

TEACHING HIGH-TECH HISTORY: WHO NEEDS PROFESSORS IN CYBERSPACE?

In 1996, Acadia University embarked on the "Acadia Advantage" (AA) programme. The university began wiring all classrooms and residences for Internet access, invested in a variety of high technologies, and enrolled approximately one-third of the first-year students in specially designated courses in several disciplines that required the use of notebook computers in and out of class. In September of this year, all first-year students leased a standard notebook computer. By the year 2000, mobile-computing technology will be an integral and inescapable feature of the campus.

What impact has this new high-tech environment had on students of history and their professors? Elsewhere, historians have concluded that microcomputers can make significant contributions to the teaching and learning of history. They note that computers facilitate the development and presentation of census material, historical simulations, and supplemental instructional resources.¹ But recently, a darker argument has emerged. Instructors from across the spectrum of disciplines argue that professors may become expendable in light of the many options high technology gives to administrators and students. Who needs professors in cyberspace?²

The simple answer is that we all do. In 1996-7, I taught History 1306A0, the Department's initial Acadia Advantage (AA) course offering. This article summarizes my experiences with that class³ and draws on my observations and the results of four surveys students completed during the year.⁴ I conclude that the introduction of notebook-computer technology encouraged the development of an increasingly student-centred, active-learning curriculum. It also heightened, rather than diminished, the role of the instructor. As well as attending weekly lectures and tutorials, students participated in what came to be known as studio classes, where they worked with primary sources under close supervision. Notebook-computer technology facilitated the design and presentation of the studio classes, their monitoring and their evaluation. The result was an enriched teaching and learning experience, one that requires imaginative, engaged instruction. High-tech teaching makes professors of history more important, not less so.

History 1306A0, a full-year course, met Monday, Wednesday, and Friday in a one-hour slot. During the first term, I lectured on Monday and Wednesday, using PowerPoint, CD-ROM presentations, and overhead transparencies to illustrate the lectures. The final class hour on Friday focused on the student-centred activities of the course: presentations, discussions, and document-analysis work. In essence the two-hour lecture/one-hour tutorial division was the same teaching format I had used with classes of a similar size in past years, a format that is facilitated by our small first-year class sizes of 20 to 45 students.

The generally high quality of document-analysis work, the ease with which I could evaluate the assignments, and the feeling that the Friday tutorial was much too short to accomplish its objectives recommended the need for change. The results of the class survey the students completed in December confirmed the need. As Table 1 shows, most of the students in the December survey reported being pleased or very pleased with the document-analysis work they were performing in class. As Table 2 shows, however, most also reported that they should be using their computers "more" or "much more" in class than was presently the case. These elements combined to suggest the need to refine a computer-assisted strategy that was coming to be known as studio teaching.

Studio teaching can be defined as the creation of a workshop or laboratory environment in which students work with the raw materials of their discipline under the close supervision of the instructor. Notebook computers and supporting software and hardware can make significant contributions to this form of learning. At Acadia, physics has instituted an introductory course section built entirely on the concept. Other disciplines, including history and English, offer course sections with studio components.

In History 1306A0, the refinement of the studio teaching concept required changes to the weekly class schedule and the in-class methods of instruction. While the Monday and Friday classes continued much as they had in the first term, the Wednesday class underwent significant modification. Beginning in the last week of the first term and continuing throughout the second term of the course, I lectured in the Monday class, the Wednesday class became the studio class, and the Friday class remained a tutorial devoted to student presentations and the discussion of course readings.

The December Survey indicated a high level of student satisfaction with the first-term group work. For the second-term Wednesday studio class, I therefore assigned students to permanent two-person or three-person studio groups based primarily on the first-term groupings and on student performances generally. Whenever possible, students who seemed to be working well together were left together; when first-term groups had to be reduced in size or when students requested a change, I assigned students working at the same level to the new studio groups.

Norton Textra *Connect* facilitated studio teaching. Textra *Connect* is a word-processing program that can run through Microsoft Word. It allows students to work independently or collaboratively on assignments posted to them by the instructor, and to submit the assignments electronically for comment and evaluation. The instructor's copy of Textra *Connect* includes a marking menu and options for organising student group work. With the exception of the midterms, the examinations, and the initial

report in the first term, students were encouraged, but not required, to submit all of their written work through Norton Textra Connect, some twenty-four assignments in all by the end of the year-long course.

