

Clio Contemplates Her Students: Reflections on Teaching and Learning History in the Digital Age

Since 2004 I have published a series of five research articles that explore various aspects of teaching and learning history with technology. These articles build not only on each other but on my earlier SOTL articles, which often provided baseline data. Through my series of articles on teaching with technology, I have been able to learn more about the most effective ways to use digital resources to promote the development of critical skills in students. Consequently, I have continuously revised my teaching methods, assignments, and materials in response to findings.

My work is firmly grounded in the philosophy of history and in constructivist theories of learning. As E.H. Carr points out, “facts” are constructs that involve interpretation, and there must be a “continuous process of interaction between the historian and [their] facts...”¹ Sam Wineburg argues that historical thinking is an “unnatural act,” since “texts are not lifeless strings of facts ...” but must be “interrogated ... [and] decoded.” We want our students to think like prosecuting attorneys but, unfortunately, students often read texts “like jurors ... unable to question witnesses directly or subject them to cross-examination.”² For students to achieve Carl Becker’s ideal of “every [one their] own historian,” constructivist theorists insist that instructors must move from being authoritative dispensers of wisdom to “midwi[ves] in the birth of understanding,”³ who enable students to construct meaning from their own experiences, often in social contexts. It is in this context that I became an early adopter of technology as a tool to develop historical skills, and began publishing articles in the 1990s on the benefits of teaching and learning with technology.

Historians have been among the most reluctant in the academy to embrace new technologies, and the prevailing attitude seems to be that, “real historians do not read bytes.”⁴ Some historians doubt the very possibility of creating a meaningful constructivist learning environment online, since so many computer applications embody didactic models of teaching whose focus is on information transfer rather than on constructing knowledge through learning communities.⁵

¹E. H. Carr, *What is History?* (New York: Viking Books, 1961), 35.

²Sam Wineburg, *Historical Thinking and Other Unnatural Acts* (Philadelphia: Temple University Press, 2001), 74-77.

³Ernst von Glasersfeld, “Sensory Experience, Abstraction, and Teaching,” in Leslie Steffe and Jerry Gale, eds., *Constructivism in Education* (New Jersey: Lawrence Erlbaum Associates, Inc., 1995), 369-384.

⁴Jeffery G. Barlow, “Historical Research and Electronic Evidence: Problems and Promises,” in Dennis A. Trinkle, ed., *Writing, Teaching, and Researching History in the Electronic Age* (Armonck, New York: M.E.Sharpe, 1998), 205.

⁵Stephen Gance, “Are Constructivism and Computer-Based Learning Environments Compatible?” in the *Journal for the Association for History and Computing* Vol. 5, No. 1 (May 2002). Retrieved March 30, 2007, from <http://journals2.iran-science.net:800/mcel.pacificu.edu/mcel.pacificu.edu/JAHC/JAHCv1/K-12/gance.html>.

Central to these concerns is the loss of the face-to-face interaction between instructor and student that would normally occur in a classroom.⁶ However, historians have failed to take into account the use of asynchronous discussion as a medium for enhancing communication between students and between the instructor and the students. Communication patterns between students and instructors change markedly in online environments,⁷ and research suggests that student learning outcomes in asynchronous discussions can at least equal if not exceed those of traditional, face-to-face courses.⁸

Asynchronous Discussion in Online and Hybrid Courses

Consequently, in "History in the Digital Age: A Study of the Impact of Interactive Resources on Student Learning," I explored the extent to which asynchronous discussion might enable students to develop critical skills essential to historical analysis in a fully asynchronous World Civilization I eCore® course. I used tracking data available from WebCT to study student usage patterns, data-based profiles of the students provided by the University System of Georgia's Office of Information and Instructional Technology, surveys conducted by OIIT, my own formative surveys, and actual student work in asynchronous discussions and on assignments.

