HANDBOOK OF INSTRUCTIONAL PRACTICES FOR LITERACY TEACHER-EDUCATORS

Examples and Reflections From the Teaching Lives of Literacy Scholars

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Computer-Based Instruction in Reading Education

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Computer-Based Instruction in Reading Education, ERD711, was first developed at UGA in the early 1980s by George Mason, who designed the course to focus on the use of software in reading instruction in K–12 classrooms. When we arrived at UGA with interests in computers and literacy, we subsequently taught or co-taught the course. For example, David’s interest in digital texts on conceptions of literacy and literacy instruction has led to a shift in the course’s emphasis and focus over the last decade. More recently, Linda adapted the course to reflect trends in software development, current innovations in computer technology, relevant developments in literacy learning theories and instructional practices, and contemporary research conducted by UGA faculty and others in the field. It is important to note that in the midst of the sweeping changes in technology and education that have occurred since the mid-1980s, we have also continued to adhere to George Mason’s original vision of offering a practical, hands-on approach to a survey of current software with an emphasis on immediate classroom reading instructional applications.

The following graduate level catalog entry describes the overall intent of the course for the 10 to 20 masters, specialist, and doctoral level students from a variety of departments including, Reading, Language Education, Elementary Education, Educational Psychology, Early Childhood Education, and Instructional Technology, who take the course.
Examines the computer's role in classroom instruction, learning, and educational research as these topics relate to literacy. Software of potential value to the teaching of reading and writing will be critically examined. Students will use and evaluate a variety of software and will develop plans to implement computer-based instructional activities focusing on reading and writing.

There is also a note in the syllabus about the connection between this course and a related course taught by David, Topics in Computer-Based Reading and Writing (see chapter this volume). This related course attracts graduate level students who are interested in delving into underlying theories of technology related literacy development, unique characteristics of electronic digital text, and the implications of technology for literacy related research.

The course goals include fostering basic competencies in using computers to run literacy-related software, acquainting students with the range of computer applications related to literacy, providing students with a conceptual and pedagogical basis for considering the use of computers in literacy instruction, and exposing students to current issues related to the use of computers for instruction in general and literacy in particular. Students also examine critically a variety of literacy-related software and consider technological developments that have potential to affect reading and writing instruction in the future. One of the primary goals is to enable students to develop workable plans for implementing computer-based instructional activities that focus on reading and writing. And ultimately, we hope to enable students to conceptualize the range of literacy learning computer-related opportunities that are appropriate across the elementary grade levels into middle school.

A major challenge we faced in designing the course is to provide and a current and appropriate range of software. Our department has made a commitment to ordering literacy/reading related software through educational catalogs several times a year. It is interesting to note that many software programs originally ordered over a decade and a half ago are for all practical purposes outdated because the computers required to run the programs are obsolete and not widely available. Software collected for the course include the following categories that correspond to some of the topics discussed in class: Early literacy applications including reading skills, reading and writing activities, and interactive stories; middle-grade applications including reading and writing across the curriculum; upper-grade and secondary applications including reading and writing hypertexts. Of course, today we also spend considerable time helping students think about how they might integrate the use of the internet and email into their instruction aimed at enhancing reading and writing across the curriculum.

We provide at least four different types of opportunities for students to develop the ability to critically analyze reading/literacy related software. First, many class sessions begin with an instructor demonstration of a software program. This demonstration may consist of several segments including (a) how to initiate and run the program; (b) how to navigate through the program; (c) how to use the program for a whole-class lesson; (d) how to determine potential grade school level student literacy learning opportunities; and (e) how to design an individual lesson plan related to the software. Second, about one third of the class meeting time is devoted to hands-on explorations of additional software in a College of Education computer lab. During this time students analyze the software in terms of factors such as its pedagogical value (e.g., its consistency with accepted principles of literacy instruction, its potential for enhancing or positively transforming instruction), its technological soundness (e.g., freedom from glitches in its operation), its ease of use (e.g., easily navigable), flexibility for instructional purposes (e.g., its capability to be adapted to different students or contexts of use), and so forth. Third, students may also critically analyze software and present a demonstration of that software to the class. For example, some masters or specialists level students who are currently teaching will sometimes opt to analyze software that is available in their school district or on their school campus. Fourth, we require students to complete a special course project. David has required each class member to participate in a small group project to develop an instructional unit or coordinated series of instructional activities that entail using computer technologies to enhance in some way their students' reading and writing. Linda has used a variety of activities for the course project that include writing a traditional research paper, conducting an action research project conducted in a classroom, developing a unit that includes the use of the computer, or conducting an annotated bibliography of software that may be used by teachers at their school. Students are also encouraged to conduct unique course projects that allow them to explore a variety of computer-related areas of interest. For example, some classroom teachers have created hypertext programs specifically designed to allow their students to explore children's literature in a digital, interactive format.

