

The Myth about Student Competency

“Our Students Are Technologically Competent.”

College and university students today seem so technologically competent. When they wake up in the morning, they don't turn on the TV to find out about the weather; instead they go to the Web site WeatherBug.com. For news, they use CNN.com, not channel 21. Of course, this is after they check to see what instant messages (IMs) they missed while sleeping. To learn about friends, they turn to Facebook.com. Going online for entertainment is normal for them. Computer games, massively multiplayer games, and music downloads are an assumed part of their environment (for example, 85% of 18- and 19-year-olds download music).¹ And when they want to communicate, sending IMs or text messages is as natural as picking up the phone. There is no question that students go online before they go to the library; Google has become this generation's reference desk.

Watch just about any college or university student. Whether it is taking pictures with a cell phone, downloading ring tones, searching the Web for information, or contributing to Wikipedia or a blog, today's students seem to have no hesitation about using technology. This is what we've come to expect from a generation that has never known life without the Internet. Among today's college and university students aged eighteen to twenty-two, 20 percent first used a computer when they were between the ages of five and eight; all of them had used a PC by the time they were in high school.² They continue to use the Internet daily. Surveys consistently put student computer ownership above 90 percent.³

Faculty, staff, and administrators see

the facile use of technology by students and assume that students have more than adequate IT competency. After all, even senior IT professionals still feel the need to read instruction manuals, can't type text messages with their thumbs, and prefer to read rather than to listen to podcasts. But are students competent or just confident? Having no fear is not the same as having knowledge or skill.

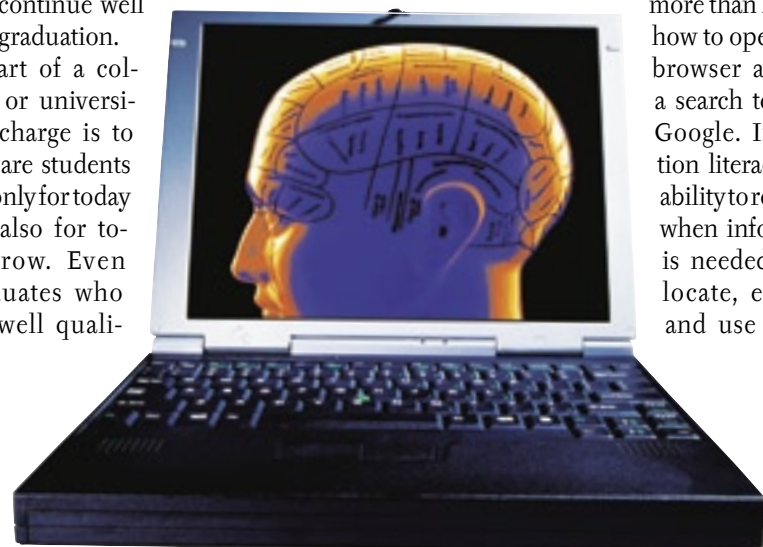
Virtually 100 percent of students use word processors and utilize the Internet for coursework. But the impression of broad competence slips when percentages are revealed for use of other applications, such as those for presentation development (65%), spreadsheets (63%), graphics (49%), or creating Web pages (25%).⁴ Using a variety of applications is just one possible definition of IT competency. Perhaps a more important question is, what is IT being used for? From the perspective of a college or university, *learning* must be part of that answer—learning that will continue well past graduation.

Part of a college or university's charge is to prepare students not only for today but also for tomorrow. Even graduates who are well quali-

fied today will experience changes in their disciplines and their careers, requiring additional education. Although just about everything is on the Internet, will graduates have the skills they need to find the right information, assess its value, and interpret it? Will the information selected by students be legitimate? Historically, library collections have ensured quality control and have safeguarded the legitimacy of the material used by students. Beyond the quality of the collection itself, professional librarians have helped students hone their information searches and find information resources. What happens when students bypass the library and librarians entirely? Doing a Google search or exploring Wikipedia may be a start, but do students know where to go next?

Whereas colleges and universities often focus on technology skills, it is actually *information literacy* that should be the concern. Information literacy is much

more than knowing how to open a Web browser and type a search term into Google. Information literacy is the ability to recognize when information is needed and to locate, evaluate, and use that in-



formation effectively. Moreover, information literacy is not just a skill required in college; there is “a lifelong need for being informed and up-to-date.”⁵

Information literacy includes cognitive activities, such as acquiring, interpreting, and evaluating the quality of information. It is enabled by technical skills, such as using a computer to research, organize, analyze, and communicate. And it carries legal and ethical implications such as understanding intellectual property and copyright,⁶ as well as understanding bias in the information itself.