Student postings in asynchronous discussions requiring role-playing postings based on primary sources evinced a large number of cognitive indicators, such as engaging in more than the required number of postings, pursuing original sources beyond those given in the course textbook, conducting especially vigorous debate, and extended information seeking episodes. These actually exceeded results obtained in traditional face-to-face contexts. Student perceptions were also positive. Surveys administered by the eCore® staff at the end of the fall semester 2002 showed that 64 percent of the students found the eCore® course more intellectually challenging than traditional on-campus courses. Ninety-one percent of the students rated their involvement, defined as "doing assignments, interacting with other students, and interacting with faculty," as much higher than in other college courses. However, the majority of eCore® students were non-traditional students with an average age of 33.95. Thirty-two percent had taken or were taking other eCore® courses. Their previous experience and maturity suggested that online instruction might most benefit mature students.

In "Asynchronous Discussion and Communication Patterns in Online and Hybrid History Courses," I then explored the extent to which asynchronous discussion might enhance communication and analytical skills in the context of a face-to-face class with students whose average age was nineteen. Among the benefits reported for "hybrid" courses are a greater sense of

⁶Leonard J. Shedletsky and Joan E. Aitken, "The Paradoxes of Online Academic Work," in *Communication Education* 50 (2001): 206- 217.

⁷Robert Heckman and Hala Annabi, "A Content Analytic Comparison of Learning Processes in Online and Face-to-Face Case Study Discussions," in *The Journal of Computer Mediated Communication* Vol. 10, No. 2 (2005): article 7, Retrieved March 30, 2007, from <http://jcmc.indiana.edu/vol10/issue2/heckman.html>.

⁸Maryam Alavi, "Computer-Mediated Collaborative Learning: An Empirical Evaluation," in *MIS Quarterly* Vol. 18, No.2 (1994): 159-174.

community and better quality of written work.⁹ However, available studies did not explore the effect of using asynchronous discussions in mid-continuum hybrid contexts, which incorporate substantial proportions of both face-to-face as well as asynchronous communication.¹⁰

I wondered whether asynchronous discussions would enhance the results of the in-class role-playing debates I already conducted using small group work to prepare for various roles. Although I anticipated that advance preparation would enhance the quality of the hybrid students' postings, the hybrid students' work was generally less cognitively elaborated, compared to postings made by students in the eCore® course. While the better performance of the asynchronous students might be attributable to the greater 'lag time' these students had for responses,¹¹ an alternative and equally compelling explanation might be the greater maturity (age) and online experience of the asynchronous students. Interestingly, the hybrid students regarded the in-class preparation as essential to their success online.

Hybrid students also said their online discussion helped improve the quality of in-class discussions. Two-thirds of the 2005 hybrid class students said that the online postings made them feel more comfortable talking in class. Of the 53 percent who said they preferred to listen during in-class group discussions, all but one said that the online discussions made them more comfortable talking in class due to greater familiarity with material and knowledge of what was expected. However, the nature of the classroom discourse continued to consist largely of exchanges between the students and the instructor, but not between students and students. It rarely achieved the level of authentic student dialogue¹² and one-half of the respondents in the hybrid class preferred the online discussions. Although the mutually synergistic relation between online discussions and in-class discussions was a very positive finding, the question remained as to how best to transplant the high level of student-student interaction that characterizes asynchronous discussions into the face-to-face classroom. I have since made some progress in this area by modifying the structure of in-class debates to make use of student moderators.

The Impact of Digital Multimedia on Student Learning

⁹Alfred P. Rovai and Hope M. Jordan, "Blended Learning and Sense of Community: A Comparative Analysis with Traditional and Fully Online Graduate Courses," in *International Review of Research in Open and Distance Learning* Volume 5, No. 2 (August 2004), Retrieved March 30, 2007, from <http://www.irrodl.org/index.php/irrodl/article/view/192/795>.

¹⁰See, for example, T.R. Christensen, "CASE 1: Finding the Balance: Constructivist Pedagogy in a Blended Course," in *The Quarterly Review of Distance Education* Volume 4, No. 3 (2003): 235-242.

¹¹ D.R. Garrison and Terry Anderson, *E-Learning in the 21st Century: A Framework for Research and Practice* (London: Routledge/Falmer, 2003).

¹²Martin Nystrand, Adam Gamoran, Robert Kachur, and Catherine Prendergast, *Opening Dialogue: Understanding the Dynamics of Language and Learning in the English Classroom* (New York: Teachers College Press, 1997).

