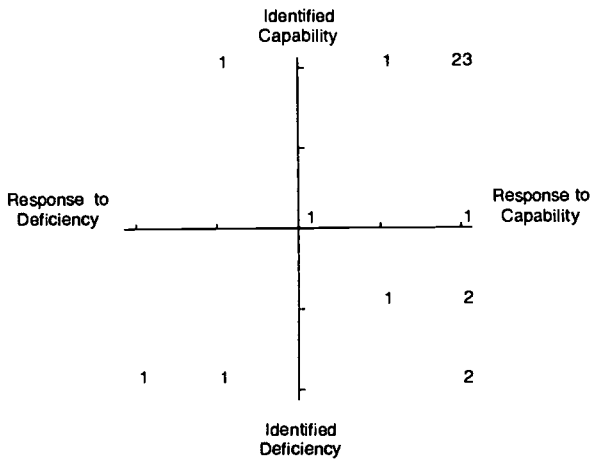
Relatively few responses emphasized deficiencies. In fact, 14 of the prospective teachers indicated that no (unusual) action needed to be taken, the most for any scenario. An additional 10 prospective teachers gave no response to the second questions, about what actions the prospective teacher would consider.

Figure 5 shows the relative placement of the responses to Scenario #5, which describes a young Hispanic girl in a computer classroom. In Figure 5, 24 of the respondents identified capabilities, while 9 identified deficiencies. The pattern reversed itself in the suggested responses, with only 12 suggesting responses to build upon the child's

capabilities and 26 suggesting responses that involved trying to correct the child's deficiency.

Figure 5
Factors Identified and Actions Considered for Scenario #5
### Deficiency vs. Capability

```
                              Identified
                              Capability
              1       3          ┤          3

                      4         │.10        3

Response to                                        Response to
Deficiency      .1       9    │ 4      .5      1   Capability

                      2       2         ┤

              3       1        ┤.1
                              Identified
                              Deficiency
```
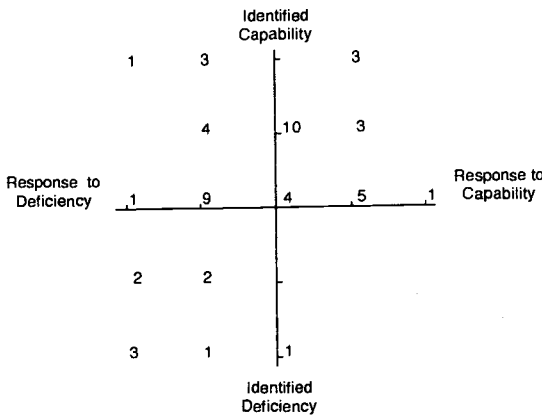
Many of the respondents indicated that the child's ability to communicate with the other students was an important factor. For example, "Even though the child isn't fluent in English, she is able to communicate with fellow students." A capabilities-based suggestion for instruction would be the following: "I would continue to demonstrate and verbalize her requests in English. I would encourage her to use the vocabulary to respond to my feedback. I would continue social interactions of learning to support her development in English."

Often, however, the prospective teachers noted her capabilities and then simply suggested an instructional reaction focused on her deficiencies. For example, "This child must have help developing one language. I feel the combination of Spanish and English has confused her. She needs to fully learn one before she can master the other. This would have to be done before she progressed through school."

Discussion

This study examined judgments made by prospective teachers about students' readiness to learn. The prospective teachers were presented with five brief scenarios, asked to read the scenarios from the perspective of the child's teacher, asked to identify important

factors in the scenarios, and asked to indicate what response they might make to the important factors in the scenarios.

The students' responses were analyzed to identify the factors thought to be important and to indicate whether the prospective teachers seemed to be following a model where readiness is a characteristic of a child with a focus on deficiencies or a model where readiness is socially constructed with a focus on capabilities.

An initial finding was that prospective teachers tended to see readiness as a characteristic of the child. In fewer than ten instances was the learning/testing situation even mentioned. As a result, most of the analyses tend to focus on a related contrast between seeing deficiencies in the child and seeing capabilities in the child and the situation.

On four of the five scenarios, the students responded more to deficiencies than to capabilities. The one exception was on Scenario #3 where the pattern was reversed; that scenario portrayed a young girl whose responses fit very closely with school expectations. Even on that scenario, almost one-quarter of the respondents had no suggestions for an instructional response, presumably because they had identified no problem. With a deficit model, the absence of a problem suggests that no remedial action is needed.

On Scenario #5, the deficit model was further reinforced. While on this scenario the prospective teachers tended to identify the child's capabilities as important, they then tended to direct their instructional effort to remediating what they saw as the child's deficiencies. So despite recognizing the child's capabilities, they saw their responsibility to be to fix the weaknesses they saw.

Implications

The prospective teachers in this study seemed to work within a model that viewed readiness as a characteristic of a child. As educators move more toward a constructionist view of readiness, we will need to help prospective teachers make this adjustment. To do so, we will have to counter their expectations, perhaps developed through their own schooling.

Although prospective teachers have been encouraged to focus on the capabilities of students, they apparently do not naturally do so. The prospective teachers in this study seemed drawn to the mistakes the children made rather than the strengths they brought to the learning situation. Prospective teachers will need to be helped to change this focus.

Limitation

The major limitation of this study may have been the format in which the scenarios were presented. Since the information included in the scenarios was selected by the researchers, unintended biases may have crept into the construction of those descriptions. The format may also have unintentionally suggested a deficit model, since several of the scenarios described a testing or screening situation.

An alternate method of presenting this type of information may change the salience of the factors. Perhaps a videotaped presentation would allow the prospective teachers to operate without possible influence from the researchers.

Further Research

Further research into prospective teachers' views of readiness to learn may prove productive. Specifically, looking at the changes that might occur through a teacher education program would be beneficial. Additionally, looking at the views of prospective teachers with specific early childhood education backgrounds and the views of practicing teachers would also prove instructive.

Conclusion

In this study, prospective teachers appeared to follow a model of readiness that focused on children's deficits. Given descriptions of children's learning-related performance, they tended to emphasize the things that children could not do and suggest instructional strategies that responded to those deficits.

Efforts to move toward a constructionist view of readiness will need to recognize existing expectations. Changes in views of readiness will need to take into account the need to help prospective teachers adjust their expectations.

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Appendix

The following scenarios present you with brief descriptions of young children of about kindergarten age. Please read each scenario from the perspective of the child's teacher and then respond to the questions that follow the scenario.

#1

You meet with a five and one-half year old kindergarten child during the week before school starts to administer a kindergarten screening test. You greet the child, named Milton, in the lobby and he eagerly accompanies you to the testing room. You begin with the first question on the assessment: "What is your first name?"

He looks at you questioningly and responds, "Patrick."

"Patrick?" you ask with surprise. "Is that really your name?"

"Uh-huh," he insists emphatically.

"And what is your whole name, Patrick?" you pursue.

"Ahh," he hesitates, "Andrew!"

"Patrick Andrew," you repeat. "Are you teasing me?"

"No," he insists.

"Okay, Patrick Andrew, can you point to your shoulder?" He points to his shoulder.

You proceed through the questions asking him to identify basic body parts.

During the test, the child is continually out of his chair, standing next to the desk, leaning over the page, resting on his elbows, and so forth. He appears to be intent on the tasks he's asked to do.

When asked to draw several familiar shapes (a circle, a box, a triangle), his drawings are somewhat crude, but they represent the required objects.

Given a set of colored cars (red, green, and blue) and different size boxes (small, medium, and large) he is asked to place the blue car under the small box. He picks up the blue car and after several seconds of hesitation, places it to the left of the small box.

He is then asked to look at several geometric shapes (circle, triangle, square) and to color the triangle orange. He looks at the examiner with a puzzled expression.

The examiner repeats the instructions. "Color the triangle orange."

After several more seconds of hesitation he picks up the orange crayon, but does nothing. Then he asks, "Where?"

"On this paper," the examiner responds.

"I can't do it there." he responds.

"What can you do?" the examiner asks.

He picks up the paper and turns it over to the blank side and says, "I can do it here."

The examiner nods. He proceeds to draw a triangle with the orange crayon.

When asked afterward about his reaction he indicated that he could draw an orange triangle, but he doesn't know what he is asked to do when told to "color the triangle orange."

Based on what is presented in this scenario:

1. What factors do you see as important?

2. What actions would you consider because of the evidence you've seen here?

#2

A six year-old child has enrolled in kindergarten. When you meet with the child for the first time, you learn the following information:

He is the youngest child in a family of three children.

He has attended preschool for one and one-half years.

He is small for his age.

In one of your first meetings with the child, you present some Fisher-Price models of people, common farm animals, farm equipment, and farm buildings and ask the child to construct a story. The child constructs a story that contains the following episode:

He picks up two of the Fisher-Price people and has them "walk" across the table. "Once, we went to visit my cousin, Tim."

"He lives a long ways away, in a big city."

He picks up a cow, a pig, and a horse. "His mom took us to the zoo." He then moves his to people over next to the cow, pig and horse.

"We got to see one of these (points to the cow) and two of these (the pig). We got to pet this big dog (points to the horse) and a bunch of animals."

"After a while, we had pizza and took a bus home. I really liked it."

Based on what is presented in this scenario:

1. What factors do you see as important?

2. What actions would you consider because of the evidence you've seen here?

#3

You observe a group of children in a preschool class in May. You are particularly focused on one child, a girl who has just turned five. While you are observing the group, the subject of your observation is asked to share during a "show and tell" time. Her sharing goes like this: "Today, it's Friday the 13th--It's Bad Luck Day. My grandmother's birthday is on Bad Luck Day. And my mother's baking a cake. And I went up to my grandmother's house while my mother was baking a cake. And my mother was baking a cheese cake. My grandmother was baking whipped cream cup cakes. And we both went over to my mother's house. And then my grandmother had made a chocolate cake. And then we went over my aunt's house. And she had made a cake. And everybody had made a cake for nana. So we came out with six cakes." She finishes her story and smiles. Two children clap. Three other raise their hands to volunteer to be next.

Based on what is presented in this scenario:

1. What factors do you see as important?

2. What actions would you consider because of the evidence you've seen here?

#4

You observe a group of children in a preschool class in May. You are particularly focused on one child, a girl who has just turned five. While you are observing the group, the subject of your observation is asked to share during a "show and tell" time. Her sharing goes like this: "Yesterday, I went to Noah's Ark with my sister. We got up early in the morning and ate breakfast. I had Trix. I put on my new bathing suit. It's purple and pink and yellow. We got to the pool at 10:00 o'clock. First, I got an inner tube and went down the 'Lazy River.' Then Sara and I went together on the water slide. I was scared. After I got tired, we ate lunch. And then we went home."

Based on what is presented in this scenario:

1. What factors do you see as important?

2. What actions would you consider because of the evidence you've seen here?

#5

You meet with a five-year-old Hispanic kindergarten student. She speaks only a few words of English, but appears to understand what you are saying. When given a battery of screening tests, she is able to identify shapes and colors when you say their names, but she is unable to give you the names of simple shapes and primary colors.

You have the opportunity to see this child working with a computer program called Kid Pix. She is able to start the program, and work through its elements, drawing a picture of a house and yard, with several people there. When she gets stuck, she looks at a child at the next computer. She uses gestures, English, and Spanish. She points at the computer screen and says something in Spanish. The child next to her says, "Erase it!" and points to the screen. The girl moves the mouse and clicks on the screen where the child pointed. She seems pleased and continues with the program. When she finishes her drawing, she goes to the teacher, pulls on her sleeve, and points to the printer. The teacher smiles, "You want to print your picture?" She points on the screen. The child clicks the mouse on the screen where the teacher pointed. The girl then removes her printed picture and presents it to her teacher.

Based on what is presented in this scenario:

1. What factors do you see as important?

2. What actions would you consider because of the evidence you've seen here?

A Content Analysis of Current Content Area Reading Textbooks

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The theme of the Sixteenth Annual Meeting of the American Read-
ing Forum, *Literacy: The Information Superhighway to Success,* could lend
itself to a discussion of technology and its effects on the future of
reading and reading education. It could also lend itself to a discussion
of the routes being taken by various teacher educators to achieve a
common goal: literacy. We have chosen the latter discussion as it
relates to encouraging successful literacy experiences in reading in the
content areas.

Although content-area reading courses are required in most states
(Farrell & Cirrincione, 1984), there appears to be little consistency as to
what is being taught in such courses. Much of the inconsistency in what
is taught may be related to the content-area reading textbook selected
by the instructor. While some textbook authors advocate a generic
approach, others believe that strategies used for reading in the content
areas are subject-matter specific. Many authors of content-area read-
ing textbooks advocate a variety of strategies to be used in content
classes; however, there appears to be little agreement as to what
strategies are recommended and when the strategies should be used.
Additionally, there appears to be little empirical support for the use of
such strategies (Alvermann & Swafford, 1989).

The purpose of this investigation was to examine all content-area
reading textbooks currently available using the *Subject Guide to Books
in Print* (Anstaett & Prakken, 1994-95) to discover what philosophies,

strategies, and current educational issues were being advocated in content-area reading textbooks. All textbooks listed under the topic "content-area reading" were examined. The content-area reading textbooks used in this study included books from the list, plus books that have been recently released. A total of 21 textbooks were examined (see Appendix A for a listing).

Method

The method used for this investigation was a modified content analysis which involved two analyses. The first analysis was designed to determine which philosophy of content reading (generic skills vs. content-specific skills) the authors of content-area reading textbooks espoused. Additionally, the first analysis also sought to determine which current educational issues were addressed in the content-area reading textbooks. The second analysis was conducted to examine the particular strategies, both instructional strategies and reader-based strategies, recommended by the authors of content-area reading textbooks and to determine whether a consistency of recommended content reading strategies exists among the currently published content-area reading texts. The emphasis of this study was not to evaluate the quality of actual strategies presented in the particular content reading textbooks, but rather to determine the presence or absence of specific strategies.

Data Collection

Data were gathered by using content analysis. Content analysis, as defined by Gay (1987) is "the systematic, quantitative description of the composition of the object of the study" (p. 236). Weber (1990) claims that a content analysis ". . . uses a set of procedures to make valid inferences from the text" (p. 9). A content analysis may be used for many purposes; hence, a variety exists among content analysis studies. Such studies may involve basic frequency counts or complex investigations of the studied material (Dennick-Brecht, 1993; Galie, 1993; Gay, 1987; Lucal, 1994; Sharp & Wood, 1994).

The latest editions of 21 content-area reading textbooks were reviewed for this study by using content analysis frequency counting. The first analysis involved an examination of the texts to determine which texts devoted chapters to specific content areas. Additionally, tables of content were examined to determine which current educational issues were included in the content-area reading textbooks.

The second analysis also incorporated content analysis frequency counting. To determine the consistency among recommended strategies, an initial list of strategies was developed. Additional strategies were added as other textbooks were evaluated. The researchers looked through the index of each textbook to find the strategies. Secondly, the chapter outlines were studied to gain additional information. Third, the researchers looked and skimmed through the content-area reading textbooks for further information. After the researchers were finished with one textbook, a different textbook was analyzed in the same way. Once the researchers looked through all 21 content reading textbooks with the same procedure, they returned to each book once again. The purpose for the second evaluation was to limit the chance of missing strategies that were actually present within the book, thus eliminating the possibility of misinterpreting the final results. It must be noted, however, that due to the nature of the Dishner, Bean, Readence and Moore (1992) textbook which had no index and the Herber and Herber (1993) textbook which has a very general index, it is possible that some particular strategies are present in these two textbooks that are not reported.

Results

General Content-area reading Textbook Characteristics

Philosophy. The philosophies of authors influence the contents of the textbooks they write. Whether authors believe that there are generic reading skills for all content areas or whether they believe that different skills are required in different content areas is evidenced by examining the tables of contents of the books they write. To categorize the content textbooks, a book considered to be generic focused mainly on a variety of strategies for use in all content areas. The 14 content books in this category were authored by Alvermann and Phelps (1994); Brozo and Simpson (1995); Conley (1995); Crawley and Mountain (1995); Dishner, Bean, Readence, and Moore (1992); Forgan and Mangrum (1989); Herber and Herber (1993); McKenna and Robinson (1993); Readence, Bean, and Baldwin (1995); Richardson and Morgan (1994); Ruddell (1993); Ryder and Graves (1994); Tonjes and Zintz (1992); and Vacca and Vacca (1996). Although these books do not contain specific chapters related to a specific content area, there are examples and illustrations from a variety of content areas (see Table 1).

Table 1

Characteristics of 21 Content-Area Reading Textbooks

	Content Area	Orientation 7-12	Diversity	Special Needs	Computer	Writing	Lifelong Reading	Cooperative Learning	Professional Development	Secondary Program
Alvermann & Phelps		X	X			X	X		X	
Brozo & Simpson		X		X		X	X		X	
Cheek & Cheek	X	X		X						
Cochran	X	X		X	X	X				X
Conley		X				X				
Crawley & Mountain		X		X		X	X			
Dishner, Bean		X				X				
Readence & Moore										
Forgan & Mangrum		X								
Herber & Herber		X	X			X				
Lapp, Flood & Farnan	X	X					X	X		
Manzo & Manzo	X	X		X						X
McKenna & Robinson		X		X	X					
Moore, Moore, Cunningham & Cunningham	X					X				
Readence, Bean & Baldwin		X	X		X	X	X			
Richardson & Morgan		X				X	X	X		
Roe, Stoodt & Burns	X	X		X	X					X
Rubin	X	X		X		X	X			
Ruddell		X	X			X	X	X		
Ryder & Graves		X	X			X		X		
Tonjes & Zintz		X	X				X		X	
Vacca & Vacca		X	X			X	X			

The remaining content-area reading textbooks were classified as content specific, which means that a separate chapter or separate chapters were included within the text that related to specific content areas (see Table 1). Lapp, Flood, and Farnan (1996) have the most extensive specialized approach, with five chapters devoted to specific content areas. Textbooks by Rubin (1992) and Manzo and Manzo (1990) each contain three chapters for specialized content areas, while Moore, Moore, Cunningham, and Cunningham (1994) and Roe, Stoodt, and Burns (1995) have two. Cheek and Cheek (1983) offer two chapters entitled "Lessons for Teaching Content Reading" and "Special Notes for Special Folks," which include suggestions for teachers of various content areas. Cochran's (1993) first chapter addresses the notion of multiple literacies, which includes a variety of content areas.

Orientation. Another characteristic that separates the content-area reading textbooks is the grade-level orientation. All the textbooks, except the one authored by Moore, Moore, Cunningham, and Cunningham (1994), emphasize reading in the content areas from grades 5-12. Their textbook includes K-12 (see Table 1).

Additionally, there are three content-area textbooks that are organized differently from the rest. The books by Dishner, Bean, Readence, and Moore (1992) and Lapp, Flood, and Farnan (1996) are akin to edited books. In the Dishner, Bean, Readence, and Moore book (1992), the

chapters consist of a series of three to four related articles written by different authors. The Lapp, Flood, and Farnan book (1996) consists of 29 chapters, each written by a different author. The Forgan and Mangrum book (1989) is a series of modules intended to be used by readers to develop selected competencies.

Current Issues Addressed in Content-Area Reading Textbooks

Diversity vs special needs. Many of the textbooks have clearly identified chapters related to either diversity or special needs. Interestingly, none of the 21 books evaluated contained both a diverse populations and a special needs chapter. Eight of the textbooks had chapter titles that included either the term "diverse" or "diversity." These books focused on cultural and/or linguistic diversity and included teaching suggestions/recommendations for content area teachers (see Table 1).

Seven of the textbooks had chapter titles that included the terms "special needs" (see Table 1). McKenna and Robinson's chapter (1993) focuses on mildly handicapped students; Brozo and Simpson (1995), Cheek and Cheek (1983), Manzo and Manzo (1990), Cochran (1993), Crawley and Mountain (1995), and Rubin (1992) include brief descriptions of the students with special needs followed by suggestions and recommendations for teaching poor readers/remedial readers, mainstreamed students (learning disabled, educable mentally retarded, physically handicapped), language-varied students (including English as a second language students), culturally handicapped, dyslexic, and/or talented and gifted students.

Several of the textbooks contained chapters that were very narrow in scope. For example, Dishner, Bean, Readence, and Moore (1992) include a chapter entitled "Accommodating Individual Differences," which includes an article related to gifted learners. The chapter included in Lapp, Flood, and Farnan (1996) is limited to "Students Acquiring English: Reading and Learning." Richardson and Morgan's (1994) chapter entitled "Reading for At-Risk Students" focused on students who are at risk because of limited English proficiency, low socioeconomic background, and/or low self-esteem. Guidelines and teaching strategies are provided. Herber and Herber's chapter (1993), "Students' Diversity: An Instructional Resource," explains how teachers can use the diverse backgrounds to complement instruction rather than try to ignore or minimize the diversity which exists in each classroom. Tonjes and Zintz (1992) have incorporated a chapter entitled "Meeting Diverse Needs Through Classroom Organization." Although there is some mention of the diverse nature of students in the chapter, the emphasis is on logistical concerns and teaching formats

that may be successfully implemented within a classroom. Forgan and Mangrum (1989) is limited to a chapter on helping problem readers.

Technology. Of the 21 content-area reading texts, only three devoted entire chapters to technology (see Table 1): *Content Area Literacy: An Integrated Approach* by Readence, Bean, and Baldwin (1995); *Reading in the Content Areas for Junior High and High School* by Cochran (1993); and *Teaching Through Text: A Content Literacy Approach to Content Area Reading* by McKenna and Robinson (1993). In the 1989 edition of their book, Lapp, Flood, and Farnan included a chapter on using computers effectively in content area classes; however, in the most recent edition (1996), the chapter on computer applications was eliminated.

Many of the other textbooks mentioned the use of the computer, but did not provide much beyond basic information. The most common information provided in the textbooks included mentioning productivity software (word processing, database, and spreadsheets), explaining the types of software (drill and practice, tutorial, simulations, learning games), providing some background knowledge concerning computer integration, and suggesting ways to select software. Two textbooks mentioned multimedia applications and telecommunications software; however, where telecommunications software was mentioned, the titles provided tended to be primitive applications like FredMail. In all, CD-ROM applications (interactive books and electronic encyclopedias) were mentioned in only 3 of the 21 texts reviewed. Information superhighway applications (Internet, World Wide Web, etc.) were not included or mentioned in any of the chapters. Based on a review of the three technology chapters and those texts that mentioned technology, virtually all the texts are lacking in information and applications related to the use of the computer to enhance literacy in the content areas.