A challenge we have faced is providing a collection of relevant course readings. In the past, readings for the course have consisted of a core of readings supplemented with practitioner-related articles from professional literacy and educational technology journals. Because hardware and software and their availability in classrooms changes so rapidly, publications about the use of technology in classrooms quickly become dated. Thus, we face the challenge of keeping readings current and relevant. Most recently, course readings have consisted mainly of chapters in a book that we co-edited with Michael McKenna and Ronald Kieffer in conjunction with a conference funded by the National Reading Research Center. Selected chapters from the text, Handbook of Literacy and Technology: Transformations in a Post-Printographic World (1998) are read and discussed in class. Students are also required to locate, read, and present a contemporary professional article or Web site related to course topics.
Sample Syllabus
Computer-Based Instruction in Reading Education

Text:


Class Format:

 Approximately
 1/3 lecture and discussion
 1/3 demonstration and presentation
 1/3 hands-on experience with hardware and software

Course Requirements and Evaluation:

Minimum requirements (successful completion of the 9 requirements will result in a B for the course; completion of 8 of the requirements will result in a C; poor quality of work may result in a D or below)

1. Regular attendance (Class activities are central to the goals of this course and are difficult to make up outside of class. More than one absence may negatively affect your course grade).

2. Active participation in class activities and completed course contract.

3. Read and be prepared to discuss assigned readings in class.

4. Submit and discuss in class 3 two-page (double-spaced size 12 font) reactions to self-selected articles or chapters related to technology and literacy. Papers should focus on reacting to the readings and not summarizing their content. These must be submitted by (date listed here).

5. Sign-up to present one self-selected course reading as an oral report to the class. Highlight the relationship between the article or chapter selected and the focus of the course (as detailed in the course description).

6. Sign-up to present on assigned course reading as an oral report to the class. Prepare a handout to help guide the discussion and to highlight key points.

7. Submit all written material as the output of computer-based input such as a word processing program, database program, graphics program, and so forth. Spelling and grammar checks are recommended. Reactions to readings may be submitted via e-mail.

8. Complete 3 written reviews of individual computer programs or courseware packages that can be used for reading and/or writing instruction (see accompanying review form).

9. Participate actively as a member of a group assigned to develop and present to the class a plan for implementing a computer-based instructional activity.

- Students who wish to pursue an A for the course must complete all of the requirements listed above. In addition, one of the following individual projects must be successfully completed to receive an A for the course.

1. Write a conventional focused research paper on a topic related to technology and literacy. The length of the paper should be 10–20 double spaced pages with a minimum of 8 references excluding ERIC documents. Given the topic, a majority of the references should have been published within the previous 5 years. The paper must follow the 3rd or 4th edition of the Publications Manual of the American Psychological Association.

2. Conduct and write up an action research project related to technology and literacy. An action research project involves identifying a specific question which one them investigates through systematic data collection such as observations, interviews, anecdotal records, instructional products, analysis of audio/video tapes, and so forth. The project might take the form of a case study of a child's use of a particular type of literacy software. The data collection should be sustained over at least 8 to 10 computer-related observations and should include multiple data sources. You do not have to be highly trained in qualitative research methods to satisfactorily complete an action research project for this course. Guidance from the instructor will be available for those who wish to pursue this option.

3. Write an article related to technology and literacy for submission to a particular scholarly or practitioner journal. The instructor will consult with anyone interested in pursuing this option, and they must deem the manuscript ready for submission by the end of the summer quarter. State professional journals for teachers such as the Georgia Journal of Reading are perfectly acceptable.

4. We welcome other proposals of ideas that might be negotiated as alternatives to those outlined here. For example, a student could create a hypertext or hypermedia product related to technology and literacy. Alternatively, a detailed written specification and description of a computer-based product might be developed without actually creating it. A detailed book review or an extremely detailed annotated bibliography of software and readings might also be possible.