The results reported in "History in the Digital Age" had also raised other important issues concerning the use of multimedia resources in the eCore® course. Despite the sophisticated design of the interactive maps, students in the course did very poorly on the map portion of the proctored midterm. Formative surveys showed that 80 percent relied on the "print text" option to bypass the interactive map. The majority of students viewed these areas of the course primarily as places to quickly download embedded text, spending less than 1 minute and 55 seconds per hit. Although my previously published studies of interactive multimedia maps demonstrated improved performance on exams by fourteen points over classes without the programs,¹³ the eCore® course lacked a graded quiz on the maps. Responses to the formative survey suggested that students used only those materials that they found immediately relevant to exams and papers.

In "The Toys Are Really Cool But Will the Kids Play With Them? Multimedia Usage Patterns in Asynchronous and Hybrid World History Courses," I explored in more depth the kinds of materials students tended to use the most, how and when they used them, and what sort of learning was likely to occur with different design structures. I used data mining techniques to query student usage patterns through the tracking tools in WebCT, conducted formative surveys, and compared the results from the asynchronous eCore® course to several sections of my hybrid courses. Larry Cuban, in *Oversold and Underused*, has recently noted that computers have not changed the way instructors teach, and my research suggested they have not changed the way students learn either. Asynchronous students make more consistent use of digitized text than do hybrid students, but both groups failed to significantly engage interactive multimedia resources. Information-gathering behavior and the desire for efficient use of time online accounted for lack of engagement. Usage patterns were also correlated to the complexity of the application. Students used multimedia applications that provide short verbal summaries more than they used complex applications, which produced cognitive overload for students. The most used and effective multimedia applications were those that promoted the lowest levels of learning. Student paradigms of learning, such as a preference for chronological materials in historical contexts and information-gathering behavior near exam times, remained unchanged by the multimedia environment. This study confirmed suspicions that "point and click applications" may not be promoting higher order learning, and suggested that the most powerful forms of learning occur in social contexts where students are assigned some real agency.

Podcasting and Student Agency

Subsequently, in "History to Go: Why iTeach With iPods," I explored whether student-produced podcasting projects might respond to this issue. One significant goal of my historical methods course is to develop writing skills. Experts on composition indicate that students who read their work aloud often correct their written errors as they go, but may not recognize that there are errors on the written page. Repeated practice in reading papers aloud improves students' abilities to spot errors in the written text.¹⁴ I wanted to study the extent to which student oral podcasts enhanced with multimedia could develop writing skills. I also wondered what impact the student

¹³Deborah Vess, "Socrates On-Line: A Multimedia Tool for the Development of Critical Thought," in *Proteus: A Journal of Ideas. Special Issue on Technology in Education* (March 1997):13-22.

¹⁴David Bartholomae, "The Study of Error," in *Writing on the Margins: Essays on Composition and Teaching* (Boston and New York: Bedford/St. Martin's, 2005), 19-35.

podcasts might have on classroom discussion. I conducted pre- and post-formative surveys, took pre-and post-samples of writing, and used rubrics to evaluate podcasting projects.

The results were very positive. On the post-course survey, several students reported that they developed greater confidence in their oral skills, since they recorded their presentations repeatedly until they were perfected. Writing skills also improved. One student with particularly weak writing skills commented that when she heard herself reading, she became aware of organizational and other writing problems in her papers and revised her written materials repeatedly to produce a single podcast. Significantly, the student's weakest performance on a writing assignment was the only one that was not the subject of a required podcast. Given more "lag time" to digest presentations, students demanded more intense classroom analysis from each other. Surveys indicated that the exchange of ideas went beyond what students normally experienced in classes. Students began to provide feedback on each other's work even before distributing their podcasts. They achieved an "authentic" dialog that transcended the classroom, suggesting that podcasts might be another way to approach asynchronous discussion.