Writing. The obvious connection between reading and writing in the content areas has yet to be fully explored. Of the 21 textbooks, only three include writing in the title (Herber & Herber, 1993; Moore, Moore, Cunningham, & Cunningham, 1994; Ruddell, 1993). If the term "literacy" is considered, then another four textbooks could be added to the list (Alvermann & Phelps, 1994; Brozo & Simpson, 1995; McKenna & Robinson, 1993; Readence, Bean, & Baldwin, 1995).

On a more positive note, there were 15 textbooks that contained a full chapter related to writing (see Table 1). Very few of the textbooks incorporated writing throughout the textbooks. These chapters focused on descriptions of specific strategies or techniques, discussions

related to the perceived benefits of writing in content area classes, explanations of the writing process, overviews of the writing to learn concept, and the writing across the curriculum notion. Other information found in these chapters includes discussions of the reading-writing connection, suggestions for evaluating or responding to student writing in content area classes, and guidelines for incorporating writing into content area classes.

Lapp, Flood, and Farnan (1996) do not have a specific chapter devoted to writing across the curriculum, but, rather, have three chapters related to reading and writing in science, mathematics, and sports/physical and health education. Tonjes and Zintz (1992) have included a chapter on identifying writing patterns but do not have a chapter that deals with the writing process. Manzo and Manzo (1990) have included writing in a chapter labeled "Recitation, Discussion, Writing, and Vocabulary Enrichment for Schema Building."

Lifelong reading. The emphasis on instilling in children the notion of becoming lifelong readers was a surprise. Nearly half of the books (Alvermann & Phelps, 1994; Brozo & Simpson, 1995; Crawley & Mountain, 1995; Lapp, Flood, & Farnan, 1996; Readence, Bean & Baldwin, 1995; Richardson & Morgan, 1994; Rubin, 1992; Ruddell, 1993; Tonjes & Zintz, 1992; Vacca & Vacca, 1996) contained full chapters on strategies and techniques for infusing the notion of lifelong reading into the content curriculum (see Table 1). Many of the chapters included strategies for combining trade books with textbooks for instructional purposes. Also included were ideas and suggestions of resources that may be used to enable students to find content-related trade books.

Other educational issues. Two additional contemporary issues appeared in several of the content-area reading textbooks. The first is the issue of cooperative learning. Several of the textbooks (Lapp, Flood, & Farnan, 1996; Richardson & Morgan, 1994; Ruddell, 1993; Ryder & Graves, 1994) devoted an entire chapter to cooperative learning in content classrooms (see Table 1). Most of the other textbooks did include a discussion of cooperative learning, but not to the extent that the aforementioned authors did.

The second issue was that of the teacher as a professional which includes the teacher as researcher. Several textbooks (Alvermann & Phelps, 1994; Brozo & Simpson, 1995; Vacca & Vacca, 1996) provided a discussion of how classroom teachers may engage in reflection of their teaching and how they may become involved in conducting action research within their classrooms (see Table 1).

For those who may be interested in a textbook that contains information regarding secondary reading programs, there were only three books that included a chapter devoted to describing the types of secondary reading programs and the personnel involved. These textbooks were written by Cochran (1993), Manzo and Manzo (1990), and Roe, Stoodt, and Burns (1995) (see Table 1).

Strategies Included in the Content-area reading Textbooks

Lesson planning strategies. The first category of strategies to be examined was labeled "lesson planning." The strategies recommended in at least half of the 21 textbooks were K-W-L/K-W-L Plus(Ogle, 1992), DRTA (Staffer, 1952), ReQuest (Manzo, 1969), Reciprocal Teaching (Brown & Palincsar, 1982), and the Directed Reading Activity/Directed Reading Lesson (Singer & Donlan, 1985; see Table 2). In some textbooks, for example Vacca & Vacca (1996), the term instructional framework was used. Therefore, the Directed Reading Activity/Directed Reading Lesson was modified and expanded to include any lesson plan or instructional strategy that emphasized prereading, reading, and postreading (see Table 2).

Student and textbook assessment strategies. Of the 69 recommended strategies for assessment, the most frequently recommended assessment strategy was a textbook assessment strategy: using the Fry Readability Formula (Fry, 1968) to determine the readability of textbooks. This formula was discussed in 18 of the 21 textbooks examined. The Cloze Procedure (another textbook assessment strategy) developed by Taylor (1953) was recommended in 17 of the textbooks. Another textbook assessment strategy was also recommended in over half of the content-area reading textbooks: using a checklist to evaluate the textbook. Only two student assessment strategies were recommended in half of the content-area reading textbooks: using inventories to evaluate the students' interests in the content areas and using portfolio assessment (see Table 2).

Table 2

Selected Strategies in 21 Content-Area Reading Textbooks

	KWL	DATA	ReQuest	Reciprocal Teaching	DRA DRL	Fry	Cloze	Checklist	Inventory	Portfolio
Alvermann & Phelps	X	X	X			X	X	X	X	X
Brozo & Simpson	X			X				X	X	X
Cheek & Cheek					X	X	X	X	X	
Cochran		X		X	X	X	X	X		
Conley	X				X	X	X	X	X	X
Crawley & Mountain			X			X	X	X	X	X
Dishner, Bean	X				X	X	X	X	X	X
Readence & Moore										
Forgan & Mangrum						X	X			
Herber & Herber					X	X	X	X		X
Lapp, Flood & Farnan	X			X	X	X	X			X
Manzo & Manzo	X	X	X	X	X		X	X		
McKenna & Robinson	X	X	X	X	X				X	
Moore, Moore, Cunningham & Cunningham	X	X		X		X		X	X	X
Readence, Bean & Baldwin	X	X	X		X	X		X	X	X
Richardson & Morgan	X	X	X	X	X	X	X	X	X	X
Roe, Stoodt & Burns	X	X	X	X	X	X	X	X	X	
Rubin					X	X	X	X	X	
Ruddell	X	X	X	X	X	X	X	X		X
Ryder & Graves	X		X	X		X	X	X		X
Tonjes & Zintz	X	X	X			X	X		X	
Vacca & Vacca	X	X	X	X	X	X	X	X		X

	Note Taking	SQ3R	Summary Writing	Context Clues	Semantic Feature Analysis	Semantic Mapping	Dialogue Journals	GWP	Learning Logs
Alvermann & Phelps	X		X	X	X	X		X	X
Brozo & Simpson	X		X	X	X	X	X	X	X
Cheek & Cheek	X	X	X	X				X	
Cochran	X	X				X			
Conley	X	X	X	X		X	X	X	X
Crawley & Mountain	X	X	X	X	X	X	X	X	X
Dishner, Bean			X	X	X		X	X	
Readence & Moore									
Forgan & Mangrum		X		X					
Herber & Herber				X	X	X	X		
Lapp, Flood & Farnan	X	X	X		X	X	X		X
Manzo & Manzo	X	X	X	X	X	X	X		
McKenna & Robinson	X	X	X		X	X	X	X	
Moore, Moore, Cunningham & Cunningham	X	X		X	X		X		X
Readence, Bean & Baldwin	X		X	X	X	X		X	
Richardson & Morgan	X	X	X	X	X	X		X	X
Roe, Stoodt & Burns	X	X	X	X	X	X	X		X
Rubin	X	X	X	X		X			
Ruddell	X	X			X	X	X		X
Ryder & Graves	X	X	X	X	X	X	X		
Tonjes & Zintz	X	X		X		X		X	
Vacca & Vacca	X	X	X	X		X	X		X

Study strategies. Among the 72 strategies categorized as study strategies, the most frequent strategy was note taking (see Table 2). A variety of notetaking strategies were explained in the content-area textbooks. SQ3R (Robinson, 1961) was the second most-discussed strategy; 16 of the content-area reading textbooks explained the procedure and how it should be used. Summarizing was the only other strategy that was discussed in over half of the textbooks reviewed (see Table 2).

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Vocabulary strategies. Eighty-five different strategies were recommended in the content-area reading textbooks as appropriate ways to introduce and teach the vocabulary needed for successful reading in the content areas. There appeared to be a tie between using context clues (McCullough, 1945) and the use of semantic mapping (Johnson & Pearson, 1978) as the most often recommended strategies. Procedures for the use of and development of these two strategies were explained. The final strategy that appeared in at least half of the content-area reading textbooks was semantic feature analysis (Johnson & Pearson, 1978) (see Table 2).

Writing strategies. A total of 50 different strategies were recommended for integrating writing into content area classes. It is interesting to note that only one strategy was recommended in at least half of the textbooks. The most often recommended strategy was journal writing/dialogue journals, which was discussed in 14 of the 21 books. The other two strategies, Guided Writing Procedure (Smith & Bean, 1980) and Learning Logs were recommended in nine textbooks (see Table 2.)

Comprehension strategies. The final category of strategies evaluated was labeled comprehension strategies. This section was particularly difficult to evaluate because some of the textbooks listed strategies according to whether they were considered prereading strategies, reading strategies, or postreading strategies. Other textbooks merely identified them as comprehension strategies. Other textbooks listed the same strategy in two or more places. There were over 100 strategies recommended for comprehension. In an effort to minimize repetition, the strategies that were recommended in over half of the content books will be discussed, regardless of where the authors of the various content-area textbooks placed them in the textbooks. The two most recommended strategies (17 books) were graphic organizers and discussion groups. The next two most frequently recommended strategies were cooperative learning and mapping, recommended in 16 of the content-area reading textbooks. Raphael's (1982) QAR (Question-Answer Relationship) was recommended in 15 books. The use of analogies was recommended in 14 books while three-level guides and anticipation guides were recommended in 13 books. Langer's (1981) prereading plan (PReP) was recommended in 12 textbooks. The remaining 100-plus strategies did not appear in at least half of the textbooks.

Discussion

The findings of the present study indicate that content-area reading textbooks vary widely in their approach to content area reading and

vary with respect to the extent that current educational issues are presented in the textbooks. Professors need to be aware of the different viewpoints of the various content-reading textbooks as well as their own orientations to content area reading. The generic textbooks tended to provide examples from a variety of content areas within the chapters while the content specific textbooks provided examples in specific chapters. This philosophic distinction should be considered when selecting a textbook.

With respect to the strategies presented in content-area reading textbooks, it is clear that there is some agreement as to which strategies appear to be effective in promoting content literacy. However, once one goes beyond the top two or three strategies, there is very little agreement as to which strategies should be included. When selecting textbooks, some categories such as assessment, which seemed to provide the most agreement in terms of what is presented by the authors of the content-area reading textbooks, may not need to be scrutinized as heavily as other areas such as vocabulary, writing, and comprehension, which had very little agreement among content authors. Further research is needed to determine which strategies appear to be most beneficial to students. The quality of the strategies, based on practice and research, needs to be investigated in depth.

While it was the intent of the authors to determine the types of issues that are currently being addressed, it was not our intent to pass judgment as to the quality of the coverage. Virtually all the textbooks contained what could be considered "extra" chapters: those that addressed diversity, special-needs students, writing, computer technology, lifelong reading, cooperative learning, professional development and secondary reading programs. The addition of these chapters could also play a significant role in determining which textbook should be used for a particular class.

Our intent was not to suggest that textbooks which contain a separate chapter for writing or diversity, for example, are superior to those which may address the topics throughout. For example, some textbooks incorporate writing strategies or strategies to meet the diverse needs of the students throughout the textbook, rather than provide strategies in a separate chapter. Some textbooks provide both a chapter and strategies throughout the text. The analysis indicates only those which have separate chapters and does not address those which have infused the content throughout the textbook.

For many preservice secondary education majors, a content reading class is their only formal exposure to reading instruction throughout

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their entire educational career. If preservice teachers are introduced to a variety of content reading strategies in their methods courses and through their textbooks, there is a greater chance they will utilize these strategies in their future teaching assignment and will therefore be able to help their students. Preservice secondary education majors need to be provided with a variety of content reading material and strategies so they may select those strategies which seem to "fit" their teaching styles. Without sufficient instruction in content area reading, preservice teachers are likely to simply dismiss the strategies recommended by authors of content-area reading textbooks. If preservice teachers do not have sufficient knowledge of a variety of strategies to assist them in teaching reading in their content area, then they cannot help their students read and interpret the meanings intended by the authors of content materials and will be unable to help their students travel the information superhighway to success.

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Appendix A

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Undergraduate Reading Metaphors: Traversing the Information Superhighway or Weaving the Web?

Alice Randlett, Bobbie Stokes

Soon after the reading and writing labs on the University of Wisconsin-Stevens Point campus were merged to become one Tutoring-Learning Center (TLC) in 1985, we put into place a new reading program based on teaching reading as a process, much like the former Writing Lab taught students to improve their ability to write. Away with machines! Away with SRA cards! Reading and study skills workbooks were either tossed or banished to a dank storeroom. The brave new world of reading had arrived at the TLC, and henceforth, students would see reading and the world of academe through new cognitive and social constructionist spectacles. What we didn't count on was that old bugbear: resistance. And resistance came in the shape of learners who could see no sense in writing about what they were reading or in considering the disciplinary conventions that might be operating in the reading that they were assigned in, for instance, physics or French literature classes. Our learners just wanted to "read faster and comprehend better." It did not seem to matter to them when we pointed out that one could and should read the newspaper and a chemistry text at different speeds or that neither we nor they could define "comprehension," that magic concept.

After a few semesters of failing more often than succeeding with our learners, we two decided it was high time for a good look at our assumptions about learning to read at the college level. As we talked, it dawned on us that this insistence on speed and comprehension were,

of course, lifted straight from all those Iowa Basics and Nelson-Dennys through which our learners--and we--had suffered. What our under-graduate learners believed reading to be had been shaped by those tests, not by graduate classes such as we had taken at the University of Wisconsin-Madison. What proved more surprising--and was the incentive for the focus of this present study--was our finding (Stokes & Randlett, 1992) that our peer tutors, whom we had taught about reading in the process mode (Tierney & Pearson, 1983), also believed that reading was primarily comprehension and speed. This revelation was the beginning of our joint interest in belief and how beliefs affect learning. Our resulting research has been propelled by wanting to ascertain what our learners, and indeed, what we believe about reading.

How to locate or isolate an individual's beliefs (i.e., how we know what is so [Gilovich, 1991]) presented the next interesting but not insurmountable difficulty. Because our fields of expertise lie in the realm of language use, we chose to study language, and, in particular, metaphors, which are crystallized beliefs (Tobin, 1990). We believe, as do Lakoff and Johnson (1980), that our beliefs live in our metaphors. In the following study, which focuses on the reading metaphors of peer tutors in our campus tutorial center, we attempt to identify, classify, and make some preliminary sense of these metaphors.

While our theoretical framework is social constructionist, that is, we are concerned with "the large-scale processes of readers and writers as members of discourse and interpretive communities," we situate ourselves within the social interactionist perspective, which "concerns itself with the dyadic interactions of *particular* [italics added] writers and readers" (Nystrand, 1990, p. 4). Further, we describe ourselves as "trinitarian," because we believe that all aspects of human behavior have three major seats of causation: biological, social, and psychologi-cal.

What is a Metaphor?

Our working definition for metaphor, one adapted from Lakoff and Johnson (1980), became individual words or groups of words that either assert or suggest that one entity is another when that *cannot literally be so*. Most of us are familiar with the traditional metaphor form, one having two parts or two ideas (Richards, 1936/1965): "books are our friends" (p. 96), with *books* being the subject that is being compared in this metaphor and *friends* being the image to which books is being compared. While we were keen to discover these two-part or explicit metaphors, we were even more interested in metaphors that

did not so readily reveal themselves, ones that were hidden just under the surface and might be expressed in a single word--even in a so-called throwaway word like a preposition (e.g., "I'm going to take *on* reading"). We label these latter kinds of metaphors "emergent" in contrast to the conventional or "explicit" metaphors. Emergent metaphors, we thought, just might reveal more of an individual's beliefs about reading that the explicit or surface kind, much in the way that an iceberg above a watery surface may suggest the greater mass beneath.

Whose Metaphors Did We Collect?

Because our earlier work (Stokes & Randlett, 1992) suggested that our practicum tutors held reading beliefs similar to the learners with whom they and we collaborated in the tutoring booths, we wanted to do a follow-up study where we concentrated on tutors' reading metaphors. And for greater perspective we wanted to look at the reading metaphors of more than one class of practicum tutors. The language vehicle for this study became the discursive reading questionnaire that we routinely assign tutors to complete near the end of each semester (see Appendix). At the time of this study, we had collected questionnaires from seven practicum classes (from fall 1992 through fall 1995) for a total of 91 questionnaires.

Our practicum tutors are a community of successful students representing a wide range of the majors and minors at a mid-size, comprehensive public university in the upper Midwest. Taking the fall 1994 as a representative example, 13 of the 17 tutors had GPAs over 3.5, they specialized in 15 different majors and 7 different minors (5 tutors were double or triple majors), most were upperclasspersons, the male to female ratio was about 1 in 3, and 15 of the 17 were traditional age.

How Did We Gather and Consider Tutor Metaphors?

Working individually, we combed through every word of tutor language on the questionnaires, looking for even the suggestion of a reading metaphor. We highlighted both explicit and emergent metaphor types. Next, we worked together to apply our metaphor test: Could this word or group of words ever be literally applied? If the response was negative, we knew we had a metaphor according to our working definition. The process was extremely slow and was helped by our collaboration. Once we had identified, tested, and typed in context the body of reading metaphors, we set about to apply our categorization scheme. Our objective here was to determine where our tutors placed meaning. We located meaning in two predefined categories: the older view, which we label "traversing the information superhighway," and the new one, which we call "weaving the web."

Traversing the information superhighway represents the older, more traditional view of reading because it is a linear model. The superhighway is a rather straightforward journey with readers as travelers seeking to arrive at a destination (comprehension? understanding?) as efficiently as possible. In this category, readers can only look at text but not through it. Suggested in traversing the information superhighway are storage and retrieval or conduit models of reading (see Mosenthal, 1987a, 1987b, 1988a, 1988b, 1988c).

On the other hand, weaving the web stands for the new view, one informed by social constructionist thinking. In this metaphor the reader is crawling around in a complex, multidimensional and web-like hyperspace; meaning is not located in a particular place or received from an outside source or location but rather constructed by the reader, and the product (understanding?) is under continual construction, evolving and changing. The text itself is hypertextual and can be looked through as well as at.

As we worked through the tutor metaphors, we frequently saw superhighway metaphors and rarely saw web-weaving; however, we began to see a third or transitional metaphor, one we descriptively label as "seeing beyond the words to put things together," that appeared less frequently than the superhighway but more often than the web.

How Do Tutors Traverse the Reading Information Superhighway?

As we mention above, the majority of tutor reading metaphors fall into the old or information superhighway metaphor. However, we learned a good deal from our tutors' metaphors in this category about them as readers and what their journeys and the terrain were like. Some tutors "approach," "attempt," and "feel so alienated from" their reading, while others "take on reading" and are "not afraid to explore and discover." The trip itself has a pace: Some tutors "keep a good pace," others "keep up [with other readers]," and some "speed-read" in contrast to others who read "carefully, slowly."

On the journey the readers exhibit a general desire to be one with their reading. That reading has dimension is suggested by the tutors who "dive into," "look into the depths of," and "delve." Others enter more carefully as the tutor who "put [herself] in and let the details . . . surround [her]." Along these lines, a number of tutors wanted to be taken over by their reading; for example, several used the verb *engulfed*.

We expected to find plenty of conduit or consuming metaphors

(Reddy, 1982) and we were not disappointed. Tutors were busily "picking up on new things." "grasp[ing] meaning," "extracting meaning from," "getting all [the reader] should," "drawing meaning out," and "pulling out main ideas." And of course, we noted the ubiquitous "to express" that suggests an expeller process.

Reading was not all hard work, for some tutors playfully "bounce[d] ideas" and tossed ideas." But most tutors were focused on "keeping" and "retaining" what they had received in the conduit or consumed during the journey. Some tutors were more active than others, expending part of themselves: They "spend time," "spend all [their] energy figuring out," "strive," and "probe stories."

The journey often presented problems, for it was not always a nice, neat linear path. Some tutors would "have trouble," "lose track," "[get] caught up in," and "get stuck." These metaphors surely suggest the container (Reddy, 1982) that is part of the conduit metaphor. Apparently, for these tutors the reading container was a quicksand-like mire.

And naturally, we expected that many tutors would be passive receivers on one end of the conduit: They would "keep an open mind," "be receptive to new ideas," and just generally "receive."

Tutors were willing to take on the arduous chore of reading because of its many benefits: Tutors could "see a new point of view clearly," "get an outlook," be "affected by [a piece of reading] in an emotional sense for a long time afterwards," and could "savour" what they read.

In addition to learning something about the reading journey, we learned a goodly measure about the many qualities that a piece of reading might have according to our tutors. Among the negative we noted that a text might have these largely human qualities: boring, trite, stale, cryptic, tough, dry, difficult, preachy, dull, foreign, banal, pretentious, convoluted, self-indulgent, overdone, stuffy, utilitarian, frustrating, disturbing, shocking, entangling, and wordy. On the other hand, a container of reading can be stirring, rich, deep, fun, suspenseful, entertaining, informative, inspiring, useful, beautiful, powerful, and challenging.

Texts not only *have* the qualities listed above, but they can *do* so many things: They are versatile and powerful, for they can "lose meaning," "exercise the mind" and "relax the brain," "convey emotion" or "speak." On the even more active side, they can "grab," "hold attention," "jump around," "throw the reader," and "drive [the reader] crazy."

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Our tutors--those successful college students--see the variousness of texts, characterizing them, for instance, as "a welcome place to run to," "junk food," "a garden," "cheap thrills," "a deep pool of knowledge," and "plain garbage."

We see the following metaphors as exemplifying reading along the superhighway, with its focus on locating meaning outside the reader and its suggestion of the conduit and container metaphors (emphasis ours):

"going beyond the words on the page *to find the deeper meaning*"

"Reading should be taught as an exploratory art--the farther *one delves*, the *more there is to be retrieved*"

"*seeing things from the same perspective* as the author"

"Students should be taught *to grasp meaning*"

"I can *spend hours on* it and *get a lot out* of it."