What does computer-assisted learning in a mobile-computing environment offer students? AA student satisfaction with computers increased slightly as the year progressed, although the number of students reporting in the very top category declined in the April survey. AA students also reported a higher level of satisfaction with computers in both surveys than did the non-AA History students surveyed. Most AA students want to take AA courses this year, most look forward to using computers when they graduate, and the degree of satisfaction with the AA program increased slightly between the December and April surveys, although the number of students expressing dissatisfaction with the program also increased. Clearly, students learned that computers are not the magic bullets they may have thought they were earlier in the year.

But high-tech instruction in History can offer students something more substantial than basic computer literacy and a sense of mastery over the machine. The experience of History 1306A0 suggests that the new technology is an excellent medium for the teaching of age-old skills. Students need close instruction in critical reading, writing, and thinking, perhaps now more than ever. It is also an excellent medium for teaching the discipline. Students who have grappled with the complexities of the past will be in a better position to confront the present. Our resolve to provide instruction to this end is an important step toward keeping our discipline alive in an age that increasingly questions its value. The teaching of history in a studio environment has much to offer students and their professors.

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Table 1
Acadia Advantage (AA) Student Satisfaction with Document-Analysis Work Expressed in Percentages

	AA Students: December Survey	AA Students April Survey
Very Pleased	17	5
Pleased	43	59
Satisfied	30	36
Unsatisfied	9	0
No. of Students	23	22

Question asked of students: I am [unsatisfied, satisfied, pleased, very pleased] with the web site and document-analysis work we do in History 1306. Percentages have been rounded.

Table 2
Student Use of Computers in the Course Expressed in Percentages

	AA Students: Dec. Survey	AA Students: April Survey	Non-AA Students: Feb. Survey
Much More	17	5	0
More	48	36	44
About the Same	35	59	56
Less	0	0	0
No. of Students	23	22	25

Question asked of AA students: I should be using the notebook [less, about the same, more, much more] in History 1306A0 than I do. Question asked of Non-AA students: I should be using a computer [less, about the same, more, much more] for History 1306B/C0 than I do. Percentages have been rounded.

ENDNOTES

1. Evan Maudsley et al ed., *History and Computing III: Historians, Computers and Data* (Manchester & New York: Manchester Press, 1990); Nicholas J. Morgan and Richard H. Trainor, "Liberator or Libertine? The Computer in the History Classroom," *Humanities and the Computer*, ed. David S. Miall (Oxford: Clarendon Press, 1990), 61-70; Richard C. Rohrs, "Sources and Strategies for Computer-Aided Instruction," *Historical Methods* 20, 2 (Spring 1987): 79-83; David Miller and John Modell, "Teaching United States History with the Great American History Machine," *Historical Methods* 21, 3 (Summer 1988): 121-134; P. Jeffrey Potash, "Systems Thinking, Dynamic Modeling, and Teaching History in the Classroom," *Historical Methods* 27, 1 (Winter 1994): 25-39; Trudi Johanna Abel, "Students as Historians: Lessons from an 'Interactive' Census Database Project," *Perspectives* 35, 3 (March 1997): 1; 10-14; James B. M. Schick, "The Decision to Use a Computer Simulation," *The History Teacher* 27, 1 (November 1993): 27-36; Vernon Burton and Terence Finnegan, "Developing Computer Assisted Instructional (CAI) Materials in the American History Surveys," *The History Teacher* 24, 1 (November 1990): 67-78.
2. For instance, see Jeffrey R. Young, "Rethinking the Role of the Professor in an Age of High Tech Tools," *The Chronicle of Higher Education* XLIV, 7 (3 October 1997): A26.
3. For the complete story see my forthcoming article, "Tom Swift Jr. Meets Clio: Reflections on Teaching Freshman History in a Mobile-Computing Environment," *Writing, Teaching, and Researching History in the Electronic Age* ed. Dennis A. Trinkle (Armonk, New York: M.E. Sharpe, 1997). I presented a version of that article at the meetings of the Canadian Historical Association in St. John's, Newfoundland, June 1997.
4. They included the departmental course evaluation, completed in March 1997, two identical surveys completed in December 1996 and April 1997, and a survey conducted in History 1306B0 and C0, the non-notebook computer sections of the course, in February 1997. Because the students of the notebook section were all first-year students, only first and second-year students were included in the results of the last survey. I would like to thank all of the students who participated in this study, as well as my colleagues Doug Baldwin and Kathleen Burke, who allowed me to survey their classes.