In "Stay Tuned for Podcast U: A Review of the Data on M-Learning," my colleague Michael Gass and I explored the impact of podcasting in an institutional context, questioning whether there was any measurable difference between student performance in classes requiring student-produced podcasts ("production" courses) and those requiring use of instructor-produced podcasts ("enhanced" courses). Dr. Gass and I collected information on 52 course sections taught between 2002 and 2006 at GCSU that employed podcasting and differentiated between those sections based on the sorts of applications required. We looked at results of student opinion surveys, GPA, and hours completed per term and also correlated the data with results of formative surveys. Surprisingly, GCSU research data did not provide any significant indication that enhanced or production courses have a positive impact on student opinions of teaching, raising questions for further research. On the other hand, students in podcasting production courses completed more hours per term and there were interesting patterns in their grade distributions. Students in podcasting courses entered with higher SAT scores than the general student body and, as expected, they earned higher overall GPAs. However, there were significant differences in course grade distributions for students in enhanced courses as compared to their non-enhanced courses. Students in enhanced courses were more likely to earn an A in, were less likely to earn a C, D, or F in, and were less likely to withdraw from their enhanced courses as compared to their other courses. The difference was even more pronounced, except on the C level, between student performance in production courses as opposed to their performance in other courses. More research needs to be done on the grade distributions of particular instructors in comparison to instructors in all GCSU courses, but the data suggest that student-produced podcasts may be the most efficacious model to pursue. Formative surveys indicate that students believed they had in a deeper learning experience in production than in traditional courses, and that peer-to-peer mentoring through student-productions motivated them to perform on a higher level due to greater potential visibility.

Conclusion

As a result of my research, my focus has shifted from instructor-delivered multimedia resources to student agency in the digital environment, thereby improving student learning. My projects have also raised new questions for exploration, demanding continuous revision of my teaching and new testing of its impact on learning. Through making my teaching public with SOTL and collaboration with other colleagues, I hope to contribute to an evolving body of knowledge about the digital environments that most effectively facilitate a deep learning experience.

Dr. Deborah Vess
Condensed Vita Related to Teaching and Learning

Education

Ph.D. December 1991 University of North Texas in European History. Dissertation: *Humanism in the Middle Ages: Peter Abelard and the Breakdown of Medieval Theology*.

MA 1980 University of Pittsburgh, Pittsburgh, Pennsylvania, in Philosophy.

BMUS 1985 Pennsylvania State University, University Park, Pennsylvania, with highest distinction; major in Piano Performance.

BA 1979 Indiana University, Bloomington, Indiana, with honors in Philosophy and high distinction.

Employment History

Fall 1997-Present: Professor of History and Interdisciplinary Studies (2002-present) and Co-Coordinator, Center for Excellence in Teaching and Learning (since 2003); Associate Professor of History and Interdisciplinary Studies (1997-2002), Tenured, Spring 2001; Director of Interdisciplinary Studies and International Coordinator for the College of Arts and Sciences (1997-2001), Georgia College & State University.

Fall 1992-Summer 1997: Assistant Professor of History and Philosophy, Tenured Spring 1996; Coordinator of Interdisciplinary Studies (1995-1997); Promoted to Associate Professor, Spring 1997, Georgia Perimeter College, Atlanta, Georgia.

1991-1992: Visiting Instructor of History, Benedictine College, Atchison, Kansas.

Selected Peer-Reviewed Publications on Teaching and Learning (SOTL)

"Stay Tuned for Podcast U: A Review of the Data on M-Learning." In the *Handbook of Research on Computer Mediated Communication*. Ed. Sigrid Kelsey. Hershey: Pennsylvania, IGI Global Publishing, forthcoming in 2008. (With Michael Gass)

"History to Go: Why iTeach With iPods." In *The History Teacher* Vol. 39, No. 4 (August 2006): 479-492.

"The Toys Are Really Cool But Will the Kids Play With Them? Multimedia Usage Patterns in Asynchronous and Hybrid World History Courses." In *The Journal of the Association of History and Computing* Vol. IX, No. 1 (April 2006).

"Asynchronous Discussion and Communication Patterns in Online and Hybrid History Courses." In *Communication Education* Vol. 54, Issue 4 (October 2005): 355-364.

"History in the Digital Age: A Study of the Impact of Interactive Resources on Student Learning." In *The History Teacher* Vol. 37, Issue 3 (May 2004): 385-400.