The Transitional Metaphor: "Seeing Beyond the Words to Put Things Together"

The tutors employing the transitional metaphor seem to have a foot in both old and new reading worlds. They still travel and consume or receive a little, but they are much more active readers than their fellow tutors who situate themselves exclusively on the superhighway. The following examples suggest the divided, yet evolutionary nature of tutors employing the transitional metaphor (emphasis ours):

"I read mostly *for* meaning, but can switch to reading for context when needed. I usually understand what I read and *bring in my own experiences to make* meaning."

A good reader concentrates while reading and is able *to tie together* ideas."

"*apply learned material to* life."

"They [readers] must be able *to discern* the main point (or theme) in the material *and interpret* it--maybe see *how it can influence or affect* their own lives."

"A good reader *absorbs* the material he/she is reading, and in a way, *makes it his/her own* with unique interpretations and visions."

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How Do Tutors Weave the Reading Web?

The web-weaving tutors are fully active in their reading; they construct meaning, understanding that to do so is a complex, recursive, and social process. The following examples suggest the interactiveness of these tutors (emphasis ours):

"A good reader *becomes involved in* the text, *relating* the material to some personal experience from the text."

"A good reader brings knowledge to what they read *and entwines it* with the meaning of a text to get a different, individualized meaning."

"A good reader *becomes active* in the reading. *Stopping to analyze* and *question* the reading. The reader *will also apply* the reading to personal experiences. Also will try to identify with the author."

"Letting students *draw their own conclusions* first teaches them how to form their own ideas and interpretations before hearing the most widely accepted interpretation. This way students see that there is *more than one way to interpret* a text."

"I know that I'm an active participant, not a vessel to be filled."

Concluding Comments

Based on what we learned from our tutors' metaphors, reading for them is hard work and often expressed in terms of violent imagery, but almost always rewards the effort. Tutors seem to hold views similar to students who come to our center for help with reading: Reading is a matter of getting from here to there with dispatch and involving consumption of reading material (pace, speed, and thoroughness). We have no better understanding of that mysterious concept "comprehension." Most tutors are still traveling the linear superhighway, a few have one foot in the highway lane and one gathered up in the social context of the web, and fewer are busily weaving and connecting their way into a new world.

Does a study of reading metaphors repay the effort expended to gather and consider them? We think that it does because metaphors give us yet another window into the beliefs of our students and tutors and into ours as well. If reading professionals sincerely want to reflect about their own frames and practices and to know further how to reach the students with whom they collaborate, then yes, we urge them to do as we have done and that is to take the time to listen, see, stand back and consider, and finally let reading metaphors reveal what they will ut our beliefs and practices.

The larger question is, or course, can knowing your reading beliefs change your practice? As Holt-Reynolds' work (1992) has suggested, educators cannot easily change the beliefs of their students. However, we can help tutors and students to make their reading beliefs explicit and raise issues that may cause them to question why they do what they do, setting the stage for productive reflection. And finally, we can decide what to do when we discover that our own reading metaphors may not be all that different from our students.

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Appendix

Discursive Reading Questionnaire

Your Thoughts about Reading

This survey is confidential; we do not need to know your name, but could you please answer the following questions about yourself so that the survey will be more meaningful.

Your semester and year in college: _____

Your age: _____   Gender: ☐ male   ☐ female

Your reason/s for using the Tutoring-Learning Center: _____

_____

Please answer as completely as you can.

1. How and when did you learn to read?

2. What does a good reader do?

3. What's your favorite kind of reading?

4. How good a reader are you?

5. What's one of the best things you've read? Why?

6. What's one of the worst things you've read? Why?

7. How should reading be taught at the college level?

8. Please rate how successful *you feel* you are as a college student:

   low   1   2   3   4   5   high

An Analysis of Story Content and Discussion Through the Lens of Banks' Stage Theory of Ethnic Identity Development

Louise M. Tomlinson

Classrooms are becoming increasingly diverse, nationwide. There-fore, multicultural competencies and multicultural literacy have be-come greater priorities in curriculum. Although cultural background and heritage are largely influenced by the child's first learning environ-ment--the home--the classroom environment at school becomes piv-otal for reinforcing and expanding learning.

Unfortunately, the classroom often becomes a place where learners' cultural backgrounds are submerged or invalidated by insufficient attention to cultural issues, or by excess in learning experiences irrelevant to the learners or to other cultures in their immediate communities (Stevenson & Gonzalez, 1992). Although considerable impact is made on young learners by classroom artifacts, by the style and tone of teacher and student interaction, and through the overall cultural climate of schools, the nature of literacy instruction also plays a significant role in ways that teachers and learners develop multicultural experiences.

A 21st Century Imperative for Diversity

Multicultural literacy (knowing) and multicultural competency (navigating) (Tomlinson, 1996a) are extremely relevant to curriculum goals at all levels of schooling. This is because there is little refuge from cultural heterogeneity--if not in our neighborhoods, then in our schools,

workplaces, government, and other institutions. As always, literature presents endless opportunities for knowledge of various peoples in our world and for gaining an understanding of self. As teachers, we have the advantage of using literature to teach not only language comprehension and expression, but other critical types of literacy such as multicultural literacy.

Reading educators now realize that it is not sufficient to teach masses of people to the level of literacy which used to be considered a basic requirement, a fifth grade level of reading proficiency. We should now also realize that it is not enough to address multicultural literacy at merely basic levels of celebration for heroes, holidays, and artifacts (Banks, 1991; Nieto, 1992). We are all in need of a deeper understanding of self through understanding our own people as well as various people with whom we will interact.

Multicultural literacy, optimally, should engage learners in addressing issues of ethnic identity development. This is not to say that ethnic identity development fails to occur if only addressed at the most basic levels. It occurs inevitably, but perhaps only minimally for those not fortunate enough to be engaged in anything more than superficial explorations of their own cultural issues (through heroes, holidays and artifacts) or extensive immersion into cultures other than their own.

Literature-based classroom instruction is a particularly powerful way in which issues of ethnic identity and multicultural competencies are addressed and developed. Critical aspects of curriculum development in response to culturally relevant literacy instruction that is literature-based are story content and classroom discussion. These aspects of curriculum development can be made more culturally meaningful with the application of a theory such as James Banks' (1981) typology of ethnic identity development and curriculum goals related to each stage. Banks' typology of stages of development is universal in principle and is generalizable to individuals of all age groups and cultural backgrounds.

Banks' typology helps us understand various perspectives, thoughts, and reactions about our own cultural or ethnic group and others. This theory outlines an aspect of psychological development which, according to Banks, (1981) may progress from thinking in ways characteristic of narrower or more limiting perspectives of one's cultural or ethnic group to other stages (either through actual experiences and exposures or vicarious instruction) and ways of thinking characteristic of broader and deeper views of one's culture and others. To accompany each stage, Banks provides curriculum goals and suggestions for processes

of multicultural literacy useful in understanding and resolving hostilities and suspicions about one's own cultural or ethnic group and others. A framework is presented for developing a greater self-appreciation that can stimulate appreciation for others.

The Theoretical Lens

Banks (1988) describes his typology of ethnic identity development as an ideal-type construct. The typology is based on existing theory and research and the author's study of ethnic behavior in several nations (Banks, 1978). The construct does not specify a sequential progression of development as in cognitive development theory: an individual may progress or regress across stages at various times. However, the very nature of the elements of each stage seems to indicate that a comprehensive foundation in the earlier stages enhances development in later stages (just as it is suggested in bilingual education theory that a comprehensive foundation in the basic grammar of one's first language facilitates mastery of other languages) (Tomlinson, 1995).

Six stages are defined in Banks' typology and each stage is accompanied with suggested curriculum goals (Banks, 1981) as follows.

Stage 1: Ethnic Psychological Captivity is the stage in which the individual experiences ethnic self-rejection and low self-esteem, believes negative ideologies about his or her own culture, and may strive to become highly culturally assimilated. Banks suggests that curriculum appropriate for the enhancement of ethnic identity development in learners at this stage should be monoethnic in content and supplemented by strategies for moral development and decision making.

Stage 2: Ethnic Encapsulation is the stage in which the individual believes in ethnic exclusiveness and voluntary separatism, believes in the superiority of his or her own group, and may feel that his or her way of life is threatened by other ethnic groups. At this stage, the learner should be involved in curricular experiences accepting and empathizing with ethnic identities and hostile feelings toward outside groups and including strategies for dealing with hostile feelings in constructive ways.

Stage 3: Ethnic Identity Clarification is the stage which is identified as characteristic of demonstration of the acceptance of self, the ability to accept positive aspects of one's own ethnic group and the ability to clarify internal conflicts about one's own group. Development in this stage would benefit from curricular experiences to reinforce emerging ethnic identity and clarification with an emphasis on values clarification and moral development.

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Stage 4: Biethnicity is a stage in which the individual functions effectively in two cultures and demonstrates an orientation moving toward a more multiethnic and pluralistic view of society. In this stage, the learner can benefit from curriculum to help mastery of concepts and generalizations related to another ethnic group as well as strategies to relate positively to another ethnic group and one's own.

Stage 5: Multiethnicity and Reflective Nationalism is the stage in which the individual has a clarified ethnic self-identity and positive attitudes toward other ethnic and racial groups, is self-actualized, and is able to function at minimal meaningful levels within several ethnic environments and appreciate and share the values, symbols, and institutions of several cultures. For this stage, Banks' suggests curriculum to help develop a global sense of ethnic literacy, relating to a wide range of ethnic groups in a multiethnic environment and including strategies using moral dilemmas and case studies.

Stage 6: Globalism and Global Competency is the stage in which the individual demonstrates reflective and positive ethnic, national, and global identifications and the knowledge, skills, and commitment needed to function within cultures throughout ones' nation and the world. Banks' suggestion for this stage is a curriculum focus on knowledge, skills, and attitudes needed to function within one's group, the nation, and the world and a focus on understanding which allegiance--ethnic, national, or global--is most appropriate in a given situation (Banks, 1981).

The fourth through sixth stages of Banks' typology incorporate issues that school curriculum and teachers in classrooms most frequently address to some extent in design and delivery of units of multicultural instruction. The first through third stages require attention to issues infrequently addressed in school curriculum or classroom discussion.

Keeping the Typology in Mind for Story Selection

The selection of appropriate materials for the purpose of motivating students from diverse ethnic backgrounds and for enhancing all students' levels of multicultural competence and literacy is a critical process. This selection process can be made more meaningful if we consider the elements represented in Banks' stages of ethnic identity development and related curriculum goals. It should be noted that characters in stories found to be highly representative of the stages of the typology are not necessarily human characters. In story analysis for stages of ethnic identity development, what counts for relevance to a stage is an incident, event, circumstance, dialogue, thought, or idea

conveyed through either human or nonhuman characters or any part of the narrative of a story (Tomlinson, 1996b). Story content can be considered stage relevant if it holds the potential for making an analogy between the kinds of human cultural issues or challenges defined in the stages of Banks' typology and an issue developed among characters from animal or fantasy worlds.

For example, in *The Lion, the Witch, and the Wardrobe* (Lewis, 1950), there are both human (primary world) and animal or fantasy (secondary world) characters who think, speak, and interact in ways that typify thoughts, words, and actions that are characteristic of the various psychological stages in Banks' typology of ethnic identity. The human and nonhuman characters, the children, the animals and half-human beings reveal their self-concepts, preconceptions, and stereotypical notions about themselves and each other, engage in discovery and familiarity processes with one another, become embroiled in the war waged between various members of the same domain that are pitted against one another, and join forces with each other for a common cause.

Essentially, characters in the story move from positions of low self-esteem, or striving to assimilate or believing in separatism or self-superiority, to clarification and resolution of internal conflicts, then to cultural exchange and the kind of familiarity that leads to navigating through a diverse kingdom and, finally, to striving for a greater common purpose than that required by a narrow loyalty to one's own cultural group. When the children step into the wardrobe and it leads them into the woods, they meet characters like Mr. Tumnus who expresses many preconceptions about humans as well as a probing curiosity about them, as if with a need to determine if his own kind do measure up. They meet Mr. Beaver who indicates a distrust for those that appear to be human, but really aren't, and who is adamantly resistant to the existence of the White Witch. Then, Mr. Tumnus wrestles with his role and function as kidnapper or guardian of Lucy, because of his loyalty, out of fear, to the White Witch who commands the kidnapping, versus his loyalty to Lucy, out of his new found admiration for her.

Meanwhile, the children, Lucy and her siblings, are cast into an adventure in the woods by meeting many of the other creatures of that domain and becoming involved in a tumultuous struggle between the White Witch and Aslan the Lion, with the aid of each provided by many members of the kingdom. What ensues is tantamount to a civil war. The chart in Table 1 presents examples of how characters and their thoughts and interactions represent each of the stages in Banks' typology of ethnic identity development.

Table 1

The Lion, the Witch, and the Wardrobe

	Perception	Character	Reaction/Interaction
Stage 1 Ethnic Psychological Captivity	Self-rejection, low self-esteem, negative view of own culture, may strive to assimilate	Mr. Tumnus	Has books with titles like "Men, Monks, & Gamekeepers: A Study in Popular Legend," & "Is Man a Myth?"
		the Queen of Narnia or White Witch	Accepts idea that Fauns tell nasty stories about her that make others afraid of her--hated by Fauns and Dryads--known to turn people into stone and do horrible things
Stage 2 Ethnic Encapsulation	Believes in ethnic exclu- siveness, separatism, views own group as superior and others as threat to group	Mr. Beaver	Indicates there had never been any of Peter's (human) race in their territory before--"there may be two views about Humans...there's no two views about things that look like Humans and aren't"--the White Witch's reign and life must be ended
Stage 3 Ethnic Identity Clarification	Self-acceptance, accepts glories and shortcomings of own group and clarifies internal conflict about own group	Mr. Tumnus	Identifies himself to Lucy as a kidnapper of children for White Witch--confesses that he should kidnap her but shows conflict be- tween fear of Queen and loyalty to Lucy--asks Lucy's forgiveness
		Edmund	Grapples with how to identify self when Queen asks "what are you"? --grapples with Queen/Witch's ID --challenges Lucy's beliefs about Queen--he does "the meanest and most spiteful thing" by betraying sister Lucy to siblings--calls her a "liar" and is reprimanded by Peter for "always being beastly to anyone smaller"
Stage 4 Bi-Ethnicity	Can function very well in two cultures by familiarity with both in many aspects	Lucy and the Faun	Lucy meets a Faun--different--but, after many questions and answers by both, they go arm-in-arm along
		Children and Beavers	It is apparent that the children and Beaver' family eat same foods and practice the same manners
Stage 5 Multi-Ethnicity and Reflective Nationalism	Has clarified identity, positive attitude toward other ethnic and racial groups, can function effectively in several	Aslan the Lion	Wants to help all--"those who can't keep up must ride on backs of those who can"--puts other lion who only identifies with him in group of animals and dwarfs
Stage 6 Globalism and Global Competency	Reflective ethnic, national global ID, knowledge, capacity to function with everyone	Aslan and Lucy	Aslan asks Lucy if she is going to help others before they die or just pine over her wounded brother

In *The Lion, the Witch, and the Wardrobe,* the characters are not
monoethnic, but because the issues that some of the characters convey
are typical of Stage 1 concerns, teachers can use other materials that do
focus on the same type of issue within the students' ethnic context to
develop further discussion directed at moral development and deci-

sion making. Neither does the story evolve out of Stage 6 issues regarding group, national, and world challenges explicitly, but we can draw an analogy between these kinds of issues and the challenges that the story characters are faced with in terms of group loyalty, the struggles within the kingdom (the woods), and the involvement of individuals from another domain (the human world) in those struggles.

In contrast, *Black Like Kyra, White Like Me* (Vigna, 1990), presents only human (primary world) characters who think, speak, and interact in ways that typify thoughts, words, and actions that are characteristic of several psychological stages in Banks' typology of ethnic identity. The two main characters in this story, one African American and one European American, are schoolmates who encounter problems of racism which encroach on their relationship when the African American family moves into the neighborhood where only European Americans live. Negative self-concepts based on stereotypes emerge briefly, desires for separatism are voiced, and ethnic identity is explored and demonstrated (although mainly in superficial celebratory or symbolic ways). Some characters become directly immersed in the conflict of attitudes, values, and behaviors that result from the racial prejudice and, consequently, develop a sense of empathy and more positive interactions.

Kyra provides brief reflections on negative self-concepts when she realizes that there is racial prejudice in the all white neighborhood where her friend Christy lives and where her family plans to move. She reminds herself of her mother's warnings about what whites think about blacks. Christy becomes aware of the negative stereotypes and discriminatory values of her neighbors and even her parents. The neighbors react outwardly to Kyra's family moving into the neighborhood by forbidding their children to associate with Kyra, leaving the block party abruptly when Kyra's family arrives, damaging the party decorations that Kyra helped to make, and slashing the tires of her father's car. Christy's parents, who were also hesitant to be hospitable to Kyra's parents at first, eventually realize that there is unnecessary hurt being perpetuated against the Kirks and also upon their own daughter whose friendship with Kyra is rewarding in other ways.

There are meaningful moments of resolve when Kyra demonstrates constructive coping mechanisms for responding to the exclusionary attitudes and practices of her new neighbors and when Christy's parents and another family in the neighborhood extend their support to Kyra's offended parents. The chart in Table 2 presents examples of how characters' thoughts and interactions represent each of the stages in Banks' typology of ethnic identity development.

Table 2

Black Like Kyra, White Like Me

	Perception	Character	Reaction/Interaction
Stage 1 Ethnic Psychological Captivity	Self-rejection, low self-esteem, negative view of own culture, may strive to assimilate	Kyra	Kyra verbalizes the negative perceptions that her mother has told her others have about blacks and says that others don't want to play with her for such reasons.
Stage 2 Ethnic Encapsulation	Believes in ethnic exclusiveness, separatism, views own group as superior and others as threat to group	Matt's Dad	Matt tells Christy that his father doesn't want the Kirks (the black family) to live on the block and that he cannot play with them
		Christy's Mother	Stalls in inviting Kyra's mother to coffee like she did for other new neighbors
Stage 3 Ethnic Identity Clarification	Self-acceptance, accepts glories and shortcomings of own group and clarifies internal conflict about own group	Kyra	Decides to cook an African dish (muquaque) as a contribution from her heritage for the multi-ethnic block party--she and her parents bring it to the gathering.
Stage 4 Bi-Ethnicity	Can function well in two cultures by familiarity with both in many aspects	Christy and Parents	Have several first hand exposures to the attitudes, values, and reactions that blacks experience as a result of involuntary and voluntary practices of racial bias, in their own neighborhood, against Kyra and her parents, and ultimately, offer their assistance to the Kirks in moral support
Stage 5 Multiculturalism and Reflective Nationalism	Has clarified identity, positive attitude toward other ethnic and racial groups, can function effectively in several	Christy's Neighbors	As a superficial celebratory gesture, they have an annual block party for which participants share food from various ethnic backgrounds
Stage 6 Globalism and Global Competency	Reflective ethnic, national, global ID, knowledge, capacity to function with everyone		(no Stage 6 elements in story)

Keeping the Typology in Mind for Story Discussion

It should be noted that, although a story may contain elements that are relevant to or representative of the stages in Banks' typology of ethnic identity development, reading about and discussing the characters and events in the story may not necessarily achieve the curricular goals that Banks suggests for each stage, unless the underlying issues of culture and ethnicity are addressed specifically. Banks' curricular goals provide a framework for discussion strategies that can involve students in thinking about issues of ethnic identity development or resolving some of the related issues that they are concerned about.

The details that have been charted from *The Lion, The Witch, and the Wardrobe* and *Black Like Kyra and White Like Me* (See Figures 1 and 2) present specific story elements relevant to each stage of Banks' typology that can be used for responsive and relevant discussion of cultural issues. In the first example, the analysis is applied to the kind of story that might be more readily available in classrooms where there is a scarcity of material particularly representative of any cultural groups in the community or a scarcity of material depicting the cultural groups represented by the students in the classroom. This fantasy story of struggles between members of an animal and elf kingdom contains opportunities for discussion of cultural issues that can be built on analogies to real world peoples and problems. In the second example, the analysis addresses a story depicting real world characters involved in the real world problem of racism that is more likely to be an imminent concern to one or more of the cultural groups represented in many classrooms across the nation.

For any story in which we identify elements that are demonstrative of or relative to the stages of ethnic identity development, we can also use the following approaches to guide students in thinking and talking about the issues involved:

- help students to draw analogies between the characters and situations in the story and the real life experiences of people from their ethnic backgrounds

- help students to make comparisons between the characters and situations in the story and individuals from ethnic backgrounds other than their own

- help students to make comparisons between characters and situations in two different stories that depict individuals from different ethnic backgrounds

- in all instances, help students to make the kinds of comparisons that emphasize the similarities as well as differences between individuals of different ethnic groups

- use the identification of any group (fauns, parents, seniors, boys) as a subculture which can then be used to draw analogies regarding ethnic groups and their values, attitudes and behaviors regarding cultural issues (Tomlinson, 1996b)

When This Theory Links with Practice:
Transformation Achievement

Banks' typology of stages of ethnic identity development and curricular goals can be applied effectively to (a) the selection of instructional content, (b) the development of questions and the direction for discussion of literature, (c) the creation of a culturally relevant classroom environment that promotes positive aspects of ethnic identity clarification, and (d) the development of a framework of cultural objectives for social action oriented activities that extend to the community environment of the students.

By attending to the cultural issues which may impact students' perceptions of other ethnic groups, we can transcend the traditional and superficial approaches of multicultural instruction that are only celebratory or additive. We can surpass those approaches that focus only on heroes, holidays, music, costume, and foodways and focus there only at discretely designated times of the year or in discrete units designated for multicultural instruction. The definition of stages of ethnic identity development and related curricular goals provide us with a clear view of ways in which individuals think about cultural issues and, therefore, how we can identify opportunities in the context of instruction that can be emphasized to foster more positive self-concepts, more positive and more informed attitudes towards others, and greater interests in the critical aspects of cultures within and beyond our students' daily lives.

Here, the application of Banks' typology and curricular goals to selected stories and to strategies for classroom discussion provides examples of how we can develop a link between theory and practice that achieves more meaningful development of multicultural literacy and competencies in the context of teaching and learning. We can arrive at a higher accomplishment than just using authentic, rich, and culturally diverse content. We can reach a level of practice that will address substantive issues related to the critical and reflective stages of students' ethnic identity development (Stages 1 - 3) and assist them in finding their exposures to culturally relevant materials that address the broader and transcultural stages of ethnic identity development (Stages 4 - 6) more meaningful and, hopefully, in finding all learning more meaningful.