Linda's most recent course contract follows.
Labbo

Name (please print): ERD 711 Contract Due by:

Date: Signature:

Check one
1. I plan to fulfill the minimum requirements (1 through 9) for a potential B.
2. I plan to fulfill the full requirements (1 through 10) for a potential A.
3. 4. 3 reactions to self-selected articles or chapters related to technology and literacy.
5. Present one self-selected course reading as an oral report to the class.
6. Present one assigned course reading as an oral report to the class.
7. Submit all written material as the output of a word processing program, data base program, or graphics program.
8. 2 reviews and 1 review/presentation of literacy-related computer programs.
9. As a member of a group, develop and present to the class a plan for implementing a computer-based instructional activity.

10. Please check one of the following projects and write a brief title/description in the space provided:
A. Research paper
B. Action research project
C. Write an article
D. An alternative project—Title/Description:

ERD 711 Tentative Schedule (*Chap = chapter pages from the course text)

Date COURSE OVERVIEW
* Select and Sign-up for Assigned Course Reading, Discuss Contracts and Projects

Date LITERACY ACQUISITION
* Preschoolers and Computers in the Classroom, Socio-dramatic Play Center


Date EMERGING LITERACY
* Turn in Course Contract

31. COMPUTERS IN READING EDUCATION


Date BEGINNING READERS


Date WRITING TO READ


Date LITERACY PORTFOLIOS


Date FEATURES OF TECHNOLOGY AND CLASSROOMS

* Miller, L., & Olson, J. *Chapter: Literacy research oriented towards features of technology and classrooms*, pp. 343–360.

Date TRANSFORMING SCHOOLS THROUGH SYSTEMATIC CHANGE

* Fawcett, G., & Snyder, S. *Chapter: Transforming schools through systemic change: New work, new knowledge, new technology*, pp. 115–127.

Date MIDPOINT OF SESSION: STRUGGLING READERS


Date THE ROLE OF TECHNOLOGY IN THE READING CLINIC


Date THE INTERNET IN THE CLASSROOM


In the Department of Reading Education at the University of Georgia, each faculty member is encouraged to develop an elective graduate course that most closely reflects his or her professional interests and expertise related to literacy. Topics in Computer-Based Reading and Writing, the course that I describe here and that I proposed and first taught in 1991, was my response to that customary encouragement. It reflects my primary professional interest in technology, particularly computer technology and digital texts, and how it is effecting changes in our conceptions and use of literacy.

The course compliments another older Departmental course offering related to literacy and technology: Computer-Based Instruction in Reading Education (see Labbo & Reinking, this volume). That course was developed in the early 1980s by George Mason, perhaps the most widely known scholar interested in computers and reading during most of the 1980s. When I arrived at UGA in 1985 as an assistant professor, George graciously shared the teaching of alternative sections of the course with me because of my own interests in technology. Reflecting George's primary interests, the course focused on the use of software in the teaching and promotion of reading in K-12 classrooms. After George's retirement in 1990, I continued to teach the course with that focus. More recently, my colleague, Linda Labbo, who is quickly emerging as a recognized scholar in technology and early literacy, and I have team taught a section of the course, and as of this writing Linda has taught it once on her own. I also wish to acknowledge the influence of her research and theoretical perspectives on my teaching of the "Topics" course I focus on here.
Although I have always enjoyed teaching the established course focusing on classroom applications of technology, it did not really allow for a full consideration of the larger issues in which I was also interested. For example, exactly what is the relation between technology and literacy? Are there fundamentally unique characteristics of electronic, digital texts? If so, what are they and how do these characteristics compare to conventional printed texts? What are the implications for literacy theory and research, broadly speaking? Is it possible that computer-based reading and writing may change in some fundamental sense how we conceptualize literacy? May it change what we teach under the head of literacy instruction and how think about teaching it? These are more basic, abstract, forward thinking questions more directly related to theory and research than to day-to-day considerations of using computers in classrooms. Topics in Computer-Based Reading and Writing, the course I proposed in 1991 and describe here, allows me and my students to explore such questions.

