Information Literacy in the Undergraduate Curriculum

Certification of core technical skills verifies students' competence and strengthens their resumes

By **Charles Hannon**

In January 2000, the Association of College and Research Libraries (ACRL) outlined six core competencies that every undergraduate student should obtain to be "information literate." In spring 2000 the Board of Directors of the American Association for Higher Education (AAHE) unanimously endorsed the ACRL's statement.

These events stand out as formal recognition of an information literacy movement developing on college and university campuses. While these efforts provide an opportunity for collaboration among provosts, faculty, librarians, and computing staff, such discussions should be informed by lessons learned from previous attempts to integrate essential skills into the undergraduate curriculum.

Writing Instruction as a Model

Currently, debates over how best to implement an information literacy requirement parallel those in English departments over how best to provide meaningful writing instruction throughout a student's education. Traditionally, colleges have relied on a first-year composition requirement to meet this need, but students quickly lose skills gained in a single course. This situation has led some colleges to build a writing emphasis into other areas of their curricula, requiring students to take a number of {W} designated classes over the course of their education. The schools then rely on the departments to offer a certain number of courses as {W} designates.

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Two problems have developed from this approach:

- many faculty who teach {W} courses are selected on the basis of how much writing they assign rather than on the quality of their writing instruction; and
- students quickly learn to delay taking {W} courses until their senior year, thus negating the program's goal of integrating quality writing instruction into the entire education process.

Some colleges dispense with the traditional first-year writing course altogether. Instead they employ a writing-across-the-curriculum strategy that may or may not be based in a first-year experience course, but that typically requires a degree of writing instruction within each of the disciplines. One obvious problem with this strategy arises when there is no coherent approach to writing instruction in the various disciplines; students come away with conflicting messages about what constitutes college-level writing.

Many schools that have implemented an information literacy requirement have replicated, to one degree or another, the shortcomings of each of these approaches. Moreover, information skills are subject to an even shorter half-life than first-year writing skills due to the speed with which the technologies that support information literacy (computer hardware and software, databases, Web browsers and other information-retrieval tools) are either updated or replaced. A better approach would be to discard the notion of an information literacy "requirement" and instead develop programs according to the business model of certification.

A New Approach

Certification offers a voluntary, flexible, even desirable way for students to improve their college experience and enhance their resumes. Students graduating with information literacy certification will have developed skills and competencies that set them apart from other job candidates when they enter the workforce. As a bonus, they will have enjoyed their coursework

more, thanks to those technological opportunities.

Most campuses already have an infrastructure in place to support this kind of program — faculty who teach courses that are in some ways preparation for a certification exam. Many humanities teachers, for instance, require PowerPoint demonstrations as a way of overcoming the nontechnology "stigma" attached to majors in their disciplines. Most of them would welcome the opportunity to formalize, and improve, the PowerPoint training their students receive. Economics, psychology, and sciences faculty already include instruction in spreadsheets and data analysis in many of their courses, and would eagerly participate in a program that demonstrates the interdisciplinary applications of the skills they teach. Moreover, faculty in any discipline would benefit from a formal relationship with their library's professional staff, especially in support of student research assignments.

As part of a certification program, participating faculty could list their courses as {I} sections. With enough familiarity with the certification exam, they could modify certain segments of their courses (one or more course units or "modules," individual lectures, assignments, or special projects) to help students interested in achieving certification. This approach has an added benefit for colleges seeking to increase the number of faculty using information technologies: as more students seek certification, they will begin to pressure faculty in their majors to include an element of technology instruction in their departments' core courses.

A successful program of this sort will require these faculty to commit a heresy in today's world: they will, at times, need to teach to the exam. But given that their technology instruction will occur within the contexts of their disciplines — and in most cases, of courses they already teach — it's likely that a beneficial synergy will develop among their efforts to teach disciplinary material, their students' efforts to learn it, and both teachers' and students' interest in employing information technologies at appropriate times throughout the semester.

A voluntary certification program would avoid the difficulty of adding yet another academic course requirement, which some faculty, inevitably, will feel is either unnecessary or redundant. It would also encourage students to think of learning as a lifelong process, rather than a short-term means to the end of another academic year. An information literacy certification exam would also hold certain advantages over conventional academic "exit exams," which are notoriously difficult to administer and, in the case of subjective skills such as writing, evaluate.

First, the information literacy exam can employ objective testing methods to determine whether the student can perform a number of standard activities. For example, can the student create a certain kind of presentation with PowerPoint, analyze a complex table of data, or use a Web browser effectively to research certain questions?

Second, competency pre-tests can be made available in discrete modules that students can take (and retake, if necessary) as they develop particular skill sets in preparation for the final certification exam. The essential point is to keep such a system flexible so that it can meet the changing needs of students as they pursue their academic goals.

Developing Certification

Colleges will not have to reinvent the wheel in developing their competency exams. Already, a consortium of Virginia colleges has developed Tek.Xam for the specific purpose of testing students' information technology competency. Industry has responded to the movement, with an impressive list of companies in the banking, telecommunications, technology, media, legal, health care, and manufacturing industries endorsing the Tek.Xam test. Moreover, a number of online training companies, such as Element K and SmartForce (formerly CBT), assist students — for a fee — in developing the software skills they would need to achieve certification. However, the best practice would be to integrate such training into the undergraduate curriculum in fundamental ways.

These commercial certification companies need to develop a range of exams to meet students' various needs. One exam, for instance, might test general literacy. This would benefit any student whose transcripts would not otherwise indicate facility with information technology. Other exams might certify particular expertise in areas such as database management, multimedia design, and networking. These would benefit students who majored in one of the information technology disciplines or who developed these advanced skills through their own extracurricular activities. Most importantly, these certification exams will need to observe the difference between information literacy (as defined by the ACRL) and basic computer competency, so that certification will always mean more than the ability to understand computers or particular pieces of software.

Information literacy certification programs would offer the greatest benefit to students at liberal arts colleges lacking computer science or other technology-related departments. Requiring certification would pose obvious problems for faculty who equate information literacy with computer skills and don't see teaching the latter as within the mission of a liberal arts institution. A voluntary program, on the other hand, is an excellent way to ensure that graduates of liberal arts institutions have the opportunity to develop essential information literacy skills and promote their competencies to potential employers. *e*

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