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Children's Book Awards and 1995 Shortlists from Five English-Speaking Countries

Ira E. Aaron, Sylvia M. Hutchinson

Many good books for children are published each year in the United States and in other English-speaking countries. Finalists and winners for top awards include some of the highest quality books published. This article is based upon a study of selected annual awards for children's books over the past 15 years in five English-speaking countries (Australia, Canada, Great Britain, New Zealand, and the United States) and shortlisted and honor books for 1995 from the same five countries.

The awards selected in the four non-United States countries are those most like the Caldecott and Newbery Medals awarded each year by the American Library Association. In four countries, including the United States, awards are administered by the Library Association, whereas the Children's Book Council of Australia, which includes the Library Association plus other groups interested in children's books, administers their awards. The 11 awards selected for study, each with an assigned number and letter for cross-referencing in this article, are the following:

1A - Australia: *Picture Book of the Year*
1B - Australia: *Book of the Year - Younger Readers*
1C - Australi: *Book of the Year - Older Readers*
2A - Canada: *Amelia Frances Howard Gibbon Medal*
2B - Canada: *Book of the Year for Children*

3A - Great Britain: *Kate Greenaway Medal*

3B - Great Britain: *Carnegie Medal*

4A - New Zealand: *Russell Clark Award*

4B - New Zealand: *Esther Glen Award*

5A - United States: *Caldecott Medal*

5B - United States: *Newbery Medal*

Each of the five countries has an award for illustration (1A, 2A, 3A, 4A, 5A) and another for quality of writing (1C, 2B, 3B, 4B, 5B). Australia has an in-between award (1B) which may be an illustrated book or one consisting of text only. The United States announces winners and honor books whereas the other countries typically release a shortlist, usually of 4 to 10 titles and from a few weeks to several months before winners are announced. Winners are then selected from the shortlists. In 1995, one of the two Canadian awards atypically omitted the release of a shortlist.

Discussion will focus on the following five areas: availability in the United States of the 15 years of winners and the 1995 shortlists from Australia, Canada, Great Britain, and New Zealand; recommended interest levels for books from all five countries; themes of selected 1995 shortlists, winners, and honor books; a sample of geographical settings from the 1995 shortlists, winners, and honor books; and selected titles from the winners from 1981-1995 which the two writers of this article consider to be among the best. A summary table is presented as each area is discussed. In Tables 3, 4, and 5, titles are keyed to the two lists given at the end of the article. The first list at the end of the article contains the winners from the eleven awards from 1981-1995. The second list presents shortlists, honor books, and winners for 1995.

Availability of Books in the United States

Books come in and go out of print sometimes, seemingly, overnight. Information on availability is based upon the latest *Books in Print* and selected issues of *Publishers Weekly*. Table 1 presents data for the 15 years of winners and for the 1995 shortlists and/or honor books (both United States and one Canadian award). The titles starred in the first list (1981-1995 winners) of Appendix A of this article are those available in the United States, and the U.S. publisher is listed in parentheses. The second list (shortlists) are not starred but do contain the U.S. publisher in parentheses for those titles available in the U.S. All United States books are currently in print and are not included in Table 1.

Table 1

Availability of Winning and 1995 Shortlisted/Honor Book Titles in the United States

	Illustrations		Writing	
	Winners (1981-1985)	1995 Shortlists	Winners (1981-1995)	1995 Shortlist
Australia	10 of 14 71%	2 of 6 33%	14 of 30 47%	2 of 12 17%
Canada	11 of 15 73%	7 of 10 70%	11 of 15 73%	2 of 5 40%
Great Britain	14 of 16 88%	7 of 8 88%	11 of 15 73%	4 of 8 50%
New Zealand	2 of 13 38%	0 of 4 0%	6 of 13 46%	1 of 5 20%
TOTAL	37 of 58 66%	16 of 28 57%	42 of 73 58%	9 of 30 30%

About two-thirds (66%) of the winning titles for illustration in the four countries are currently published or distributed in the United States, and of the 1995 shortlisted titles, 57% are now available in the United States. More of the shortlisted titles likely will become available in the United States. Of the award winners for quality of writing, 58% are currently available in the United States; 30% of the shortlisted books are published or distributed in the United States. Fewer books from New Zealand are readily available in the U.S.

Interest Levels (in Terms of Grade Levels)

Publishers, or those who write reviews, assign age- or grade-levels to indicate the audience for which a book is best suited. Tables 2A (Illustrations) and 2B (Writing) summarize the interest levels for the awards by countries. As may be noted in Table 2A, interest levels were not available for almost one-fifth of the illustrated books.

Table 2a

Interest Levels (In Terms of Grade levels) for Medal Winning Titles - Illustrations

Levels				
	PS-4	Above 4	All Ages	Not Given	No. Books
Australia	12	0	1	1	14
Canada	10	1	0	4	15
Great Britain	6	6	1	3	16
New Zealand	5	0	0	8	13
United States	10	4	0	0	15
TOTAL	43	11	2	16	73

Table 2b

Interest Levels (in Terms of Grade Levels) for Medal Winning Titles - Writing

Level										
	PS-2	3	4	5	6	7	8	9	10-12	No. Books
Australia	4	7	8	12	11	9	6	5	0	17
Canada	0	5	8	11	11	11	3	3	0	11
Great Britain	2	3	3	9	9	9	5	4	1	13
New Zealand	0	0	1	4	5	6	5	5	0	16
United States	2	7	8	8	9	10	6	3	0	15
TOTAL	8	22	28	44	45	45	25	19	1	62

It comes as no surprise that one-half of the illustration award books had recommended interest appeal levels from preschool through grade 4. Interest levels recommended for the writing awards fall mainly between fifth- and seventh-grade levels; some recommended levels fall below and some above those levels, as can be noted in Table 2B. In Table 2B, the interest levels and numbers of books differ because most books fall within several levels and are counted at each level.

Themes

Themes of award-winning and shortlisted titles run the gamut from the whimsical to the deeply serious. Samples of the 1995 shortlisted titles, along with a brief note on themes, are presented in Table 3. Books from all countries treat today's problems and conditions, such as one-parent families (*Foxspell, Whispers in the Graveyard,* and *Walk Two Moons*), homelessness (*Way Home*), and violence (*Smoky Night, Gracey,* and *Whispers in the Graveyard*). Some shortlisted books are based on real events, such as *Rebel!* and *Smoky Night*. Humor is found in a number of shortlisted books, including *Bamboozled, Gift,* and *Catherine, Called Birdy*.

Table 3

Themes from Selected 1995 Shortlists - Illustrations

Illustrations

1A. *Rebel!* (People defy dictatorial general. Based on real events.)

1A. *Bamboozled* (Child bamboozled by what is wrong at grandfather's house.)

2A. *A Prairie Year* (Year in lives of people who live on prairie.)

2A. *Gifts* (World-traveling grandmother brings gifts for granddaughter.)

3A. *Catkin* (Magic cat helps solve problem.)

3A. *Way Home* (Homeless boy takes homeless cat "home" with him.)

4A. *Kotuku: The Flight of the White Heron* (How herons came to New Zealand.)

5A. *Smoky Night* (Los Angeles riots bring together families of different races.)

Writing

1B. *The Burnt Stick* (Government takes child from Aboriginal/Australian parents.)

1B. *Brocky's Bananagram* (Message on banana makes friend, causes trouble.)

1C. *Gracey* (Track star Aboriginal girl takes action to help her people.)

1C. *Foxspell* (Fox casts spell on young teenage boy.)

2B. *Summer of the Mad Monk* (Boy thinks escaped Russian royalty lives in Canada.)

2B. *Out of the Blue* ("Out of the blue," girl learns she has a half sister.)

3B. *Whispers in the Graveyard* (Dyslexic boy faces natural and supernatural enemies.)

3B. *Arthur, High King of Britain* (King Arthur legend is retold with 20th century touch.)

4B. *The Fat Man* (Taunted fat boy returns as evil fat man.)

4B. *The Blue Lawn* (Teenage boys wrestle with strong attachment to each other.)

5B. *Walk Two Moons* (Part Native American girl seeks mother who died in accident.)

5B. *Catherine, Called Birdy* (Feisty girl bucks medieval rules for growing up.)

Geographical Settings

Learning about the geography of a country is an added bonus readers get from reading books from other countries. Not all shortlisted, award-winning, or honor books help the reader to learn about the geography of the country in which the books are published, but some do. For example, the geography of parts of Australia is evident in *The Watertower, The Burnt Stick, Brocky's Bananagram, Gracey,* and *Foxspell.* Table 4 identifies these areas and also includes titles set geographically in the other four countries.

Table 4

Geographical Settings from Selected 1995 Shortlists - Writing

Illustrations

1A. *Rebel!* (Burma some years ago)

1A. *The Watertower* (Small town, edge of outback--based on picture clues)

2A. *A Prairie Year* (Plains of Alberta)

2A. *Josepha* (Midwest prairie; could be Canada or U.S.)

3A. *Gregory Cool* (Tobago in Caribbean)

3A. *The Hunter* (Africa)

4A. *Discovering New Zealand Birds* (Tasman Sea area of new Zealand and Australia)

5A. *Smoky Night* (Los Angeles)

5A. *John Henry* (Allegheny Mountains, West Virginia)

Writing

1B. *The Burnt Stick* (Aboriginal Mission, Australian outback)

1B. *Brocky's Bananagram* (Queensland)

1C. *Gracey* (Small town, outback of Australia)

1C. *Foxspell* (Adelaide area)

2B. *Summer of the Mad Monk* (Alberta farmland)

2B. *Who's Got Gertie?. . .* (Vancouver area)

3B. *Broken Bridge* (Israel)

3B. *A Time of Fire* (England during World War II)

4B. *The Fat Man* (Town near Auckland)

4B. *Gladly, Here I Come* (Isolated area of New Zealand)

5B. *Walk Two Moons* (Ohio to Idaho)

5B. *The Eye, the Ear and the Arm* (Zimbabwe in the year 2194)

Favorites

Children and adults often disagree about the relative quality of award-winning children's books. The books listed in Table 5 are based on the opinions of the two writers of this article after reviewing winners over the 15 years which are available in the United States. Readers occasionally think an honor book is better than the winner of the award. To illustrate, almost all pupils have read *Charlotte's Web* by the time they reach middle school grades. How many of them have read Ann Nolan Clark's *Secret of the Andes*? *Secret of the Andes* won the Newbery in 1953, the same year that E. B. White's *Charlotte's Web* was named an Honor Book of the Newbery.

Table 5

Some of Best Winners (Restricted to Those Available in the United States)

Illustrations

1A (1992) *Window*

1A (1990) *The Very Best of Friends*

2A (1993) *The Dragon's Pearl*

2A (1990) *Til All the Stars Have Fallen*

3A (1991) *The Jolly Christmas Postman*

3A (1989) *War Boy: A Country Childhood*

4A (1994) *The Trolley*

4A (1991) *Arthur and the Dragon*

5A (1986) *Owl Moon*

5A (1988) *The Polar Express*

Writing

1B (1993) *The Bamboo Flute*

1B (1989) *The Best Kept Secret*

1C (1994) *Angel's Gate*

1C (1984) *A Little Fear*

2B (1990) *The Sky is Falling*

2B (1985) *Mama's Going to Buy You a Mocking Bird*

3B (1992) *Flour Babies*

3B (1988) *A Pack of Lies*

4B (1991) *Agnes the Sheep*

4B (1988) *Alex*

5B (1994) *The Giver*

5B (1986) *Sarah, Plain and Tall*

In Conclusion

Good children's books are published in all five countries--Australia, Canada, Great Britain, New Zealand, and the United States. Books from other countries help readers learn about people and places different from themselves and where they live. More important, they learn that people across countries are more alike than they are different.

Appendix A

Award-Winning Children's Books from English-Speaking Countries - 1981-1995

(Starred titles available in United States: U.S. publisher in parentheses; interest level in parentheses)

1A. AUSTRALIA: PICTURE BOOK OF THE YEAR
(Begun in 1956) (Two awards-1989; no awards-1985, 1981)

*1995 - Gary Crew/Steven Woolman (ill.) *The Watertower*. Era Publications. (Pub. Dist. Svc, 1995)

*1994 - Gary Crew/Paul Gouldthorpe (ill.) *First Light*. Lothian. (Seven Hills, 1995) (K-2)

*1993 - Bob Graham. *Rose Meets Mr. Wintergarten*. Penguin/ Viking. (Candlewick, 1994) (PS Up)

*1992 - Jeannie Baker. *Window*. Julia MacRae. (Greenwillow, 1991) (PS Up)

*1991 - Bob Graham. *Greetings From Sandy Beach*. Lothian. (Kane-Miller, 1992) (PS-3)

*1990 - Margaret Wild Julie Vivas (ill.) *The Very Best of Friends*. Hamilton. (Harcourt, 1990) (PS-3)

*1989 - Graeme Base. *The Eleventh Hour: A Curious Mystery.* Viking O'Neil. (Abrams, 1989) (All Ages)

*1989 - Allan Baillie/Jane Tanner (ill.) *Drac and the Gremlin.* Viking O'Neil. (Dial, 1989) (PS-3)

1988 - Bob Graham. *Crusher Is Coming.* Collins. (PS-3)

*1987 - Junko Morimoto. *Kojuro and the Bears.* Collins. (Harper Collins, 1991) (K-3)

1986 - Terry Denton. *Felix and Alexander.* Oxford. (K-3)

1984 - Pamela Allen. *Bertie and the Bear.* Nelson. (K-3)

*1983 - Pamela Allen. *Who Sank the Boat?* Nelson. (Putnam, 1990) (PS-1)

1982 - Jan Ormerod. *Sunshine.* Kestrel. (PS-1)

1B. AUSTRALIA: BOOK OF THE YEAR - YOUNGER READERS
   (Begun in 1982)

1995 - Wendy Orr/Kerry Millard (ill.) *Ark in the Park.* Angus & Robertson.

1994 - Emily Rodda. *Rowan of Rin.* Omnibus.

*1993 - Garry Disher. *The Bamboo Flute.* Collins A&R. (Ticknor & Fields, 1993) (3-6)

*1992 - Anna Fienberg/Kim Gamble (ill.) *The Magnificent Nose and Other Marvels.* Allen. (Little, 1992) (PS-3)

*1991 - Emily Rodda. *Finders Keepers.* Omnibus. (Greenwillow, 1991) (5 Up)

1990 - Jeanie Adams. *Pigs and Honey.* Angus & Robertson.

*1989 - Emily Rodda. *The Best-Kept Secret.* Angus & Robertson. (Holt, 1990) (2-4)

*1988 - Nadia Wheatly/Donna Rawlins (ill.) *My Place.* Collins Dove. (Kane-Miller, 1992)

1987 - Emily Rodda/Noela Young (ill.) *Pigs Might Fly*. Angus & Robertson. (Greenwillow, 1988) (U.S. title - *The Pigs Are Flying*) (4-6)

1986 - Mary Steele. *Arkwright*. Hyland House.

*1985 - Emily Rodda/Noela Young (ill.) *Something Special*. Angus & Robertson. (Holt, 1991) (2-4)

1984 - Max Dunn/Ann James (ill.) *Bernice Knows Best*. Oxford.

1983 - Robin Klein/Alison Lester (ill.) *Thing*. Oxford. (PS-6)

1982 - Simon French. *Cannily, Cannily*. Angus & Robertson.

1C. AUSTRALIA: BOOK OF THE YEAR - OLDER READERS
   (Begun in 1946) (Two awards- 1994)

1995 - Gillian Rubinstein. *Foxspell*. Hyland House.

*1994 - Isobelle Carmody. *The Gathering*. Penguin Australia. (Doubleday, 1994)

*1994 - Gary Crew. *Angel's Gate*. Heinemann Australia. (Simon, 1995) (5 Up)

1993 - Melina Marchetta. *Looking for Alibrandi*. Penguin.

1992 - Eleanor Nilsson. *The House Guest*. Viking.

*1991 - Gary Crew. *Strange Objects*. Heinemann. (Simon, 1993) (5-9)

*1990 - Robin Klein. *Come Back to Show You I Can Fly*. Viking Kestrel. (Viking, 1990) (4 Up)

1989 - Gillian Rubinstein. *Beyond the Labyrinth*. Hyland House. (5-8)

*1988 - John Marsden. *So Much to Tell You*. McVitty. (Little, 1989) (7 Up)

1987 - Simon French. *All We Know*. Angus & Robertson.

1986 - Thurley Fowler. *The Green Wind*. Rigby

1985 - James Aldridge. *The True Story of Lilli Stubeck.* Hyland House. (7 Up)

1984 - Patricia Wrightson. *A Little Fear.* Hutchinson. (3-7)

*1983 - Victor Kelleher. *Master of the Grove.* Puffin. (Puffin, 1988) (5-9)

1982 - Colin Thiele. *The Valley Between.* Rigby.

*1981 - Ruth Park. *Playing Beatie Bow.* Nelson. (Atheneum, 1982) (5-9)

2A. CANADA: AMELIA FRANCES HOWARD GIBBON MEDAL
   (Illustrations) (Begun in 1971)

*1995 - Jo Ellen Bogart/Barbara Reid (ill.) *Gifts.* North Winds Press. (Scholastic, 1995)

*1994 - Leo Yerxa. *Last Leaf First Snowflake to Fall.* Douglas & McIntyre. (Orchard, 1994) (K-3)

*1993 - Julie Lawson/Paul Morin (ill.) *The Dragon's Pearl.* Oxford. (Clarion, 1993) (K-3)

*1992 - Sheryl McFarlane/Ron Lightburn (ill.) *Waiting for the Whales.* Orca. (Philomel, 1993) (PS-3)

*1991 - Tolowa M. Mollel/Paul Morin (ill.) *The Orphan Boy.* Oxford. (Clarion, 1991) (K-3)

*1990 - David Booth/Kady M. Denton (ill.) *Til All the Stars Have Fallen.* Kids Can Press. (Puffin, 1994) (PS-3)

*1989 - Janet Lynn/Kim LaFave (ill.) *Amos's Sweater.* Ground-wood. (Firefly, 1991) (PS-3)

*1988 - Marie-Louise Gay. *Rainy Day Magic.* Stoddart. (Whitman, 1989) (PS-2)

1987 - Marie-Louise Gay. *Moonbeam on a Cat's Ear.* Stoddart.

*1986 - Tim Wynne-Jones/Ken Nutt (ill.) *Zoom Away.* Ground-wood. (Harper, 1993) (PS-2)

*1985 - Ian Wallace. *Chin Chiang and the Dragon's Dance*. Ground-wood. (McElderry, 1984) (K-4)

*1984 - Tim Wynne-Jones/Ken Nutt (ill.) *Zoom at Sea*. Ground-wood. (Harper, 1993) (PS-2)

1983 - Lindee Climo. *Chester's Barn*. Tundra. (1-5)

1982 - Garnet Hewitt/Heather Woodall (ill.) *Ytek and the Arctic Orchid*. Douglas & McIntyre.

1981 - Christie Harris/Douglas Tait (ill.) *The Trouble with Princesses*. McClelland.

2B   CANADA: BOOK OF THE YEAR FOR CHILDREN
(Begun in 1947)

1995 - Cora Taylor. *Summer of the Mad Monk*. Graystone.

*1994 - Tim Wynne-Jones. *Some of the Kinder Planets*. Ground-wood. (Orchard, 1995) (3-7)

1993 - Celia Barker Lothridge. *Ticket to Curlew*. Groundwood.

1992 - Kevin Major. *Eating Between the Lines*. Doubleday.

*1991 - Michael Bedard. *Redwork*. Lester & Orpen Dennys. (Macmillan, 1990) (7 Up)

*1990 - Kit Pearson. *The Sky Is Falling*. Penguin. (Puffin, 1995) (3-7)

*1989 - Brian Doyle. *Easy Avenue*. Groundwood. (Firefly, 1991) (4-7)

*1988 - Kit Pearson. *A Handful of Time*. Puffin. (Puffin, 1991) (3-7)

*1987 - Janet Lunn. *Shadow in Hawthorne Bay*. Lester & Orpen Dennys. (Puffin, 1988) (5-9)

1986 - Cora Taylor. *Julie*. Western Producer Prairie Books.

*1985 - Jean Little. *Mama's Going to Buy You a Mockingbird*. Penguin. (Viking, 1985) (4-6)

*1984 - Jan Hudson. *Sweetgrass*. Tree Frog Press. (Scholastic, 1991) (3-7)

*1983 - Brian Doyle. *Up to Low*. Douglas & McIntyre. (Firefly, 1991) (4-7)

*1982 - Janet Lynn. *The Root Cellar*. Lester & Orpen Dennys. (Puffin, 1985) (5 Up)

*1981 - Donn Kushner. *The Violin Maker's Gift*. Macmillan. (American Printing House, 1981) (5-6)

3A. GREAT BRITAIN: KATE GREENAWAY MEDAL (Begun in 1956) (Two awards in 1982)

*1994 - Libby Hathorn/Gregory Rogers (ill.) *Way Home*. Anderson. (Crown, 1994) (1-5)

*1993 - Rosemary Sutcliffe/Alan Lee (ill.) *Black Ships Before Troy*. Frances Lincoln. (Delacorte, 1993) (5 Up)

*1992 - Anthony Browne. *Zoo*. Julia MacRae. (Knopf, 1993)

*1991 - Janet & Allan Ahlberg. *The Jolly Christmas Postman*. Heinemann. (Little, 1991) (All Ages)

*1990 - Dyan Sheldon/Gary Blythe (ill.) *The Whales' Song*. Hutchinson. (Dial, 1991) (PS-3)

*1989 - Michael Foreman. *War Boy: A Country Childhood*. Pavilion. (Arcade, 1990) (3 Up)

*1988 - Martin Waddell/Barbara Firth (ill.) *Can't You Sleep, Little Bear?* Walker. (Candlewick, 1992) (PS-Up)

*1987 - Mwenye Hadithi/Adrienne Kennaway (ill). *Crafty Chameleon*. Hodder. (Little, 1987) (PS-3)

*1986 - Fiona French. *Snow White in New York*. Oxford. (Oxford, 1987) (1-4)

*1985 - Selina Hastings/Juan Wijngaard (ill.) *Sir Gawain and the Loathly Lady*. Walker. (Lothrop, 1981) (3-7)

*1984 - H. W. Longfellow/Errol LeCain (ill.) *Hiawatha's Childhood*. Faber. (Farrar, 1994) (K Up)

*1983 - Anthony Browne. *Gorilla*. Julia MacRae. (Knopf, 1985) (PS-3)

*1982 - Angelo Carter/Michael Foreman (ill.) *Sleeping Beauty and Other Fairy Tales*. Gollancz. (Houghton, 1991) (1-8)

1982 - Helen Piers/Michael Foreman (ill.) *Long Neck and Thunder Foot*. Kestrel.