The course, like many upper-level electives in our Department, is usually taught one quarter (soon to be semester) every other year. A typical section has 10 to 20 students, approximately half who are in a master’s or specialist program and half who are in a doctoral program. The students typically come from programs in Reading, Language Education, Instructional Technology, and Elementary Education, not coincidentally because these are the departments to which I send announcements about the course in the quarter before it will be offered. Typically, several of the students have previously taken the older course focusing on classroom applications. Some of the master’s in Reading Education have chosen a specialization in the area of technology and literacy, and some of the doctoral students plan dissertations in this area.

There are several challenges I face in planning and implementing this course, and I will highlight a few here. A practical problem has been making students and their advisors aware of the distinction between the course and the established, related technology course. Invariably some students show up the first day of class expecting a hands-on computer course where they will have an opportunity to explore software they might use in their elementary school classrooms. So, the syllabus tries to make this distinction clear. Interestingly, in all but one case, after I go through the syllabus and explain the focus of the course, students who enrolled with the wrong expectations stay instead of dropping the course. This trend and the lively discussions that are typical during the course itself suggest to me that the content is inherently interesting, and relevant, to even more practice-oriented students.

Another problem has been focusing on the concept of hypertext in the course. Hypertext is a useful focal point for the course content because it raises a number of critical questions and issues. For example, the Bolter book (1991) that is required reading for the course focuses on hypertext to raise larger issues. Additionally, all students are required to use Storyspace, a utility software program that enables them to create hypertext documents to complete other course requirements.

However, despite my pointed explanations that hypertext is only an example, many students see the course as promoting hypertexts over printed texts. Some enjoy being involved in a new form of reading and writing, but others seem distracted by a need to defend printed texts as superior, a position that is reinforced by some glitches and difficulties in using Storyspace. I also require students to become involved in small group discussions over email, which has been problematic for some of them.

Perhaps the greatest challenge though is the inherent difficulty in coming to terms with rapidly changing technologies for reading and writing and their increasing use in an ever widening circle of daily events. But, that is not just a problem that must be dealt with in creating the syllabus, it is the justification for the course itself.

Course Description

Catalog description. Research and theory related to computer-based written discourse. Compares electronic and printed texts, addressing implications for reading and writing texts, for developing literacy, and for conducting research.

Further description and disclaimer. This course focuses on the consequences of the increasing shift from printed to electronic forms of reading and writing. That is, how is literacy changing when we depend increasingly on electronic forms of reading and writing, and what are the implications of the move away from printed materials? The course is designed to address such questions broadly from various perspectives. Classroom instruction, specifically instruction aimed at enhancing literacy, is a dimension of this focus. However, this course is not designed to familiarize teachers with available technology and commercial software that can be used for instruction. Students whose primary interests are related to discovering uses for the computer in teaching reading or writing should consider enrolling in the course ERD 711, Computer-Based Instruction in Reading Education. Occasionally, software will be demonstrated in this course and students will have an opportunity to use computers, but these occasions are aimed at providing examples that lay the groundwork for discussing issues and clarifying concepts. That said, it is likely that teachers who take this course will develop a different perspective on the role that technology may play in instruction, which may be quite useful in guiding their use of computers in the classroom.
Required and Supplemental Readings

Required reading


Supplemental readings:

Supplemental readings are required to receive an A or B in this course. An annotated bibliography of suggested supplemental printed and electronic readings will be distributed during the first class. [Available to readers at the Web site accompanying this text.]

Computer software:


Class Format

Class meetings will typically include the following activities: (a) small and whole group discussion of the weekly required reading in the Bolter text, (b) lecture/presentation/discussion on relevant topics selected by the instructor, (c) demonstration of computer application(s) related to activity a or b, and (d) independent time for computer work and/or consultations with instructor.

Course Requirements, Grading, and Evaluation

General requirements and conditions:

1. Provide full reference citations in APA style whenever possible.
2. Written work may be submitted via email.
3. No work for the present quarter’s grade will be accepted after the date of the final exam.
4. Work submitted to satisfy requirements will be considered acceptable or unacceptable. Unacceptable work may be resubmitted for credit subject to item 3.
5. The instructor will offer to write a letter of recommendation/commendation for students who achieve a grade of A and whose performance in the course is especially meritorious.
6. The instructor will not assign a grade of incomplete. Under extraordinary circumstances where the instructor approves completion of some requirements after the completion of the course, a lower grade will be assigned and changed when the requirement has been successfully met.