Whether the focus is calculus or calorie counting, information-literate users should be able to use IT to scan the environment. This means the user must be knowledgeable about reliable information sources as well as the process of finding and using information. Beyond just searching for information, users must evaluate the legitimacy of the information, put it in context, and then apply problem-solving and decision-making skills. In fact, information literacy can be seen as using information wisely for the benefit of others. And because the world is changing constantly, users must be able to build up new knowledge bases—over and over again.⁷

In thinking about student IT competency, college and university executives should ask themselves the following strategic questions:

1. *What skills do students (and faculty) need in a digital world?* A college/university education is designed to develop subject matter expertise, among other competencies. As more and more material is made available in digital form, IT skills become necessary to access and manipulate those information resources. But a college/university education also implies that students acquire other critical skills, such as information gathering, analysis, critical thinking, and problem-solving. Each of those can be facilitated by technology. Is the institution providing students with the tools, guidance, and practice they need? Can the students tell a legitimate source from one that is biased? Not to be forgotten are the ethics associated with ideas, information resources, and communication.

In an age of cut-copy-and-paste, music downloads, and pirated software, do the students have guidance in applying the principles of academic honesty and respect to the digital world?

2. *Do we have an operative definition of IT literacy?* It can be easy to oversimplify IT literacy as the ability to use a computer and a search engine. Does the quality of different information resources matter? Has the institution discussed the new media and communication forms that have become part of our culture—multimedia, podcasts, Web sites, IM, and avatars? Is the institution defining IT literacy based on today's tools (word-processing programs, spreadsheets) or on the activities they enable (communication, analysis)? As the world increasingly uses visualization, audio, and augmented reality, is the institution including these in the definition of IT literacy, or did it stop with keyboarding skills?
3. *Do we help students acquire the skills they need?* Although it was hoped that one day colleges and universities would be able to scale back their help desks because students would be able to handle all of their own IT problems, the fact is that students come to campus with uneven IT skills. Some are experienced Web-site builders, game players, and graphic designers. Others have never before had consistent access to a computer. The help desk may be here to stay. But what about the other types of assistance that students might require? Does the institution mention information literacy in freshmen orientation or in the library overview and then leave students to their own devices?
4. *Is IT literacy integrated across all units?* Although most of the advocacy for IT literacy has come from the library community, this is not just a library issue. Nor is it just an IT issue. Information literacy requires the cooperation of library, IT, and academic units. Like skills such as writing, information literacy is best learned in the context of a discipline. Developing these skills will not come from a single exposure to IT literacy but requires a cross-campus, long-term effort.
5. *Do we know how well we are doing?* In-

formation literacy is a relatively new concept. There are few measures of students' IT needs, expectations, and skills. Does the campus have a definition of or metrics for information literacy? Are those measures shared for the purpose of improvement?

“Information literacy is a survival skill in the Information Age. . . . Information literate people know how to find, evaluate, and use information effectively to solve a particular problem or make a decision—whether the information they select comes from a computer, a book, a government agency, a film, or any number of other possible resources.”⁸ Colleges and universities must go beyond the visible IT skills that students possess to help students develop the skill that will support them in a complex, rapidly changing world—information literacy.

Notes

1. Judith B. Caruso and Robert B. Kvavik, “ECAR Study of Students and Information Technology, 2005: Convenience, Connection, Control, and Learning,” *EDUCAUSE Center for Applied Research (ECAR) Research Study*, vol. 6 (2005): 35.
2. Steve Jones and Mary Madden, “The Internet Goes to College: How Students Are Living in the Future with Today's Technology,” *Pew Internet & American Life Project*, September 15, 2002, <<http://www.pewinternet.org/reports/toc.asp?Report=71>>.
3. Based on studies such as *ibid.*; Student Monitor, “Computing and the Internet: Fall 2003,” <http://studentmonitor.ecnext.com/coms2/summary_0246-38131_ITM>; and Caruso and Kvavik, “ECAR Study of Students and Information Technology.”
4. Caruso and Kvavik, “ECAR Study of Students and Information Technology,” 14 (table 1-3).
5. American Library Association, *Presidential Committee on Information Literacy: Final Report* (Washington, D.C.: ACRL, January 10, 1989), <<http://www.ala.org/ala/acrl/acrlpubs/whitepapers/presidential.htm>>.
6. Irvin Katz, David Williamson, Heather Nadelman, Irwin Kirsch, Russel Almond, Peter Cooper, Margaret Redman, and Diego Zapata, “Assessing Information Communications Technology Literacy for Higher Education,” presentation at the Thirtieth Annual Conference of the International Association for Educational Assessment, Philadelphia, Pennsylvania, June 13–18, 2004.
7. Christine Bruce, “Seven Faces of Information Literacy in Higher Education,” 1997, <<http://sky.fit.qut.edu.au/~bruce/inflit/faces/faces1.php>>.
8. American Library Association, *Presidential Committee on Information Literacy*.

Diana G. Oblinger is Vice President of EDUCAUSE, where she is responsible for the association's teaching and learning activities and for the EDUCAUSE Learning Initiative (ELI). Brian L. Hawkins is President of EDUCAUSE.