*1981 - Alfred Noyes/Charles Keeping (ill.)   *The Highwayman*. Oxford. (Lothrop, 1983) (5-Up)

1980 - Quentin Blake. *Mr. Magnolia*. Cape.

3B   GREAT BRITAIN: CARNEGIE MEDAL (Begun in 1937)

1994 - Theresa Breslin. *Whispers in the Graveyard*. Methuen.

1993 - Robert Swindells. *Stone Cold*. Hamish Hamilton.

*1992 - Anne Fine. *Flour Babies*. Hamish Hamilton. (Little, 1994) (U.S. title: *Flour Babies and the Boys of Room 8*) (5-Up)

*1991 - Berlie Doherty. *Dear Nobody*. Hamish Hamilton. (Orchard, 1992) (6-12)

*1990 - Gillian Cross. *Wolf*. Oxford. (Holiday, 1991) (5-9)

*1989 - Anne Fine. *Goggle-Eyes*. Hamish Hamilton. (Bantam, 1990) 5-Up)

*1988 - Geraldine McCaughrean. *A Pack of Lies*. Oxford. (Oxford, 1989) (5-8)

*1987 - Susan Price. *The Ghost Drum*. Faber. (Farrar, 1989) (3-Up)

*1986 - Berlie Doherty.   *Granny Was a Buffer Girl*.   Methuen. (Orchard, 1988) (5-Up)

1985 - Kevin Crossley-Holland. *Storm* Heinemann. (2-4)

*1984 - Margaret Mahy. *The Changeover*. Dent. (Puffin, 1994) (7-Up)

*1983 - Jan Mark. *Handles*. Kestrel. (Puffin, 1987) (5-9)

*1982 - Margaret Mahy. *The Haunting*. Dent. (McElderry, 1982) (5-9)

1981 - Robert Westall. *The Scarecrows*. Chatto. (PS-8)

1980 - Petter Dickinson. *City of Gold*. Gollancz. (Houghton, 1992) (5-Up)

4A. NEW ZEALAND: RUSSELL CLARK AWARD (Illustrations) (Begun in 1978) (No awards 1983, 1981)

1995 - Philip Temple/Chris Gaskin (ill.) *Kotuku: The Flight of the White Heron*. Hodder.

1994 - Patricia Grace/Kerry Gemmill (ill.) *The Trolley*. Viking.

*1993 - Christine Ross. *Lily and the Present*. Methuen. (Houghton, 1992) (PS-3)

1992 - Sandra Morris. *One Lonely Kakapo*. Hodder.

*1991 - Pauline Cartwright/David Elliot (ill.) *Arthur and the Dragon*. Nelson. (Steck, 1990) (1-4)

1990 - Chris Gaskin. *A Walk to the Beach*. Heinemann Reed.

1989 - Caroline Macdonald/Chris Gaskin (ill.) *Joseph's Boat*. Hodder. (K-4)

1988 - Denis Glover/Dick Frizzell (ill.) *The Magpies*. Century Hutchinson.

1987 - Robyn Kahukiwa. *Taniwha*. Penguin.

1986 - Pamela Allen. *A Lion in the Night*. Hodder. (PS-2)

1985 - Joy Cowley/Robyn Belton (ill.) *The Duck in the Gun*. Shortland.

1984 - Gwenda Turner. *The Tree Witches*. Penguin.

1982 - Gavin Bishop. *Mrs. McGinity and the Bizarre Plant*. Oxford. (1-5)

4B. NEW ZEALAND: ESTHER GLEN AWARD (Begun in 1945)
(No awards 1987, 1981)

1995 - Maurice Gee. *The Fat Man*. Viking.

1994 - Paula Boock. *Susscat to Win*. McIndoe.

*1993 - Margaret Mahy. *Underrunners*. Hamish Hamilton. (Viking, 1992) (5-9)

*1992 - Tessa Duder. *Alessandra: Alex in Rome*. Oxford. (Houghton, 1992) (6 Up)

*1991 - William Taylor. *Agnes the Sheep*. Ashton Scholastic. (Scholastic, 1991) (4-7)

1990 - Tessa Duder. *Alex in Winter*. Oxford.

1989 - Jack Lazenby. *The Mangrove Summer*. Oxford.

*1988 - Tessa Duder. *Alex*. Oxford. (Bantam, 1991) (U.S. title: *In Lane Three, Alex Archer*) (5-9)

1986 - Maurice Gee. *Motherstone*. Oxford.

*1985 - Margaret Mahy. *The Changeover*. Dent. (Puffin, 1994) (7 Up)

1984 - Caroline Macdonald. *Elephant Rock*. Hodder.

*1983 - Margaret Mahy. *The Haunting*. Dent. (McElderry, 1982) (5-9)

1982 - Katherine O'Brien. *The Year of the Yelvertons*. Oxford.

5A UNITED STATES: RANDOLPH CALDECOTT MEDAL
(Begun in 1938) (All available in U.S.)

1995 - Eve Bunting/David Diaz (ill.) *Smoky Night*. Harcourt. (PS Up)

1994 - Allen Say. *Grandfather's Journey*. Houghton. (PS-3)

1993 - Emily Arnold McCully. *Mirette on the High Wire*. Putnam's. (PS-3)

1992 - David Wiesner. *Tuesday.* Clarion. (K Up)

1991 - David Macaulay. *Black and White.* Houghton. (All Ages)

1990 - Ed Young. *Lon Po Po: A Red-Riding-Hood Story from China.* Philomel. (1-4)

1989 - Karen Ackerman/Stephen Gammel (ill.) *Song and Dance Man.* Knopf. (PS-2)

1988 - Jane Yolen/John Schoenherr (ill.) *Owl Moon.* Philomel. (PS-1)

1987 - Arthur Yorinks/Richard Egielski (ill.) *Hey, Al.* Farrar. (K Up)

1986 - Chris Van Allsburg. *The Polar Express.* Houghton. (2 Up)

1985 - Margaret Hodges/Trina Schart Hyman (ill.) *Saint George and the Dragon.* Little. (PS-4)

1984 - Alice and Martin Provensen. *The Glorious Flight: Across the Channel with Louis Bleriot.* Viking. (3-8)

1983 - Marcia Brown/Blaise Cendrars. *Shadow.* Scribners. (PS Up)

1982 - Chris Van Allsburg. *Jumanji.* Houghton. (3 Up)

1981 - Arnold Lobel. *Fables.* Harper. (1-4)

5B   UNITED STATES: JOHN NEWBERY MEDAL (Begun in 1922) (All available in U.S.)

1995 - Sharon Creech. *Walk Two Moons.* Harper. (3-7)

1994 - Lois Lowry. *The Giver.* Houghton. (7-9)

1993 - Cynthia Rylant. *Missing May.* Orchard. (6 Up)

1992 - Phyllis Reynolds Naylor. *Shiloh.* Atheneum. (3-7)

1991 - Jerry Spinelli. *Maniac Magee.* Little. (3-7)

1990 - Lois Lowry. *Number the Stars.* Houghton. (4-7)

1989 - Paul Fleischman. *Joyful Noise: Poems for Two Voices*. Harper. (3-8)

1988 - Russell Freedman. *Lincoln: A Photobiography*. Clarion. (4 Up)

1987 - Sid Fleischman. *The Whipping Boy*. Greenwillow. (2-6)

1986 - Patricia MacLachlan. *Sarah, Plain and Tall*. Harper. (3-5)

1985 - Robin McKinley. *The Hero and the Crown*. Greenwillow. (7 Up)

1984 - Beverly Cleary. *Dear Mr. Henshaw*. Morrow. (3-7)

1983 - Cynthia Voigt. *Dicey's Song*. Atheneum. (6 Up)

1982 - Nancy Willard/Alice & Martin Provensen (ill.) *A Visit to William Blake's Inn*. Harcourt. (PS-3)

1981 - Katherine Paterson. *Jacob Have I Loved*. Crowell. (7 Up)

Appendix B

1995 Shortlisted and Award-Winning Children's Books from Five English-Speaking Countries

(Australia, Canada, Great Britain, New Zealand, United States) (1994 Publications)

1A.   AUSTRALIA: PICTURE BOOK OF THE YEAR (CBC of Australia) Shortlist/Winner)

Allan Baillie/Di Wu (ill.) *Rebel!* Ashton Scholastic. (US: Ticknor & Fields, 1994) (PS-2)

***Gary Crew/Steven Wollman (ill.) *The Watertower*. Era Publications. (US: Pub. Dist. Svc., 1995)

David Legge. *Bamboozled*. Ashton Scholastic. (US: Scholastic, 1994) (PS-2)

Emily Rodda/Geoff Kelly (ill.) *Power and Glory*. Allen & Unwin.

Elizabeth Stanley. *The Deliverance of Dancing Bears*. Univ. of Western Australia Press.

Kate Walker/David Cox (ill.) *Our Excursion*. Omnibus.

1B. AUSTRALIA: BOOK OF THE YEAR - YOUNGER READERS
(CBC of Australia) (Shortlist/Winner)

Thurley Fowler/Craig Smith (ill.) *Not Again, Dad!* Puffin.

Jackie French. *Somewhere Around the Corner*. Angus & Robertson.

Anthony Hill/Mark Sofilas (ill.) *The Burnt Stick*. Viking. (US: Houghton, 1995) (3-5)

Paul Jennings and Ted Greenwood/Terry Denton (ill.) *Duck for Cover*. Viking.

David Metzenthen. *Brocky's Bananagram*. Ashton Scholastic.

***Wendy Orr/Kerry Millard (ill.) *Ark in the Park*. Angus & Robertson.

1C. AUSTRALIA: BOOK OF THE YEAR - OLDER READERS
(CBC of Australia) (Shortlist/Winner)

Judith Clarke. *Friend of My Heart*. University of Queensland Press.

Ursula Dubosarsky. *The White Guinea Pig*. Viking. (US: Viking, 1995) (5 Up)

Victor Kelleher. *Parkland*. Viking.

James Moloney. *Gracey*. University of Queensland Press.

***Gillian Rubinstein. *Foxspell*. Hyland House.

Nadia Wheatley. *The Night Tolkien Died*. Random House Australia.

2A. CANADA: AMELIA FRANCES HOWARD GIBBON AWARD (CLA) (Shortlist/Winner)

Jo Bannatyne-Cugnet/Yvette Moore (ill.) *A Prairie Year*. Tundra. (US: Tundra, 1994) (3-6)

***Jo Ellen Bogart/Barbara Reid (ill) *Gifts*. North Winds Press. (US: Scholastic, 1995)

Joanne Findon/Ted Nasmith (ill.) *The Dream of Aengus*. Lester.

Betsy James/Paul Morin (ill.) *The Mud Family*. Stoddart. (US: Putnam, 1994) (PS-3)

Esther Kalman/Laura Fernandez and Rick Jacobson (ill.) *Tchaikovksy Discovers America*. Lester. (US: Orchard, 1995) (PS-3)

Celia Barker Lottridge/Paul Zqolak (ill.) *Something Might Be Hiding*. Groundwood.

Sheryl McFarland/Ron Lightburn (ill.) *Eagle Dreams*. Orca. (US: Philomel, 1994) (PS-4)

Jim McGugan/Murray Kimber (ill.) *Josepha*. Red Deer College Press. (US: Chronicle, 1994) (1-5)

Deborah Turney-Zagwyn. *Hound Without Howl*. Orca. (US: Orca, 1994)

Ian Wallace (from Brothers Grimm). *Hansen and Gretel*. Groundwood.

2B. CANADA: BOOK OF THE YEAR FOR CHILDREN (CLA) (Winner/Honor books)

***Cora Taylor. *Summer of the Mad Monk*. Greystone.

Linda Bailey. *Who's Got Gertie? And How Can We Get Her Back?* Kids Can Press. (Honor)

Janice Earbach. *Wanderer's First Summer*. Polestar. (US: Orca, 1994) (Honor)

Sarah Ellis. *Out of the Blue.* Groundwood. (US: McElderry, 1995) (Honor)

Ken Roberts. *Past Tense.* Groundwood.

3A. GREAT BRITAIN: KATE GREENAWAY MEDAL (LA-British) (Shortlist/Winner)

Antonia Barber/P. J. Lynch (ill.) *Catkin.* Walker. (US: Candlewick, 1994) (2-5)

Caroline Binch. *Gregory Cool.* Frances Lincoln. (US: Dial, 1994) (1 Up)

Kathryn Cave/Chris Riddell (ill.) *Something Else.* Viking. (PS-3)

Trish Cooke/Helen Oxenbury (ill.) *So Much.* Walker. (US: Candlewick, 1994) (PS-1)

Merian C. Cooper/Anthony Browne (ill.) *King Kong.* Julia MacRae. (US: Turner, 1994) (7 Up)

Paul Geraghty. *The Hunter.* Hutchinson. (US: Crown, 1994) (PS-3)

***Libby Hawthorne/Gregory Rogers (ill.) *Way Home.* Anderson. (US: Crown, 1994) (6 Up)

Oscar Wilde/Jane Ray (ill.) *The Happy Prince.* Orchard. (US: Dutton, 1995) (3-8)

3B. GREAT BRITAIN: CARNEGIE MEDAL
   (LA - British) (Shortlist/Winner)

Lynne Reid Banks. *Broken Bridge.* Hamish. (US: Morrow, 1995) (5 Up)

***Theresa Breslin. *Whispers in the Graveyard.* Methuen.

Berlie Doherty. *Willa and Old Miss Annie.* Walker. (US: Candlewick, 1994) (3-6)

Leslie Howarth. *MapHead.* Walker. (US: Candlewick, 1994) (7-10)

Michael Morpurgo. *Arthur, High King of Britain.* Pavilion. (US: Harcourt, 1995)

Jenny Nimmo. *Griffin's Castle.* Methuen.

Robert Westall. *A Time of Fire.* Piper.

Jacqueline Wilson. *The Bed and Breakfast Star.* Yearling.

4A. NEW ZEALAND: RUSSELL CLARK MEDAL (NZLA)
   (Shortlist/Winner)

Pauline Cartwright/Te Maari Gardiner (ill.) *Kahukura and the Sea Fairies.* Ashton Scholastic.

David Elliot. *Dragon Tangle.* Ashton Scholastic.

Sandra Morris. *Discovering New Zealand Birds.* Hodder & Stoughton.

***Philip Temple/Chris Gaskin (ill.) *Kotuku: The Flight of the White Heron.* Hodder & Stoughton.

4B. NEW ZEALAND: ESTHER GLEN MEDAL (NZLA)
   (Shortlist/Winner)

Jay Cowley, *Gladly, Here I Come.* Viking.

***Maurice Gee. *The Fat Man.* Viking.

Sherryl Jordan. *Tanith.* Ashton Scholastic.

Margaret Mahy. *The Greatest Show Off Earth.* Hamish Hamilton. (US: Viking, 1994) (3-7)

William Taylor. *The Blue Lawn.* Harper Collins.

5A. UNITED STATES: CALDECOTT MEDAL (ALA)
   (Winner, Honor books)

***Eve Bunting/David Diaz (ill.) *Smoky Night.* Harcourt Brace. (PS-Up)

Anne Isaccs/Paul O. Zelinsky (ill.) *Swamp Angel.* Dutton. (Honor book) (PS-4)

Julius Lester/Jerry Pinkney (ill.) *John Henry*. Dial. (Honor book) (PS-3)

Eric Rohmann. *Time Flies*. Crown. (Honor book) (PS-4)

5B. UNITED STATES: Newbery MEDAL (ALA)
(Winner, Honor books)

***Sharon Creech. *Walk Two Moons*. HarperCollins. (3-7)

Karen Cushman. *Catherine, Called Birdy*. Clarion. (Honor book) (7 Up)

Nancy Farmer. *The Ear, the Eye and the Arm*. Orchard. (Honor book) (7 Up)

***Winner of medal or award

Alternate Routes to Understanding: Reading and Writing in a Second Language

Mary S. Benedetti, Terry L. Bullock,
Ruth Benander

Our goals in this article are threefold: (a) to provide both mainstream reading educators interested in adapting instruction for second-language (L2) learners and ESL reading teachers unsatisfied with the traditional vocabulary and skill-development instructional paradigm with insights into the linguistic and cultural theories regarding the reading processes of students whose first language (L1) is not English, (b) to discuss the instructional strategies which have been shown to be effective for L2 readers, and (c) to demonstrate the applications of these theories and strategies in a college reading and writing classroom.

The Importance of Linguistic Knowledge in L2 Reading

Since the 1960s, reading instruction for native speakers of English has made a dramatic move away from the teaching of word- and sentence-level processing skills toward an emphasis on whole-language learning. L2 reading instruction has been influenced by this paradigm shift as well and has moved toward more top-down and interactive approaches. However, as is the case with all changes in educational practice, we need to take care not to eliminate the beneficial aspects of prior methods in our enthusiasm to embrace the new. As Eskey (1988) points out in regard to L2 reading practice, "We must not, I believe, lose sight of the fact that language is a major problem in second language reading, and that even educated guessing at meaning

is no substitute for accurate decoding" (p. 97). Meaning-making involves far more than an understand of words and sentences, but linguistic knowledge is essential in effective reading. Interaction between reader and text presumes at the very least a common linguistic base. As basic as this issue appears to be, however, we often lose sight of it in our desire to help our students achieve higher-order cognitive skills.

While L2 reading researchers and practitioners now generally recognize that not all reading problems stem from a lack of linguistic knowledge, they do agree that L2 readers must attain a certain level of language competence before effective reading can take place. Devine (1988) points to three areas of L2 reading inquiry which have explored this concept:

1. Does limited proficiency in a foreign language restrict general reading ability in that language?

2. Does limited proficiency in a foreign language restrict readers from using very specific types of textual information, such as discourse constraints, when reading in that language?

3. Is there a 'threshold of linguistic competence' (Cummins,1979) which readers must reach before they can read successfully in a second language? (pp. 262-263)

There is substantial evidence that the answer to all three questions is yes. In regard to the first question, studies have shown that there is a correlation between proficiency and comprehension in English, that there is a positive correlation between increased proficiency and efficient reading strategies, and that low levels of language competence hinder not only comprehension but also reading speed. Researchers investigating the second question have found that readers with lower levels of proficiency rely on bottom-up reading strategies and are largely unable to access linguistic cues, while readers with higher levels of proficiency are better able to utilize context constraints (Devine, 1988, pp. 263-266). It appears, then, that there is indeed a minimum level of proficiency required for effective L2 reading. Devine (1988) notes, however, that

Cummins and others (e.g., Alderson, 1984) point out that 'threshold' cannot be understood as an absolute term; it must be seen as varying from reader to reader (perhaps related to the cognitive and conceptual development of the individual reader) and from task to task (an idea consistent with the research findings of Berman 1984 and others). (pp. 266-267)

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Other studies have demonstrated that eye fixations during reading are of longer duration among low-proficiency learners (Koda, 1994) that nonnative readers have more difficulty in recovering from incorrect hypotheses as they read, and that L2 readers' lack of knowledge regarding syntactic and nonlinguistic markers leads to increased possibilities for misinterpretation of text (Lebauer, 1985).

It is clear that L2 reading instruction must involve strategies that assist students in developing automaticity in bottom-up processing; without this base of linguistic proficiency, comprehension cannot occur. These instructional strategies will be addressed later in this paper.

The Importance of Cultural Knowledge in L2 Reading

While linguistic proficiency is indisputably a critical factor in L2 reading, it is not the only factor. Any experienced reading educator can cite examples of students who seem to understand the language well but continue to have difficulty in understanding an author's intention. Many of these difficulties are the result of a lack of cultural knowledge.

One of the most important ways that culture affects L2 reading is that it is the basis of the schemata that a particular individual has. It appears that, in fact, all schemata are largely culture-specific. The implications of this in L2 reading are clear: even if a reader possesses sufficient linguistic proficiency in English, if cultural schemata are absent, comprehension breaks down.

Carrell and Eisterhold (1988) distinguish between two types of schemata which are essential in L2 reading: *formal schema*, or knowledge of the rhetorical organizational structures of text and *content schema*, or knowledge of the subject material in the text. An absence of either of these types of schemata will interfere with efficient reading. Furthermore, even if an L2 reader possesses the appropriate formal or content schemata, she may not activate them. L2 readers who cannot or do not access appropriate schemata have been found to rely almost exclusively on bottom-up (text-based) processing. If efficient reading is an interactive process (between top-down and bottom-up processing modes), any breakdown in this bidirectionality will result in less-than-ideal comprehension.

These two factors--lack of schemata and failure to activate appropriate schemata--may account for a great part of an L2 reader's difficulties in comprehending text. In fact, Carrell and Eisterhold (1988) suggest that "problems with individual lexical items may not be as pervasive as problems related to the absence of appropriate generalized information assumed by the writer and possessed by a reader sharing that

writer's cultural background"(p. 83). These problems can affect everything from the interpretation of individual words to overall interpretation of a text (Lebauer, 1985). Without access to culturally based schema, L2 reading becomes a psycholinguistic guessing game (Goodman, 1967) whose rules are not understood. As Kaplan (1987) points out, "schema permits us to infer that certain structures are *unlikely* to occur in the normative playing out of the schema. . . . The schema also permit us to infer that whole segments of text are *likely* to occur "(p. 11). An L2 reader may continue guessing, but the guesses are likely to be wrong.

The role of culture in reading extends beyond the formation of schemata; it affects how people view the world. Culture provides a sociocultural framework for reading and forms an individual's conceptions about reading and literacy. This has been found to be true even in L1 research, as the work of, for example, Shirley Brice Heath (1983) attests. As Flower et al., (1990) found in their work with L1 college students, reading is affected by

> the larger society in which students have been taught to read and write; the schooling students have had that inculcates the habits and assumptions that help sustain the expectations of the larger society; the academic discourse communities with which students come into contact; the preferred linguistic and rhetorical practices within those discourse communities that students have been taught; the classrooms in which students have participated; the previous reading occasions and writing assignments students have completed; and students' unique intellectual histories. (pp.179-180)

Ackerman (as cited in Nelson, 1993) further argues that individuals understand the purposes of literacy according to their society's cultural needs and that schools emphasize the literacy practices which will best serve the societies which they reflect. It is often surprising to reading educators to learn, for example, that concepts such as ideal class size, gender differences, and even the critical period for learning to read are culturally determined and thus vary from country to country (Downing, as cited in Field & Aebersold, 1990).