(Note: Some course requirements outlined in the following sections are negotiable on an individual basis. That is, students who wish to propose comparable activities relevant to this course are encouraged to discuss their ideas individually with the instructor.)

Minimum requirements (successful completion of which will result in a C for the course):

1. Regular attendance and active participation in class activities. (Given that this class meets only once a week, no more than one class may be missed without affecting the final grade for the course.)
2. Weekly participation in an email discussion of the assigned reading in the Bolter text. The class will be divided into small groups for that purpose. Members of the group will take turns jump-starting the email discussion each week. Each week, the assigned reading in Bolter must be read no later than the Monday morning of the week it is due. Small group email discussions will occur from Monday through Thursday of each week culminating in a class discussion. In class, the leaders of each email discussion group will rotate to another small group to summarize the discussion of their respective groups.
3. Submit a two- to three-page, typed reaction to class discussion and activities each week. Written reactions to one class period are due by the subsequent class period. Reactions may be submitted to the instructor via email.

Requirements for a B:

1. Satisfy items 1 and 2 under minimum requirements. Completion of item 3 in the minimum requirements is not necessary for those seeking a B.
2. Write a two- to three-page reaction to 10 supplemental readings (from at least 5 different sources). At least half of the reactions must be submitted by the fifth class meeting. Supplemental readings not on the suggested list distributed in class or mentioned by the instructor are acceptable but must be approved in advance.
3. Complete one of the following:
   a. a take-home final consisting of short answer and essay questions related to the content of this course. OR
   b. write a 10- to 20-page paper speculating on the nature of literacy in 20 years.

Requirements for an A:

1. Satisfy items 1 and 2 under minimum requirements. Completion of item 3 in the minimum requirements is not necessary for those seeking an A.
2. Create a hypertext comprised of one’s own prose and existing texts (e.g., the required text, supplemental readings, etc.). The hypertext may also be expanded to include audio and visual elements (thus becoming a hypermedia application) for those who have, or who are inclined to develop, the expertise to do so. To complete this task, students must learn to use Storyspace, a word processing program designed to create hypertexts, or they must use some other application that allows them to create a hypertext document. The Storyspace application is available for the Macintosh and MS DOS platforms, although the MS DOS version has proved to be far inferior and more frustrating than the Mac version. The goal of the final hypertext document is to reflect the student’s engagement with the issues central to this course (as described in the previous section entitled “Course Description” at the levels of learning that Bloom has described as analysis and synthesis.

3. Keep a log describing progress in the developing the hypertext and reflecting on the process of creating it. (Parts of the log may find its way into the hypertext, too.)

4. Complete an electronic take-home final. That task will require that students elaborate on a hypertext dealing with the content of the course and developed by the instructor. In other words, students will add texts and links that merge with the instructor’s hypertext perhaps using existing texts from the students’ own hypertexts. It is anticipated that the richer and more extensive the effort to complete requirement Number two, the easier this task will be.

(Note: Students will be asked to declare the grade they are seeking no later than the third class meeting. After that time students may later opt for a lower grade but not for a higher grade.)

Tentative Class Schedule, Topics, and Assigned Readings

Class 1    Course introduction, introduction to hypertext, demonstration of Storyspace
Class 2    Transformations of text, theoretical perspectives and issues, are we moving to a posttypographic era? What does that mean? Historical perspectives?
Class 3    Must declare grade sought for course, transformations of reading and writing, what are the implications of new forms of reading and writing?
Class 4    Transformations of literacy in classrooms and schools, what are the implications of digital reading and writing on the way classrooms and schools deal with literacy?
Class 5    Transformations of teaching and learning, what are the implications of digital reading and writing on the conduct of teaching and learning in classrooms?
Class 6    Transformations of society, what are the implications of an increased use of digital reading and writing on societal issues such as copyright, intellectual property and plagiarism?
Class 7    Transformations of mind, what are the cognitive effects of literacy and how might they change in a posttypographic world?
Class 8    Transformations of literacy research, how might electronic texts effect changes in the agenda of literacy researchers?
Class 9    Summary, reflections, and the future of literacy in a posttypographic era
Class 10   Jay Bolter visits class to respond to your questions and comments
Class 11   Final and all written work due