"Navigating the Interdisciplinary Archipelago: The Scholarship of Interdisciplinary Teaching and Learning." In *Disciplinary Styles of Research in the Scholarship of Teaching and Learning*. Ed. Mary Huber. Carnegie Foundation for the Advancement of Teaching and the American Association for Higher Education, 2002.

"Explorations in Interdisciplinary Teaching and Learning: A Study of Learning Outcomes in an Interdisciplinary Fine Arts Course." In *Inventio* Vol. 3, Issue 1 (Spring 2001).

"The Mudfish and the European: An African Record of the Age of Discovery." In *Teaching History: A Journal of Methods* 22.2 (Fall 1997): 80-91.

"Applications for the World Wide Web in the History Classroom." In *The History Teacher* Vol. 30 Issue 3 (May 1997): 265-283.

"Socrates On-Line: A Multimedia Tool for the Development of Critical Thought." In *Proteus: A Journal of Ideas. Special Issue on Technology in Education* (March 1997):13-22.

"Creative Writing and the Historian: An Active Learning Model for Teaching the Craft of History." In *The History Teacher* (November 1996): 43-55.

Other Teaching/Learning Publications and Editorial Work

Best Preparation for the SAT II Subject Test: World History and *Best Preparation for the AP World History Exam*. Princeton, New Jersey: Research and Education Association, March 2006.

"Finding World History: New Tools, New Possibilities." Introductory Essay for *World History Matters*. George Mason University and the National Endowment for the Humanities (2003). Website was the winner of the 2007 James Harvey Robinson Prize from the American Historical Association.

U.S. HIST I and World Civ I USG eCore courses. Exemplary Course Award from WebCT.

Internet Review Editor for the *History Computer Review*.

Numerous columns in *Innovation Abstracts*, Kennesaw State University's *Reaching Through Teaching*, *The Association of Integrative Studies Newsletter*, *The Reporter*, among others.

Other Peer Reviewed Publications

Three book chapters on medieval and modern religious issues.

Articles on medieval topics in *The Modern Schoolman*, *Mystics Quarterly*, *The American Benedictine Review*, *Word and Spirit*, and other publications.

15 encyclopedia articles in the *Encyclopedia of Monasticism* and other publications.

Teaching and Learning Grants

Collaborated on Southeastern Archival Program Grant (2002) with LSU, Auburn, Kentucky, South Carolina, GCSU), Institute for Museum and Library Services, \$493,000.

Carnegie Academy for the Scholarship of Teaching and Learning Grant (2001). SOTL portfolio posted on the Association for Integrative Studies official website (\$5,000).

Project Intermath Consortium Grant (1999), National Science Foundation (\$37,200).

USG (1999 and 1997) Model Technology Infused Course Grants (\$20,000 and \$18,975).

"Cultivating Humanity: Knowledge as Transformative" (1999), Georgia Humanities Council, (\$8,000).

SOTL Presentations/Workshops

26 presentations on SOTL research, at the Association of Integrative Studies, KSU Conference on College and University Teaching, National Conference on College and University Teaching and others.

15 faculty development workshops, including 3-hour SOTL workshops for The American Association of Higher Education and Savannah State, 2 hour session for Macon State College, all-day IDST workshop for Indiana University of Pennsylvania, and Morehouse College.

Teaching/Learning Awards

Teaching Excellence Award, Georgia College & State University, 2007.

USG Board of Regents' Research in Undergraduate Education Award, 2001.

Carnegie Scholar, Carnegie Foundation for the Advancement for Teaching, 1999-2000.

Powell-Whipple Award for Collaboration between Arts & Sciences and Education, GCSU 1999.

USG Board of Regents' Distinguished Professor of Teaching and Learning (at GPC), 1996-1997.

Two Excellence Awards in Teaching, National Institute for Staff and Organizational Development, 1997 and 1994.

Instructional Enhancement (1996), General Education Outcomes (1995), and New Faculty (1993) Awards, Georgia Perimeter College.

Outstanding Teaching Fellow, University of North Texas, 1991.