How these culturally formed perspectives of literacy play themselves out in the reading classroom depends in large part upon the tasks that students are asked to undertake. Basham, Ray and Whalley, in a 1989 study of reading-to-write tasks, examined the text orientations of Asian, Latino, and Alaska Native students in university-level ESL writing courses and found that students from different cultural

backgrounds responded to text in very different ways. They point out that when teachers assign tasks, "they do so with certain underlying assumptions about the nature of texts, of literate practices in general, and more specifically, about what constitutes 'academic discourse'" (Basham, Ray & Whalley, 1993, p. 299). Unfortunately, when students' culturally formed expectations and assumptions are different from those of the task assignor, task performance is likely to be viewed as deficient. This problem can be alleviated to some extent if the task demands are made explicit by the teacher, but it would be extremely difficult for a task assignor to anticipate all of the cultural differences in task conceptualization that a heterogeneous group of L2 readers will exhibit.

Culturally based literacy practices may influence L2 reading in another important way: by determining the cognitive style (Carrell, 1988) that an L2 learner brings to the reading classroom. Different cultures value different cognitive skills and activities and, logically, children become proficient in the skills which receive the most emphasis in the classroom and for which they receive the most praise. In a 1990 study of the cognitive activities emphasized in reading classrooms in literate (U. S.) vs oral (Morocco and Samoa) cultures, Field and Aebersold (1990) conclude that these culturally based emphases shape the way readers approach text. In their study, Field and Aebersold discuss a number of cognitive activities that, according to Fillmore (as cited in Field & Aebersold, 1990), vary from country to country:

1. Sustained and systematic attention (both the child's willingness to remain with a given task over a period of time and the child's attitude toward that kind of activity)

2. Verbal memory (how much the child is expected to memorize materials, recite, or repeat texts/narratives)

3. Analyticity (recognizing patterns and generating new materials using them)

4. Playfulness (willingness to experiment, to manipulate materials)

5. Mental flexibility (generating guesses, considering alternatives, hypothesizing)

6. Field dependence/independence (proclivity toward being able or unable to see relationships without reference to background)

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All of these cultural and linguistic factors affect the learning behaviors of nonnative speakers of English, and educators attempting to design effective instructional strategies must keep them in mind. To this end, an examination of instructional strategies and classroom applications will build upon these linguistic and cultural theories.

Instructional Strategies

Although there are advocates of top-down approaches, bottom-up approaches, and approaches combining top-down and bottom-up strategies, we believe that reading can be most effectively and efficiently taught using an interactive reading and writing approach with a strong emphasis on a top-down model. Simply put, L2 readers need to be exposed to a wide variety of reading materials wherein they can experience success in reading a second language, in this case English. L1 proponents of this method include Ken Goodman and Frank Smith. Does this top-down method developed for L1 students hinder L2 students' grammar and vocabulary skills? The answer is no for L2 students with basic processing skills, since appropriate reading materials coupled with a reading to write emphasis will provide L2 students with opportunities to read, discuss, think, and write about what they have read. In so doing, L2 students will have an ongoing exposure to and application of new vocabulary, idioms, organizational structures, and cultural concepts found in what they are reading and, in turn, what they are writing.

In addition to the curricular goals of the instructor, students' needs and goals must also be considered. College-level L2 students frequently come from vastly different cultural and educational backgrounds. These students want and need to become proficient readers to get on with the rest of their academic and social lives. They need to succeed in reading English proficiently; therefore, providing opportunities for them to become successful readers is paramount.

Appropriate materials for these reading and writing courses include a textbook with diverse selections, a daily newspaper, student-generated materials, and discipline-specific texts. By having this range of materials available, students encounter many different forms of writing as well as discover the necessity of realizing different purposes for reading.

When selecting materials for use with L2 students, a series of questions need to be addressed:

1. What are the interests and reading levels of the students?

2. Do the materials deal with topics and themes relevant to the students?

3. Do the materials allow the student to experience a wide variety of language structures, vocabulary, idioms, and cultural concepts?

4. Do the materials model good writing?

5. Do the materials provide students with ideas and issues to discuss and write about?

Spack (1993) discusses and provides examples of reading-to-write and writing-to-read activities that will enable L2 students to become academic readers and writers. Spack argues for starting L2 students with reading and writing tasks that are more general in nature and then moving them toward more discipline-specific tasks.

Based on the L2 students with whom we have worked, this approach has been successful, as these students are just starting in their academic careers in a new language. Therefore, when answering the questions posed above about materials selection, a teacher should consider materials that are suitable for students' reading levels and interests. More importantly, the reading material must provide a basis for the L2 students to bring their own academic and personal experiences to bear on the readings. The materials should provide students with opportunities to practice a variety of writing tasks such as note-taking, summarizing, journaling, and essay-writing. Obviously, this is where teachers need to experiment with materials from commercial texts, students' writings, newspapers, magazines, and other authentic sources.

Various interactive reading and writing strategies are recommended for classroom use. Spack (1993) discusses "a write-before-you-read activity" whereby students can freewrite in response to a prompt that the teacher provides before the actual reading assignment is given. This not only engages students in writing, but also allows them the opportunity to bring forth personal experiences relating to the selection about to be read. These writings, in turn, provide a wonderful opportunity for small-group of whole-group discussions. Finally, the instructor can get a sense of the range of experiences and interests of the students in relation to the reading.

Journal-writing is another strategy through which L2 students can respond to what they have been reading as well as to what they have

been encountering outside the classroom in daily life. The first type of journal is a reader's response to the readings of the class. Students can be given specific prompts such as "How did this individual's environment influence his decision to pursue higher education?" or general prompts such as "How does this event relate to your own experience?"

The second type of journal is a cultural-experience journal in which L2 students reflect on incidents they have observed or experienced in daily life in America. As a starting point, students can be asked to comment upon differences between school protocol in their home country and in the United States. They may also comment on what American habits they find confusing, funny, irritating, or insulting. This type of journal should be done regularly in order to accustom students to writing frequently.

A major challenge for L2 students is summarizing an article that they have read. One effective strategy for helping them learn to summarized is to have them use a major daily newspaper which provides a summary of news stories in the first section. In addition, the development of a summary-writing guide, or the use of existing commercially published guidelines, provides a step-by-step explanation of the process of writing an effective summary. These student-produced summaries might then later be used as part of longer essay assignments dealing with particular themes or issues.

Classroom Applications

In a basic English class designed for a combined group of L1 and L2 learners, writing can be used as a way for students to process what they read and to create more in-class reading that contributes to the interpretive community of the class. This section will first discuss how reader response theory, schema theory, and interpretive tasks contribute to understanding practice; present a lesson that incorporates these theoretical constructs; and finally, relate examples of student writing that shows teachers and students grappling with reading through writing. All of these theories coalesce in classroom practice where reading leads to personal reflection and then reflection on the reading.

Non-native speakers of English come to the classroom with complex and well-practiced first-language reading skills but weak second-language reading skills, while the native speakers come to the developmental classroom with very poor first-language reading skills. The non-native speakers also come with much more flexible schema since, as bilinguals, they have two schemata available to them while the native speakers often seem to suffer from a form of narrow schematic myopia due to their somewhat more limited life experiences. The

greatest difference between class members is the focus on individual grammar problems, which is the only aspect of the class that may be dealt with separately.

In second-language reading, the text can also be the teacher. It is an interpretive challenge to understand the culture of the text. Through reading these interactions, students can begin to learn the schema they need for the texts of the new culture. This process is similar to the interpretive tasks Ellis (1995) outlines for grammar instruction. Ellis points out that in order for receptive learning to take place, the teacher must provide contexts that help the students notice the new information that they might have previously ignored. The same is true for learning new schema in the second language. The teacher must help the students recognize other possible schemata to understand the reading through prereading tasks and class discussions of the reading. In this way, the teacher scaffolds the experience for the students.

Vygotsky (1978) describes a model of development that conceives of two levels of a learner's capabilities. The first level is the learner's actual capabilities: what she can do by herself. The second level is what she can do with assistance. Thus, in the context of second-language reading, the role of the teacher is to present a way of understanding to the learner which she would not be aware of by herself, but which she can internalize; later, then, she will be able to understand the readings in relation to the new schema by herself.

Once the scaffolding has been presented by the teacher, the students must then make the information their own and react to the reading in a way that makes sense to themselves. Part of this process is taking their first-language schema and reconciling it with the second-language schema. Bilingual students have two interpretations open to them, both of which are valid. Reader response theory (Beach, 1993) suggests that a reader responds to a text in a way that makes sense to her, and this is also informed by the larger community in which she participates. The classroom provides a rich environment for this meeting of schemata and provides a reading community which explicitly acknowledges multiple perspectives. The class itself creates an interpretation in the class discussion.

Individual students must discover for themselves where they fit in this reading community of the classroom and to this end create writing that contributes to this reading community. Writing "reader response" journals is a way that students can take what the class creates, what the author of the reading created, and their own interpretations to create a new piece of reading for the others in the community. In this

way, writing is a method of participating in this community and reconciling the various schemata available.

Previous to encountering the new schema, the student can explore her current schema through creating a reading based on that schema. Focused writing on the topic (referred to as "write before you read" by Spack, 1993), in addition to prereading strategies is a way to accomplish this. In a piece of focused writing, students notice their starting points. Being able to recognize where they start will make it easier for them to know when they have arrived at a different place. Focused writing is also embedded firmly in their own schemata and created from their own linguistic resources--a baseline of experience.

Reader response is the journey from the focused writing. In a reader response, students have been exposed to a new schema and must respond to it. They have also been exposed to new linguistic input in the form of new vocabulary and more complex structures than perhaps they spontaneously use. Thus, the reader response will be a window on the learning process of reading. The reader response also helps students from other rhetorical traditions practice the playfulness and mental flexibility that American university courses require, but with which many native and non-native speakers of English may not be familiar.

Carrell (1988) points out that students often forget to use their personal knowledge schema to understand class readings. She suggests that students believe class readings only have meaning in the text since the reading is done for an assignment created for the teacher's pedagogical goals, and comprehension is usually gauged by questions based on the facts of the text. This process would force students into bottom-up processing. However, L2 students can be directed to top-down processing and reflection on the readings as well as focusing on bottom-up processing through creating writings on the readings. Vocabulary and structure must be comprehended, but relevance to the students' experiences is also part of the right answer. Thus, the reader response assignment fosters both types of processing.

The Class Assignments

A typical integrated reading/writing assignment in our classes includes several different readings, a focused writing topic, a reader response journal entry, and an essay. An example of this assignment is the following:

Unit Title: Television

Readings:

"Life without Cable. No Way!" by Jeff Greenfield (from *TV Guide Magazine*, Radnor, PA: Triangle Publications, 1978)

"Television Addiction" by Marie Winn (from *The Plug-In Drug*. New York: Viking/Penquin, 1977)

Excerpt from *Bullet Park* by John Cheever (New York: Knopf, 1969)

Excerpt from *Charlie and the Chocolate Factory* by Roald Dahl (New York: Knopf, 1973)

Focused writing: Write about how television has affected your life. What do you like about it? What do you hate about it?

The reader response journal entry: This journal entry is written after you have read an assigned class reading. All reader response journals are due at the beginning of the class in which the reading will be discussed. This entry includes three parts.

1. The heading: the title of the reading and the author.

2. The summary: one or two sentences that tell what the reading was about.

3. The entry: your thoughts, reactions, and responses to the reading.

   The Essay:

   "Life Without Cable, No Way!" suggests that TV is a great part of a person's life. All three of the other readings suggest that TV is a terrible influence on a person's life. We have discussed these positive and negative aspects in class. Write an essay that expresses your conclusions concerning whether TV is positive or negative. You must write to an audience that does not agree with you. Your task is to convince this audience that your view is reasonable. In your discussion, you must anticipate your audience's objections and respond to them.

These assignments also foster lengthy and spirited class discussions that include debates concerning the readings, sharing personal experiences, and arguments over what the essay topic means.

The above readings deal with positive and negative aspects of TV. In order to help the students explore their own understanding of TV, the focused writing asks the students to reflect on their own experiences with TV. The focused writing is written before the reader response journal. The students choose the reading they wish to respond to from the list of readings. The focused writing helps the students understand their own schema and makes explicit their own relationship with the reading before having to respond to the new schema presented by the reading. In addition, the topic is extensively discussed and the students do guided prereading before the reader response is written. Thus, each reading occurs within the classroom community and students actively create meaning from their own experiences and from the shared experiences of the class.

Comparing Reader-Responses to Focused Writings

An analysis of class performance demonstrates that the clearest difference between the focused writings and the reader responses is that the focused writings are significantly longer. The students spend more time recounting personal experiences and beliefs in the focused writing than they do responding to the content of the reader response. However, it is interesting to note that although the reader responses are shorter, they are more complex than the focused writings. In many cases, the students must use vocabulary from the reading to respond to it and therefore use words they might not spontaneously use in their more personal writing. There is more use of past tense in the reader responses, and more cause-and-effect reasoning. Thus, although the reader responses are shorter than the focused writings, the language the student uses is more complex.

The reader responses are also interesting in that the students present in them the schemata they have built for the stories, thus helping the teacher arrange her scaffold-of-understanding for the class appropriately. For example, the following passage clearly presents the students' schema for the story "My Own Two Feet" by Irina Marjan (1994):

The author tell us that since many obstacles came to her life, from she was nine months old to eighteen years old. She realized that she needed to make her own life better than dependent from someone else.

I like this story because in my life, I had many obstacles too. When I read this story, that made me remembered all my problems back. For example

Irina Marjan had two set of parents, but neither one she couldn't stay with them. I only had one set of parents, but they all died when I was thirteen years old. And no one could take my parents place. Time passed by, I had to deal with all kind of problems like made my own decision, support and event protect myself. Therefore, I realized that I better to stay on my own two feet than depend to someone else. It also made me grew older than my age. "My own two feet" I think this story is very reflecting with my life.

In this example, the student expresses her sympathy with the author. She also presents her interpretation of the story as a struggle for independence and pride. This schema was shared by the class and they reported that the story was easy to read.

"My Own Two Feet" is an example of a story for which the class community shared the schema of the writer: a nonnative speaker of English struggling in the United States. In contrast, the story "Discovering Words" by Malcolm X (1990), assigned in a unit called "Rites of Passage," did not present a schema immediately shared by the students"--an African-American man in prison. This difficulty became clear in the reader responses generated. For example, a Japanese student wrote:

When Malcolm X was in prison he got a dictionary. He learned English how to read and speak. Finally he made a remarkable progress and he became new person. I'm related with this story very much because I'm learning English too. I respect Malcolm X because I know its difficult to master English. I have a lot of books for studying and I have nice teachers and I can watch TV in English and so on but its not easy for me to master English. However Malcolm X mastered English with just the dictionary and he became a educated person.

If he didn't get the dictionary he would be illiterate.· He mastered how to speak English fluently and he became more thoughtful person and then he contributed for black people. He said, "Never had I been so truly free in my life." He got a really freedom cause of education. His efforts in the prison were rewarded. He committed a crime but he became a respectable person. He succeed in his life.

This study relates how her current schema can account for Malcolm X's writing. The teacher's responsibility is now to increase the number of possible schemata available to the student by discussing Malcolm X's native language and the political issues that accompany this reading.

Reader responses can also show a student in the process of adjusting her interpretive schema as in the case of this reader response to the reading "TV Addiction" (Winn, 1989):

In this story the author compares two general kinds of addictions. Lighthearted category like cookie addicts mystery book addicts and more serious category destructive addictions. Heroine alcohol and television which were mentioned by the author would be included in this category. This kind is more powerful and dangerous because the addict can't live and function normally without it.

This topic had drawn my attention because I never seriously thought about television as a destructive addiction. For me television is pleasure and entertainment. I never felt that I was hooked on tv because I have the power to turn the television off anytime I want. It is hard for me to picture anybody to be destructively addicted to a television because in my family everybody controls their time that they spend watching television. Hopefully we will never end up in the severe category.

In this response, the student tells how her thoughts on the subject of TV have changed as a result of the reading. It is also evident that she is using classroom discussions to understand this reading, as a previous class discussion had dealt with the two kinds of addictions and the definition of addiction. Here, the student incorporates the class' ideas on the topic in her own response to this reading.

Conclusion

Second-language reading is particularly exciting because of the wealth of interpretative schemata available to the reader. However, this excitement cannot be realized if the reading task is treated in a narrow manner. Reading teachers must acknowledge that multiple interpretations are available, and the teacher must become an interpretation coach. Teachers must help the students notice their own schemata by having them write about their beliefs concerning the topic beforehand. Then the class must create its own community of interpretation through discussion of the topic and through prereading activities.

After reading, teachers must ask the students to explicitly present their interpretations of the story in their written response. Using these reader responses, the teacher will discover the various understandings of the students and offer alternate routes to understanding the story based on the various schemata presented by the students. If students read each other's reader responses, the process is iterated again, and the class community can create more interpretations of the readings.

The key to reading in a second language is first knowing where the starting point is. Focused writing is essential to establishing a conscious starting point of interpretation. Even if a student misses the traditional interpretation of a story, as the Japanese student missed the traditional interpretation of Malcolm X's writing, she still has a starting point to hear alternate readings of the story and her comprehension begins with her own comprehensible input, ready for more. The first reading and the reader response are only the first steps to building interpretations and exercising the mental flexibility and playfulness required not only of university reading tasks but of learning to read in a second language.

In summary, first- and second-language reading involve the same processes but have different starting points. Second-language readers can successfully be taught using first-language-based strategies adapted to second-language needs. Second-language reading is cross-linguistic and cross-cultural; second-language readers build on existing skills, expand these skills and learn more about their first language and culture as they learn the second language. The teacher's role for second-language readers is to help the readers negotiate meaning in the new culture through writing about their experiences and interpretations of that culture using their first language and cultural experiences as their explicit starting points.

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Hitchhiking on the Information Super Highway: Where Are We Going? How Will We Get There? How Will We Know We've Arrived?

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Wayne Otto's Proposal

For quite a while I'd been contemplating the theme of the 1995 Annual Conference of the American Reading Forum . . . *Literacy: The Information Superhighway to Success* . . . but somehow I didn't seem to be able to get beyond the two images that came to mind when I first took note of it.

In the first one, I'm a hitchhiker. I'm hitchhiking on the Information superhighway and it stretches from horizon to horizon just like Interstate 94 stretches across North Dakota. Someplace in the middle, between the horizons, is me. I've come a long way, I've a long way to go, and all the traffic is passing me by. I'm not at all sure how I got where I am and I'm wondering, "How will I get where I'm going and how will I know when I have arrived?"

The second image is a scene from Mary Shelley's (1816) original *Frankenstein*. Doctor Frankenstein, the creator, is in confrontation with his creation. The Monster speaks: "Everywhere I see bliss, from which I alone am irrevocably excluded. I was benevolent and good; misery made me a fiend. Make me happy, and I will again be virtuous."

I'm no hitchhiker there; I'm the Monster and I'm excluded from bliss. What I'm trying to tell my antagonist is that I want to stop worrying; I want to be happy . . .

. . . Now a cynic--make that a cynic who remembers Mary Shelley's original--might say that all the Monster was after was a girlfriend, that he was merely trying to cajole the good doctor into ordering up some more spare parts and piecing together a Lady Monster for him (the Monster) to live "in communion" with. And that same cynic might wonder what such a thing could possibly have to do with the 1995 conference theme, much less with some poor soul hitchhiking on I-94.

To which I am pleased to reply.

In the first place, I was more than a little bit discomfited by the 1995 conference theme. The literacy part was okay. What bothered me was the juxtaposition of "Literacy" and "Information Superhighway." I don't think that literacy *is* the superhighway to success; I think that the information superhighway is but one of many and diverse pathways that lead to "Literacy" (which let's define for present purposes as *an earnest and unceasing quest for "understanding"*). For me, the theme's metaphor was flawed because when I read "information superhighway" I saw no primrose path; I saw computers and modems and printers and software and hard disks and . . . mice--all as alluring yet forbidding to me as the sirens that tempted Ulysses.

I was a computer boob, you see; the only keyboard I knew was the one on the Smith Corona in the typing room at the Weyauwega High School where I struggled mightily to earn the C that kept me out of Harvard. When I saw literacy and information superhighway juxtaposed, I saw neither invitation nor opportunity: I saw me abandoned and forlorn.

As forlorn as a hitchhiker on the stretch in Oklahoma where the freeway passes close to the state correctional facility, where signs proclaim that *Hitchhikers May Be Escaping Prisoners* and the passing vehicles never slow down.

So you see, the 1995 conference theme did just what a good conference theme should do: It got me thinking. In addition to wondering whether literacy is more properly conceived as synonymous with or as the object/goal of information superhighway, I was examining my personal reactions and apprehensions regarding the technology that has come to be associated with the information superhighway. And when I'd shared my wonderment with some other ARF members, I experienced catharsis; I felt a little less forlorn. So I was

convinced that others, too, might be (a) apprehensive about the proper place of the information superhighway in literacy development, and (b) intimidated by their personal response to the technology that has come to surround the information superhighway. I decided that they, too, needed a chance for catharsis!

The purpose for the proposed Problems Court, then, was to address two related questions:

1. As a reading educator, where does the information superhighway fit into my conception of literacy?

2. What am I doing--and why--to assure my continuing access to the information superhighway?

The panelists were invited to respond to those questions in view of their personal views and aspirations.

The Problems Court Discussion

About 20 people, including the presenters, attended the session, and individuals' comfort level with the current technology seemed to range from almost total withdrawal to near nerd-level confidence. The presenters set the tone for the discussion. They expressed everything from bemusement, to high expectations, to dismay; and those feelings were reflected in the brief discussion that followed.

Each of the presenters prepared a paper to reflect her or his personal thoughts after the problems court discussion. Together, the papers nicely reflect the diverse views that were expressed at the session. The papers follow.

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Alice Randlett's "Computers, and Texts, and Selves, Oh My!"

The printed line, after all, is so orderly and chaste, so chronologically determined--that is, the reader is obliged to read, line by line, page by page in sequence; very unlike the visual image, which assaults the eye out of nowhere, in a manner of speaking, with no preparation, and no power over the viewer to demand from him more than a moments' casual contemplation (Oates, 1985)

And here we are barely ten years later in a world where the printed line has been taken up, shaken up, and made visual and infinitely mutable by the personal computer and its readers and writers. The personal computer has created a new writing space where the interac-

tion between writer and reader is blatantly interactive. Readers cannot only choose new paths through hypertext works and thus rewrite texts; rather, readers may play tricks with typefaces and graphics making a newly self-conscious space, where they look at as well as through the text.

Scholars say alphabet that can support highly literate cultures need to be simple enough to be learned by children and thoroughly internalized in order that they may serve as clear windows into conceptual thought. The shape and surface of the letters themselves are not to be read aesthetically; that practice would interfere with the transparency needed for "pure" literacy. As Lanham (1993) suggests, *reading* "would not . . . except in its learning stages, be a self-conscious, rule-governed, re-creative act but an intuitive skill, a literate compact exercised on the way to thought" (p. 4).

But now readers of computer texts can change the size of letters, add color, or even make the text read itself aloud. Instead of looking through a text to the world *out there*, readers who look at a text for its graphic playfulness begin to regard the interior world of the self and its effect on creating text, and therefore, in making meaning. We are in the midst of a revolution not only in technology but in the way we grasp reality. We are going from a stable, decorous reading world where meaning was *out there* and could be comprehended, captured and subjected to tests, to one where the creation of meaning is seen as equally shared by author and writer. What does this mean for literacy? Does this make the present literacy debate, as Lanham (1993) says, "about mechanical drawing techniques in an age of CAD-CAM?" (p. xi).

The last twenty years of reading research have been heavily influenced by research in cognitive psychology and educational anthropology. Both disciplines have reshaped our notions of the primacy of reader over text and changed the focus of reading research. Rather than a reader's extracting meaning from a text, research tells us that readers actively construct meaning in interaction with the text. In important ways, however, electronic texts bring the surface as well as the content of reading back into focus. Electronic texts can carry video, sound, and be updated continuously. Readers can now not only abstractly but literally interact with a text. How will this change the way we teach students to read? How can we make tests based on texts whose most salient feature is instability? Who will say what comprehension is in this environment?

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Rick Erickson's "Hazardous Practices"

New computer technology is wonderful, but watch out! I've
encountered hazards created by the speed, efficiency, and popularity
of the information highway. For example, the other day I used ILLNET
and in no time at all I learned that most of the Illinois university
libraries have my book. But this good news was instantly squelched-
-no copies were checked out. Hoping to recover from this electroni-
cally delivered disappointment, I quite ILLNET and opened another
file. I've discovered that playing with essays is fun so I returned to a
current unfinished piece on why paying someone to write a school
assignment is a sin but going to the Hallmark store to buy writing is
thoughtful and caring. The new Macintosh software was still confus-
ing so I pulled down the Tools menu to see how the spell check works.
And here is where efficiency became a hazard. As it looked for
mistakes it highlighted my last name and suggested I replace it with
"erections". Startled by this match I chuckled to myself, imagining
what my vita would look like if the computer does a replace whenever
it confronts my family title. I muse a moment on why erections is so
close to Erickson and decide it's just a coincidence, it means nothing.
I added Erickson to the custom dictionary to fix this little glitch not
knowing that I'd created a bigger problem that I'll return to later. I
started to go back to the essay on why we pay others to write for us but
I couldn't stop thinking how an innocent single printed word can make
big trouble.

That's when I remember the town called Poot in the Wisconsin
Design Study Skills materials I used back in the 1970s. The teaching
materials featured a fictitious map with lakes, roads, rivers, and a town
called Poot. Students were taught to read the symbols and answer
questions, like what road would you take or what lake is closest to
Poot? I remember laughing out loud imagining what might have
happened if these materials had existed when I saw a sixth grader in
the Upper Peninsula of Michigan in the late 1940s. No one I knew
would have dared to use that word in teaching materials that children
would read because poot meant flatulence as in "Did you poot?" As
a former sixth grade teacher I imagined discovering the fatal word late
Friday afternoon. I had to spend the weekend going through all of the
maps and materials hoping I could find every Poot so I could change
the P to a B or an R (thank god it is a capital letter) with a single pen
stroke. How could anyone have chosen such a word to name a town?
That's when I remember that Gus worked on the Wisconsin Design as
a graduate student at UW. As a yooper from Ironwood I wondered if
he did it as a joke that was overlooked by others and when it was
published he kept his mouth shut.

My musing about Gus was interrupted by an e-mail message from my buddy, Vince. Curious about how he is doing in his new job, I opened my mail. I was relieved that he is happy with his new situation but troubled that he, like many e-mail users, had resorted to using symbols called "smiley" faces instead of words. I decided to write back and tell Vince that millions of computer users are reporting a sore neck caused by excessive tilting of the head to the left should to read the smiley logo writing that e-mail users employ to add a supposedly "human touch" to the high tech world of electronic communication. When the reader's head is tilted all the way to the left the basic smiley unit looks like a face with two eyes, a nose, a smile :-). This basic pattern has spawned hundreds of variations so that wanna be comedy writers like Vince were combining symbols to yield mega-smiles such as the drunk, devilish chef with an updraft toupee, a mustache, and a double chin C=};*{)). A smiley dictionary making the e-mail rounds continues to grow as users invent new neck-wrenching symbols where this hazard threatens to go beyond a mere sore neck and into the very heart of reading. I stopped musing, but before I could start playing with my fun essay there was a knock at my door. I looked up and there was Freddy, or Pheddy as I think of him. He's a newly retired professor of linguistics with a love of phonetics who drops by about twice a semester and we schmooze about language stuff.

The last time we talked he complained about the demise of the schwa. Today his keen eye for print found the smiley logos in Vince's e-mail on my computer screen and he began wailing, "It doesn't take a genius to see how the rapid growth of these visual symbols signals a move away from an alphabetic writing system based on symbols that represent phonemes." He continued, "This smiley logographic system marks a world-wide move away from a letter-sound system to a Chinese-like visual picture system. It's a plot by whole language zealots that will lead to the demise of phonics because there is no need to sound out a smiley logo." He agonized, "The hated look-say reading approach will become a simple tilt-stare." Before he could go on I blurted, "If you're right and logographs like smiley faces catch on not only will phonics be gone, left to right printing will be replaced by a top down orientation that will eliminate the head tilting and of course, the sore neck."

When I said this Phreddy assumed I agreed with him so he closed my door and asked me to close the vertical blinds. In a quiet but desperate voice he said, "If things keep going in this direction reading will change drastically. Instead of left to right decoding there will be only top to bottom staring. Instead of 26 beautiful letters with their alphabetical order there will be thousands of smiles and other logos to

memorize." I started to respond but he kept going, "I know this sounds crazy but the International Reading Association just adopted a new logo that doesn't look at all like the letters *I R A*. This remark brought on a cold chill as my eyes moved down to stare at the cover of the December 1995 RRQ lying on my desk. There in white on blue was the feared logo in the middle nearing the binding. He saw the logo too and as he pointed to it with a shaking finger his eyes caught a glimpse of the ARF 1995 heading on a manila folder next to the RRQ. He said, "Isn't ARF that group you meet with on the beach?" When I said, "Yes," he seemed to calm down a bit. "Can I assume your group still believes in letters and words, phonemes, and phonics?" I said, "Sure, but don't take my word for it. Why don't you come on down to our meeting this year. Several of us are speaking on the very topic we are whispering about here in my dark room behind a closed door." I got up to open the blinds and said, "Imagine that on Friday, December 8, at 1 p.m., you could be sitting in the Sandpiper room, only yards away from a shell covered Gulf of Mexico beach, telling others of the plot to wipe out alphabetic writing as we know it." Phreddy looked out my window at the cold-gray Illinois sky, the red leaved pin oak, the yellow zoysia grass soccer field and his eyes glazed for an instant. Then he got up, opened the door, looked both ways down the narrow hall, turned and said, "I think it's too late--too late to get on the panel--I only get travel money if I'm on the program--and it's too late to stop the take over." I swear I saw tears in his eyes as he walked away muttering, "No more sounding out, no more sight words, just look-say and tilt-stare logos."

I sat there thinking about his fears. It was hard to get back to playing with my essay on why it's ok to pay someone to do your writing out of school. My ideas paled in comparison to his concern. I decided that instead of playing with essays I'd better get serious about the reference letter I promised to write for a former student. I knew it wouldn't take long because I'd written several for her already. I opened the reference file, found her letter, and after making some minor revisions, read it carefully, used the spell check, and printed a laser copy. However, when I went to sign my name at the bottom I was shocked. Four spaces below "Sincerely," it said L. Erections. I was stunned. Did I type that? I hastily deleted it, retyped Erickson, and magically it changed to Erections all by itself. I tried to fix it again, but every time I typed my last name the computer replaced it. Shaken, scared, I called Sandy, our in-house computer technician. I told her I had a problem with my spell check but waited until she was in my office to show exactly what was happening. She laughed, looked in a place called autocorrect, and found that instead of adding Erickson to the custom dictionary I had added Erickson to an autocorrect file. In my ignorance I had programmed the computer to write Erection when anyone typed Erickson.

She told me she had fixed it and explained that the new Macintosh Word 6.0 had an autocorrect feature that automatically retyped frequently misspelled words. I said, "You mean that if I type recieve it will automatically write receive?" She showed me how it was impossible to type receive with the *i* before the *e* and added, "Of course, you can turn this feature off if you don't want it." I said, "Go ahead, please kill it! Turning off that automatic feature is easier than changing my last name."

The next day I returned to the computer confident that Sandy had solved the spelling hazard peculiar to my name. Overcoming a temptation to check ILLNET to see if anyone had my book checked out I went directly to my essay on buying writing. But when I tried to open the file a message on the screen told me that the college server was full and I would have to try later. I called Sandy for help and I learned that the college license for sharing Macintosh Word 6.0 had a limit of key users and I would have to wait until there was a key available for me. She said this problem was spreading and I should call the Dean's office, make a complaint, and that more keys would be added to the license. I turned to my touch tone, hit the first number, then stopped. I don't know how I knew--perhaps all of my crime fiction reading kicked in--that complaining was actually the newest type of electronic administrative surveillance. The Dean's secretary would know I had come to work later than most everyone else. I pictured her putting a black mark by my name in the secret log that all Dean's keep on faculty. I smugly tried to open Macintosh 6.0 once more, but was refused and told to try again later. In addition to the speed and automatic spelling hazards, the information highway in our college was so popular I couldn't get a license to drive on it today. I sat quietly for few minutes trying to decide what to do. Then, as the snowplow screen saver came on, I grabbed my coat and headed for the recreation center. Frustrated by information highway hazards I decided an early racquetball game was just what I needed.

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Dave Gustafson's "Just a Stranger in Paradise"

Superbowl 1984! Who played? Who won? Who cares? This January event is probably most famous for the unveiling to the world of the first MacIntosh computer. A few days later, February 3, 1984, I bought my first Mac which had 128K memory for $2,782.50. I thought it would lead me to a blissful world perhaps. Today, February 8, 1996, I turned on my Macintosh IIsi and found 69 e-mail messages (none from students) along with the eight messages on my voice mail that had been sent to me in the past 18 hours! Are we sure that Dr. Frankenstein is dead? Could he be a cyborg? Am I being made into a fiend?

Something or somebody has laid claim to a piece of my life and there
seems to be no way I can shake it off. Each day I *must* open the "doors
of communication" while knowing that there are forces which will
surely wrap themselves around my time, my life. What causes more
pain is the knowledge that the task of mastering the computer is a
never-satiated monster which keeps gnawing away at life itself. So
why do I open the doors? I must.

Now that I am in an elated state of mind and frothing at the mouth
to get on my computer, let me address the questions that my mentor,
Wayne Otto, has proposed. The first is: As a reading educator, where
does the information superhighway fit into my conception of literacy?
He defined literacy as "an earnest and unceasing quest for 'under-
standing'".

At this point I have to wonder, then, what the term *functional literacy*
would mean in this context since normally (normal in my world
anyway) literacy means to have a basic grasp of the reading and writing
processes. Functional literacy on the other hand connotes the idea that
many people need quite advanced literacy skills due to the demands
of their occupations, i.e., retired professors who volunteer to be on the
Boards of Directors of alternative high schools. I think it is functional
literacy that is the real focus of concern with the Information Super-
highway. We are reminded daily that the future of our country lies in
its ability to have a high tech labor force since much of the world is
teeming with masses of low-skilled people (2-lane hikers) who will
work 10 hours for a buck. To obtain a spot near the lake in the high tech
campground, one will absolutely have to be computer-literate and a
traveler on the information superhighway or one won't get through the
gate. Note clearly that I have said both the literacy and the traveling
(Otto) are necessary. In the end, I guess Wayne and I agree enough to
wind up at the shuffleboard court.

Simply put, in the future, and the future seems to be now, literacy
cannot be just the ability to read and write, but also the ability to operate
a computer or all of the types of computers (DOS/Mac) in order to
pursue knowledge/information on the same level that one operates in
using a dictionary, for instance. Just as we expect that a literate person
can find things in a library by using various knowledge and devices,
now, or soon, we expect a literate person to be able to locate and use
information which is stored on the information superhighway. Any-
one lacking these skills will necessarily be termed functionally illiterate
and unemployable. In effect, they will be stymied in their earnest and
unceasing quest for "understanding". One might term them the
"roadkill" on the information superhighway.

The second question that Otto proposed is: What am I doing--and why--to assure my continuing access to the Information Superhighway?

Well, tomorrow I could put in my retirement notice so that I will then have more time to hitchhike. Well, maybe I will run some cold water over my head and rethink that last statement. In the meantime, let me tell you my story of where I've been and what I'm doing to keep moving down the "road" or what some cultured folks call the information superhighway. It seems I've been detoured into some pretty dismal dives along the way and have eaten some strange stuff at truckers' diners while watching other people seemingly drive right by while feasting on a diet of escargot and Bud Light.

As I mentioned earlier, I've been a Mac addict since 1984, when I started using it basically for regular word processing purposes and to make great overheads and handouts. The rest of the family delved into MacDraw and other programs of interest. Life was peaceful and secure until the retirements and cutbacks started in 1994 at my university. Instead of a secretary, we then had voice mail to be checked regularly. In about 1989, fiber optic cables had been laid underground throughout the campus, but there wasn't any money to connect the buildings. For five years the worms checked the cables out and probably decided that they weren't part of their family tree. In October, 1994, the faculty and students became connected to the campus, the state, and the world. I got *Eudora!* Then I got a 20 minute group introduction to Eudora, but the person conducting the session was using overheads that depicted screens from a DOS computer rather than the Macs that we all used. Really motivating! Really effective! No hard copy manual--Muddle around for hours on your own! It is now 17 months later and confirmation that all members of my department are online was officially announced just last week.

Once connected, whenever I click on the "apple", about 20 different "things" that were listed as Netscape, Fletch, NewsWatcher, UNYSIS, UWL Library, TurboGopher, MOUNT MACED, Banner, Hypercard, and so on appeared. I never was able to get any hardcopy (except for a Eudora manual I begged from Utah State) that described what this stuff was, much less how to use any of it. So, on January 9, 1995, actually having an earnest and unceasing quest for understanding, I opened NewsWatcher, and a *Whole New World Appeared For Me!* Moving to Newsgroups and the subject "Smart Drugs", my first (non-Eudora) internet message came from Dartmouth College, Hanover, NH, USA. It was "On 31 Dec 1994, .gko. wrote: You can't, and never will get anything for nothing . . . but it's too late to tell that to the jocks

with the shriveled testicles who took steroids, and lost their kidneys
and hair and life etc. "Wow! I really was hooked to the World! Being
a rather sensitive person, I was taken aback a bit and needed a moment
to ponder this stuff and this event and my life, and . . . Wow! Before
this I knew nothing of cyborgs much less cyberspace. Wow!

Oops! I felt that I had "happened" into something rather like hitting
a tree with my car. Where should one go next and why? I tried Fletch
and got a little red dog that ran in place for 10 minutes! A call to my
campus computer center asking if the dog wasn't supposed to stop
sometime received an affirmative answer. (However, my dog kept
running. While trying to think of some way to get him to the Wisconsin
Dells Dog Track and make a few bucks because he could outlast any
greyhound, it became clear that they only had short races and there was
no future for a long distance mutt.) The computer lady said to come
over and she would give me a manual or something. My arrival at the
center found it to be locked with a sign saying the center closed at 4
p.m.! It was 4:10 p.m. when I was talking to the computer lady and she
could be seen through a series of windows sitting at her desk! GRRR!
To this day, my little red mutt just runs in place, never getting
anywhere. Just like me much of the time. In *Silicon Snake Oil*, Clifford
Stoll (1995) wrote:

> . . . For all the talk of friendly, open systems, there's no warm
> welcome for novices. It's up to the user to figure out a new
> terminology, heavy with jargon and acronyms up to the user to
> figure out which system is best; up to the user to install and
> maintain the software. (p. 60)

In the same way, the networked community is an exclusive club for
the initiated. Too often, there's an established hazing ritual to get
online. First you try the system, make mistakes, and walk away
frustrated. Then you hunt for the documentation, and hope that the
manuals match the current software.

> Or perhaps there's an online help file--it scrolls off your screen
> when you leave its menuspace. Software designers feel that
> online help is a great way to answer questions. As a result, we
> find balloon help on the Macintosh, function key 1 on Windows,
> and online help files for networks. All these assume that I'm
> having a problem with a command. But often, I'm floundering,
> not knowing what command to use. The only way to get an
> answer is to ask someone. (p. 60)

Time after time I have found myself in the world described by Stoll-
-at the apex of the frustration curve and fine tuning my private

vocabulary which some say I use too frequently in public. (Could these fiendish influences be causing a total vocabulary reversal in my case?) When it becomes commonplace to be in one's office on campus at 9 p.m. on a Friday night and in a "fervent" conversation with a campus computer guy who is at home, most would agree something or someone is out of synch. Unfortunately it got to be normal. I have been plagued with new equipment that turned out faulty, programs that were too old, and bad, or maybe a better term is skimpy, advice which resulted in many wasted hours. Along the way, I have learned and kept on moving forward.

Just last week I spent a day in Milwaukee at our State Reading Conference while an expert demonstrated the deep secrets of the Internet. He lost his telephone connection and then his presentation program ran amuck behind him as he was speaking. He stated firmly: "I just learned to never do this again!" He gave us a list of terrific sites on the WWW and then in the afternoon we bussed to a computer lab where we could surf the net. There we were, two to a computer, and there we sat as site after site was busy. Got into some interesting stuff, but once again, there was the feeling that this was another happening and the car was hitting that tree again. In retrospect, that feeling fit the scene because with the temperature at 30 below zero, my real car didn't start and it cost me $135 to get out of town. So goes the pursuit of my continuing access to the information highway which I likely will be pursuing until they drop me into that final folder.

From my experiences and reading, there has to be great skepticism regarding the promise of the Internet. While it is fun to surf, the time involved in teaching oneself to use the Net and get through the advertising and other aspects is tremendous. Having been to the Louvre and having seen the Mona Lisa, I can't imagine that meeting the Mona Lisa via CD-ROM, or whatever, will feel the same. However, it is the great unknown and that is enough to pique the interest of most of us. Students must be involved in using the Internet because as future teachers they will be expected to do so. When compared to the students at Utah State, Appalachian State, etc., who interact via e-mail, my students lag far behind. Many have never used e-mail, much less the World Wide Web. How will they be able to get a job at the new high school where my son-in-law teaches in Oregon and where every student has a laptop computer and every room is wired to the world, unless I incorporate computer related tasks in my teaching and assignments?

In the meantime, my life is being consumed and the line between fiend and fanatic is getting blurred. Am I turning into a cyborg? Are

you?   Are we controlled by the screens we spend endless hours
viewing? Do we now hear from lots of people we didn't hear from
before and aren't sure we want to in the future? Do I have to keep on
hitchhiking down the information superhighway? It seems to be the
key to *literacy* and ain't that what I'm supposed to be about? Isn't that
why this book is on my shelf--*The Internet for Macs for Dummies* (1995).
Gotta go. Gotta read some more. Gotta let literacy grow. Page 263
looks interesting--"I want Oot, Find me a route!" Maybe it's Out I want,
but I gotta move on. I can't shake off my earnest and unceasing quest
for 'understanding'. Could this mean that I'm getting literate at last?

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Ken Smith's "A Poor Wayfaring Stranger in Cyberspace:

"I am a poor wayfaring stranger . . . a travelin' through this lonely
world . . .," sung by Glenn Yarbrough and the Limeliters, keeps
wandering through my mind as I think of my evolving journey in
cyberspace, interactive television, teaching computer-supported classes,
and now exploring and using the World Wide Web/Internet.   At
Eastern Oregon State College we've been expanding and enhancing
our distance education delivery systems throughout eastern Oregon,
an area the size of Pennsylvania.   These support our programs in
teacher education licensure, reading endorsements, and special educa-
tion. We've been at it for more than five successful years now, but, as
the song continues, it is not exactly true that ". . . there's's no sickness,
there's no toil or danger, in that bright land to which I go."

At the start of this journey, and once I "discovered" the computer,
we were promptly given "conferencing" capability through Oregon's
EDNET-3 Program. Internet access also provided the potential to
explore and research as well as create discussion groups among our
professional colleagues. This communication feature was then used to
support our interactive television delivery in selected education courses,
and soon we could communicate asynchronously with our students as
well. A great deal of training was needed for both instructors and
students. We continue to experiment, with trying to find the most
effective array of delivery strategy options for both instruction and
learning as various curricula and their goals/objectives are examined
and developed.

As part of this professional exploration, I examined the learning/
teaching style characteristics of both faculty and students involved in
this distance education milieu, which included interactive television
and supportive computer conferencing, I sampled their perceptions of
what worked and what didn't work with regard to their learning or
teaching (Smith, 1993; Smith, 1994; Smith, 1995). Although both faculty

and students generally found that these distance delivery systems (interactive television and/or supportive computer conferencing) did not match very well with their preferred styles of learning or teaching (Kolb, 1985), but they could readily adapt to them. Both students and faculty also stated that these forms of class delivery were worth the trade-off in travel time to attend or teach courses on or off campus. Students and faculty found that work expectations and course quality were similar to campus courses. Both groups tended to favor a combination of both interactive television and computer conferencing. There was no apparent difference in the grades of students on or off campus. Finally, students expressed a great need for structure no matter what their learning style preference, while instructors tended not to have a high learning style preference for structure on the Productivity Environmental Preference Scale (Price, Dunn & Dunn, 1991).

Many of the more troublesome aspects of this type of course delivery involved a lack of comfort, confidence and experience in working with computers and programs. Such interaction was often a new experience for those involved. Support systems needed to be put in place to (a) answer hook-up questions involving various types of computers, (b) learn the software systems, (c) use free local dial-up numbers for modem use at home, and (d) provide knowledgeable administrative and technical support personnel to work closely with both students and faculty. Financial support for start-up activities and consistent administrative backing are essential over the years for successful technology-based distance education delivery systems to evolve. Much of this support improved dramatically over a fairly short period of time. Also important to the success of our distance education delivery was that the School of Education faculty decided to deliver the bulk of an entire graduate intern licensure program and handicapped learner endorsement program to cohort groups of students. This meant faculty did not treat these courses as something to do for extra pay. Camaraderie developed among the students as they learned the system in their first class and initial training session and, then, used the systems to communicate with and support each other.

During this past academic year, my secondary content area reading students at Eastern were active in e-mail discussions with groups of students in the same courses at Appalachia State University, University of Virginia, Arizona State University, Utah State University, University of Utah, University of Georgia and Tennessee State University. Many of our students also have started personal e-mail conversations with student colleagues at the other universities. This has added a useful dimension to class discussions and follow-up activities.

Students have done considerable individual searching for literacy and teaching resource sites on the World Wide Web and shared their findings in class as well as with students at the other universities. Another important site for students and our professional colleagues, relevant to secondary education literacy instruction, is the Content Literacy Information Consortium (CLIC) Web site developed in the past several years by Gary Moorman, Woody Trathen and other university literacy professors around the country (http://www.ced.appstate.edu/clic/). This WWW "surfing" has resulted in important shared information with their interactive/interdisciplinary curriculum development in group projects. Students also find it a short step into the development and use of multi-media production in their instruction.

Other helpful resources are the numerous chat sessions or news groups created by professional organizations and professional educators with common interests, such as NCTE-TALK, AERA's various division discussions, National Reading Conference's NRCmail, or American Reading Forum's ARF-L. Besides these discussion groups, most of my colleagues and administrators on campus have created their own on-line interaction groups and much of our committee business on campus involves e-mail activity. So, it is not uncommon to find 75-100 e-mail messages placed neatly by Eudora in my mailbox each day, which require a significant amount of my time. Another caution, simply put, is that cyber-surfing and chatting are addictive!

This current WWW/Internet exploration direction in my journey is, perhaps, the most challenging and will consume much of my professional energy in the next few years. How can we develop useful web sites which can serve as important link sources for our graduate and undergraduate education students who are especially interested in literacy development? How effective will WWW-related and fully WWW-based courses in literacy education really be when compared with those delivered on campus or in other ways? What types of course content and curriculum is best suited for specific distance delivery strategies such as computer conferencing, interactive television, or independent study supported by snail mail and voice mail? What about plagiarism with all the easy access to lesson plans, research papers, and easy communication among students around the world? What are the educational, financial, administrative and political concerns that influence these decisions in our colleges and universities (Ehrman, 1991)?

To finish the song, "I'm going there . . . to my new home."

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Roger Eldridge's "Social Reality and Technology: Not Everyone Has Carefree Access to Hitchhiking Along the Information Superhighway"

As I read the title of the 1995 ARF proposal, "Hitchhiking on the Information Superhighway . . .", my gasp was immediate, loud, and long. The term hitchhiking is not my concern. I learned to hitchhike as a kid and traveled alone to many places. The term *information superhighway* sticks in my throat. Images of technology and computers race through my mind. I thought, "Not only do my fellow presenters know something about technology, they probably use technology to get onto the information superhighway. I'm not ready for this! I'm at a pre-primer level when it comes to knowing and using technology." I asked myself, "What do I know about the information superhighway?" My answer was rapid and definite. "I know nothing! I'm a *Blue Highways* (Least Heat Moon, 1982) kind of guy. I like traveling roads where I find small stores, shops, family-run eateries, and friendly face-to-face interactions. I like receiving my mail delivered each day, and I like hearing familiar voices over the telephone. I don't need the information superhighway. I can travel the back roads, the blue highways." I forced my attention back to the proposal held in my hand. Again, I thought, "What could I possibly add to the problems court conversation?" The metaphorical title appeared to call for knowledge beyond my expertise.

However, by the time the problems court presentation arrives, I am ready! I listen to Wayne introduce the topic and tell how he developed the proposal. Several presenters offer comical anecdotes while still others state very serious facts about their experiences with technology on the information Superhighway. I am the last presenter before the session reactor takes his turn. I feel apprehension! My hands are sweaty! I'm nervous! As the presenters and audience members interact, I register a sense that just about everyone in the audience is enarmoured by technology and the information superhighway. My mind races, "How can I possibly state my position? How can I raise questions about the social value and good of technology on the information superhighway?"

During the problems court session, the presenters and audience only began to explore the social-economic-educational issues related to acquiring access to technology and the information superhighway. What follows is an elaboration of ideas from both my initial discussion with Wayne, after receiving the proposal copy, and from my brief interactions with the presenters and audience during the problems court session.

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In the first place, I am not anti-technology or anti-information superhighway. Both are realities I acknowledge and want to be more informed about. Based upon the existence of social, economic, and educational realities, however, I believe we all must be aware of conditions that favor a select audience to obtain access to technology and the information superhighway. A majority of our fellow citizens may be prevented from gaining access to technology and the super-highway.

Furthermore, I have concerns about the overzealous position many individuals in the field of technology, communication, business, and education take relative to the need of *all* our citizens to become technological experts on the information superhighway. I don't believe, as some individuals claim, that technology is or will be the savior of our society. No, I am not pessimistic about technology in our future, but I am cautious in accepting at face value the claims some people make when touting what technology and the information superhighway can do to improve our lives. I ask specifically, "Whose lives?" Our society cannot afford to assign inordinate powers to ideas and materials that may in fact pose a threat to the social, economic, and educational existence of some of our citizens.

A main concern I want to address is the relationship between technology and education and, more specifically, technology's rela-tionship to literacy.

Steven Jobs, the former head of Apple Computer Systems, writes in an article in *The Wall Street Journal*, dated January 23, 1996, that technology is not the answer to the crisis in education. He reports that in his years in technology he has given to schools hundreds of thou-sands of dollars worth of computer equipment. He claims these technology gifts have not solved the problems of the educational system because technology has not improved the quality of our graduates. He states that we graduate individuals who cannot read, write, and/or compute adequately to function in the marketplace. Frequently, these individuals enter the job market and create produc-tion, economic, and management problems. Therefore, businesses are forced to institute basic education programs related to literacy. Schools have failed to prepare literate workers. Consequently, Jobs no longer provides technological gifts to schools and other educational institu-tions. In fact, he urges other businesses to reconsider giving technology gifts to educational institutions until such time that educators can improve the quality of the graduates in the areas of reading, mathemat-ics, and writing.

I wonder if what we are teaching about technology in schools is adequate to enable people to be proficient users of services like Internet, e-mail and the like. What are "computer teachers" in our schools teaching potential computer users? Is the instruction sufficient to create literate usage of the computer networks so as to maintain a standard English? Again, I don't have answers to these questions, but based upon conversations I have had and from listening to others who frequently use the Internet, the writing on the various on-line services is substandard. Is substandard writing a reflection of what is or isn't taught in our schools?

Another question is: Who uses the technology and the information superhighway? Technology that allows for the development and expansion of the information highway is very expensive. After watching reports of technology and communication stock profits on WNBC the past few weeks, I conclude that companies dealing with technology and communications reaped substantial profits in 1995. Our businesses, educational institutions, military, and well-to-do fellow citizens bought computers and related products/services in record numbers. Business is booming! Who are the buyers you ask? The homeless? I think not! Fast-food, minimum-wage service workers? I don't believe so! Retail sales people? Maybe a few but probably not too many. Hotel and motel service personnel? Doubtful! Single parents working at minimum wage jobs? No! Families with two minimum wage earners? Not likely! Elderly retired people living on fixed incomes? Probably not! Sure, many of these people use technology in their jobs and at home in the form of automobiles, appliances, etc., but these are not the people who earn sufficient incomes to purchase $2500 or even $1200 computer outfits.

The social, economic and educational differences between the *haves* and the *have nots* of our society are increasing. Technology is contributing to the differences. A consequence of not having the financial power to make purchases of technology to access the information superhighway is a more divided social, economic, educated society. The haves get more information and consequently improve their lives in the society. The have nots fall further and further behind in their access and use of information. The haves become more empowered to make their lives better while the have nots remain powerless. Not only that, the number of people who are unable to afford the luxuries of the technological age is increasing. The size of the haves group remains unchanged or only slightly larger, while the number of have nots is rapidly increasing.

How can the size of the have nots group be increasing in number and

becoming more and more powerless? Maybe the have nots can gain access to technology on their jobs. Reports from the government and the business community indicate that more and more employees nationwide use technology and particularly computer technology in their jobs. An author of a report in the December, 1995 issue of the *Phi Delta Kappan*, however, disputes these claims. The author writes that most new job openings do not require or provide opportunities for employees to use computers. Most new jobs are in the service sector, and they require only minimal literacy skills and absolutely no knowledge about how to operate a computer. So not only do the *have nots* not have sufficient funds to purchase technology for their home use, they do not have access to technology and the information superhighway on the job. Again, our society is becoming more divided along social, economic, and educational lines.

Issues like these lead me to believe that technology and the information superhighway are not as beneficial to our society as some individuals would like us to believe. There are problems of usage, problems of access, and problems related to educating our citizens. These problems need to be discussed and plans need to be developed to lessen the division between the haves and the have nots. As educators there is much for us to consider. We must create a society where access and ability to use technology and the information superhighway are not prevented because of social, economic, and educational realities.

Where does the information superhighway lead? What is next? Shopping by computer? A reality! Salespeople jamming your e-mail with offers you can't resist? Not too far from reality! Government agencies knowing each on-line adventure you make? Privacy completely lost? These are a few things that are of concern to me now. Maybe a life totally controlled by technology won't be so bad, but at the moment I feel that I don't and won't have much control. For now, I think I'll stick to the blue highways.

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Otto's Epilogue

Like I said at the outset, the presenters express feelings that range from child-like bemusement to nerd-like addiction. And Tom (See Tom Cloer's Reaction Paper) has the good sense to urge us to proceed with caution as we contemplate making our way on the information superhighway. Together, they pretty much cover the topic as I have experienced it. Since I wrote the proposal, you see, I've acquired a computer, which resides in our home.

It's like having a mother-in-law or a down-on-his-luck cousin in the spare room. Like Willie sings it, sometimes it's heaven and sometimes it's hell.

Like when I decided to use my resident computer to help me put together this very paper that you now have before your eyes. It was heaven to imagine my colleagues' prose winging to me through cyberspace. No Postal Service glitches, no phone tag, no re-typing. No muss, no fuss, no bother.

But of course things didn't work out quite so well; and it was hell. I won't recite the details--you either know what I mean or you couldn't grasp it--but I could have scratched the whole manuscript on a stone tablet quicker than I did it with the help of my resident computer. And I could have shipped the whole damn stone tablet off to Kaybeth and Bernie for lots less than what it cost me for Prozac to regain my equilibrium.

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Reaction to Hitchhiking on the Information Superhighway

Thomas Cloer, Jr.

We've all been thrust into the technological orgy that is demanding our acts of excessive indulgence. We're told we must prepare for the 21st century. Wouldn't it be wonderful if we could jump on Disney's Carousel of Progress in Tomorrowland, begin in the year 1995 with the first stop, and spin right on around to the year 2095?

As I sat in my office with enough computer hardware and software to run NASA, and with my voice mail activated, I thought about sitting on that Carousel of Progress where the stage remains stationary and the audience turns. I pondered what it would be like to have insight from hindsight and to view the 21st century that Mac built.

"Good evening persons of worth (no more ladies and gentlemen), and welcome to General Electric's Carousel of Progress, 2095. We ask that there please be no sex during our program and that you remain in your seats. Our Carousel of Progress will look back to the year 1995 just before the beginning of this 21st century. So sit back, relax, and we hope you'll enjoy your stay with us this evening. Now persons of worth, General Electric is proud to present—The 2095 Carousel of Progress."

Now is the time, now is the best time.
Now is the best time of your life.
Life is a joy; live every minute.
Open your heart, let someone in it.
Yesterday's memories sparkle and gleam.
Tomorrow is still but a dream . . .

The music plays and the audience spins around to the first stop. The set shows the typical workplace environment for 1995. People sit at desks, each typically equipped with a computer keyboard, a monitor, and laser printer. Telephones with voice mail and two fax machines are also in the set. A young office worker remarks:

"Hey cool! I'm getting e-mail from Alaska. Our branch office there is asking how the weather is in Florida. E-mail is unbelievable!"

The audience members laugh heartily, all sitting in their Star-Trek lightweight four ounce jumpsuits with temperature and humidity control for comfort. The young office worker continues:

"Let's step down to the workshop on Literacy: The Information Super-highway to Success."

"You know the sight of a computer mouse prompts me to jump on a chair and squeal," answers an older female at the next desk.

People laugh in the audience as they push buttons on the thermostats that control their jumpsuits.

"Well, let me receive the fax that's coming in," says the young office worker. Then I'll set my laser printer, activate my voice mail, and away to the workshop we'll go. Life has surely been made easier by this latest technology."*

"All right! Before anybody goes to the workshop let's get one thing clear," a rotund CEO cries from his door to an inner office. "You cyberaddicts that have been enslaved by the computer card game of Solitaire, and who have neglected your work, family, and leisure in search of the useless perfect hand—listen up! Instead of sorting kings and queens in your gadgetboxes, you better get busy and sort our customers' files."* The animated robot CEO with real human skin and hair raises one arm smoothly and snaps to the workers, his mouth and the sounds now perfectly synchronized. "Now let's go gang; you won't be tempted anymore since we're going to expunge these dang games from your gadgetboxes."*

The crowd roars with laughter. The stage light goes off on the office set and a new one comes on that shines on a family trying to trouble-shoot a problem on their Mach computer.

"This mess of connections here probably is the cause of the problem dear," a young mother says as she raises a six-way plug with numerous

cords running to keyboards, printers, monitors, etc. "You know mom, I'm going to be roadkill on the information superhighway if I don't learn how all this stuff works," the young boy says disconcertingly.

Members of the audience laugh merrily and shake their heads in disbelief at the primitive nature of the technology as the lights dim and the carousel audience turns to a new stage set depicting the beginning of the new 21st century.

Now is the time, now is the best time.
Now is the best time of your life.
Life is a joy; live every minute.
Open your heart, let someone in it.
Yesterday's memories sparkle and gleam.
Tomorrow is still but a dream . . .

The darkened set appears with the mechanical robots ready and in place to entertain the Disney visitors. The light comes on a computer- ized classroom where two young technicians are before a group of anachronistic educators.

The narrator speaks:

"Well, we see here in this part of the 21st century that a group of educators have identified some core skills to master and are looking for a nonthreatening environment where novices can find support. After all, there are toll booths to the information superhighway, and these people seem to be paying their dues. Let's listen in."

One of the technicians was a Wally Cox looking guy who had MIT on his white jumpsuit. The other technician seemed inordinately young and had Georgia Tech and an image of a huge yellow jacket with the stinger erect on his jumpsuit. Both had virtual reality masks pushed up on their foreheads like welders at a construction site. The youngest one asks:

"You people have LCD's for us to demonstrate the laser discs?" The educators all look nervously at each other and one fellow less paralyzed than the others queries, "What's an LCD?"

At this the audience laughs robustly and are still laughing when the MIT technician says condescendingly:

"An LCD is a liquid crystal display panel. I see you people have unlimited potential for improvement in your knowledge of technology."

Laughter from the Disney audience permeates the air. As the young MIT technician turns, he gives a high five to the Georgia Tech graduate. Neither one makes eye contact or stops walking in order to execute the high five.

"I don't know if these people are ready for on line multimedia capabilities," one robot technician whispers to another. *"Maybe we could just have them e-mail each other in the room here."*

At that the audience roars and the set light on the classroom goes off, and on the same stage, a new light reveals a disgruntled professor meeting with his department chair. The professor's drab clothing (no jumpsuit) demonstrates the era to be long ago.

The narrator speaks:

"Well, well, looks like Dr. Jones is upset again over not having the latest technology. Let's listen in."

The professor robot talks eruditely to the department chair, Dr. Smith, a man plainly from another era in a pin-striped Wall Street suit. Dr. Jones complains, "In order for appropriate technology to arrive here at the college before it is outdated, this college needs to make technology a priority in their budget, and not rely on us, the people in the trench, to find their own funding."

The department chair shakes his head and says, "I'm sorry Dr. Jones but you know how tight money has been, and how this new era of little government and big prisons has left us short on funds."

The bedraggled professor at this point looks at the department chair, points his finger at him and states emphatically, "If you want us to stay abreast of all the new technology, we need a budget line yearly that automatically allows us to continually update. You'd better put your money where your mouse is!"

The audience erupts in laughter and hoots, the music starts, and the carousel turns.

> *Now is the time, now is the best time.*
> *Now is the best time of your life.*
> *Life is a joy; live every minute.*
> *Open your heart, let someone in it.*
> *Yesterday's memories sparkle and gleam.*
> *Tomorrow is still but a dream . . .*

"Well now, we've come a long way in the 21st century since we first tried direct democracy," an obvious Al Gore type politician says from the front steps of the White House. "The information technology that allowed us to have electronic town halls has now been put to better use. Cyberdemocracy that allowed each voter push-button voting and created a virtual congress was really no better than the representative democracy envisioned by our founding fathers."

An attractive middle-aged woman dressed in a temperature-controlled new age suit with pants instead of skirt replied, "That's right Mr. Vice President, and as long as I am President of these United States this hyperdemocracy, where popular fads and passions replace cool deliberation by sagacious elected officials, will no longer lead to such demagoguery as 'three strikes and you're out'!"

The vice-president robot standing next to the lady president nodded in agreement and raised his chin to look more interested.

The president continued, "The Federalist Papers made it clear that there was a need to elect representatives whose wisdom and patriotism would put the country's best interest above the temporal heat generated by a trendy little slogan or a release of emotions made easier by our information technology."

The audience applauds generously in what appears to be a very popular statement endorsed by a large majority and realized and verbalized by an always revenue-conscious Disney. As the applause weakens, the lights come on and the Disney representative pulls out a tiny battery-operated microphone from his pocket and says.

"Thank you persons of worth for visiting our Carousel of Progress, 2095. We hope your stay in our sterile earth bubble will be a pleasant one. Be sure to check for your things before you exit and good evening."

Conclusion

As I sit contemplating where we are going with information technology, I think about how we could misjudge and go for many miles before realizing we're on the wrong road. For us even to consider juxtaposing the word literacy with the information technology is evidence that such misjudgment is inevitable.

To equate literacy with the information superhighway is analogous to equating consumer adeptness to visits in shopping malls. While one can probably use literacy in some manner while on the information

superhighway, or use consumer adeptness while visiting a shopping mall, it is possible that fools lacking consumer adeptness may spend all their money on frivolous items in a shopping mall or that vapid travelers on the superhighway may have never had a genuine literary experience in their lives.

To equate literacy with the information superhighway is like equating healthy sexuality with orgiastic and frenzied reveling. For those of us whose most boisterous merrymaking is normally watching our legs go to sleep at night, constant and frenzied reveling is not our idea of healthy sexuality. While we probably should know that the Internet is not a tennis club here on Sannibel Island, it is disconcerting to consider that our healthy self-esteem and ultimate fulfillment in the future will be gained only by clicking a computer mouse and gazing at a computer terminal.

To equate literacy and the information superhighway is like equating my fly fishing skills with the outdoor catalogs of Orvis, L. L. Bean, Cabella's, Gander Mountain, Pro Bass shop, etc. I probably could find something related to my literary intrigue on the information super-highway or something connected to my fly fishing skills and interests in Orvis and L. L. Bean catalogs. This surely doesn't mean, however, that my existence apart from Orvis, L. L. Bean, or a gadget box is meaningless, vacuous, and past.

There are toll booths on the information superhighway; we all know that. We do have to pay in many ways for its use. I, for one, am willing to pay. I will undergo disequilibrium, learn new skills, try new approaches, and obtain new equipment. I won't however, be a participant in a demolition derby on the information superhighway without considering the three questions posed: Where am I going? How will I get there? How will I know I've arrived? We owe our profession that degree of skepticism.

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The American Reading Forum:

The American Reading Forum is a nonprofit, professional organization composed of individuals who share an interest in the improvement of reading. While the American Reading Forum is an organization that facilitates the dissemination of ideas and research, it places highest priority on providing its members opportunities for a critical discussion of ideas, issues, research, and paradigms.

The American Reading Forum's Goals:

The American Reading forum declares the following to be its reason for existence and the guidelines for its activities:

* To provide a true forum for reading education where new research can be generated, research in progress can be refined, completed research can be reported, and reported research can be evaluated.
* To provide for the translation of reading research, theory, and philosophical deliberations into sound practice, but with no research, discussion, or contemplation to be discarded because its implementation is not immediately apparent.
* To conduct a conference at which newly trained scholars and scholars in training can get to know and get assistance from established and distinguished scholars in the field, through a mutual exchange of ideas.
* To provide a yearbook through which scholars of all levels can share viewpoints, resources, and expertise.
* To ensure that in the field of reading no idea is too bold or new to be given a hearing, and none too old to be given reconsideration.

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To achieve its goals, ARF sponsors a meeting each year during early December. The program consists of the common conference session formats (e.g., paper sessions, major addresses, and symposia), as well as alternative formats to those generally employed by organizations in the field of reading. To enhance the opportunity for participants' interaction, the American Reading Forum encourages a variety of formats for its sessions. A "Topical Issues Forum," a "Continuous Dialogue Session," and "Mentorships Sessions" are a few of the formats that ARF considers as ways to allow issues and topics to be discussed in depth by those who attend the annual meeting.

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