

## **Technology Skills**

(computer literacy, Internet skills,  
retrieving and managing information via  
technology)

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## 21<sup>ST</sup> CENTURY LEARNING OUTCOMES TECHNOLOGY SKILLS

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*“Technology, in and of itself, is not a magic wand. Technology is not going to fix the problems associated with schooling, but at the same time, the problems that plague our educational system are not going to be remedied without the presence of technology.”*

Young people today are entering a workforce in which 60% of jobs require technological competency, and one of the responsibilities of the community college is to prepare students for this reality. The long-term goal of achieving universal technological literacy can best be achieved by starting such programs at the elementary level. However, the community college environment is currently composed of people with a wide spectrum of skill levels in the technology arena, and we must deal with this reality.

Although there seems to be widespread agreement that students need to become proficient at computer and technology use, there also seems to be a rather vague notion of what technology literacy really means. In too many situations, schools spend a great deal of money on technology, only to end up using computers as expensive flash cards or electronic worksheets.<sup>ii</sup> Clearly, there is a need to improve the productivity side of computer use among students and faculty alike. The goal of this paper is to suggest how these improvements can begin.

### College-Level Goals

As community college educators, we should ask ourselves how we can best contribute to the achievement of widespread technological literacy among our students. Studies examining the success of technology-rich learning environments have revealed four key features that lead to success in this

- b. The use of clearly articulated goals in measuring student achievement: Instead of relying only on test scores to assess student proficiency with technology, indicators such as motivation and engagement, job placement, attendance rates, and dropout rates should also be employed.
- c. The restructuring of the school environment to support the learner-centered environment: Changes to classroom design, school calendars, and curriculum development should be considered in response to the development of learner-centered environments.
- d. The creation of widespread technology access: This involves a 1:5 ratio of computers to students.<sup>iii</sup>

These goals are admittedly ambitious. However, they do give us a starting point in the development of college-wide goals in the area of technology learning.

### **Computer Skills and Problem-Solving**

There's no doubt that "it has become increasingly popular for educational technologists to advocate integrating computers into the content areas."<sup>iv</sup> However, when students learn isolated skills and tools without a basic understanding or rationale for their use in problem-solving endeavors, these skills are of little value. Therefore, it is critical that we teach students how to use computers in a way that allows them to be creative, flexible, and purposive in their pursuits.

While there are specific skills that students should learn, the transfer and application of skills from situation to situation should be recognized as the most beneficial part of any technology curriculum. As most technology scholars note, "students develop true 'computer literacy' when they have genuinely applied various computer skills as part of the learning process."<sup>v</sup>

With this in mind, the following is a list of computer skills that should be part of a well-rounded technology curriculum:

- presentation software
- email, newsgroups, and listservs
- web-based chat forums
- multimedia files

- Desktop videoconferencing

The challenge of keeping up with these technologies seems daunting, but now is the time to invest in the future technology needs of our student population. The benefits of technology education are almost immediately evident, and are characterized by:

- a. expanding student access to core curriculum materials (via distance learning)
- b. enhancing student achievement;
- c. preparing students for the workforce; and
- d. preparing life-long learners in all fields, through the development of critical thinking and problem-solving skills.

### **Technology Education and the Faculty Member**

There is little doubt that technology helps instructors improve their teaching skills. In addition, community college faculty members are able to expand their opportunities for training and for building collegial relationships by taking advantage of technology-driven interaction with their peers. The possibilities for professional activities via technology also include accessing student information (i.e. the “Stargazer” program and NHMCCD), accessing education research, and downloading curriculum materials.<sup>vi</sup>

### **From Vision to Reality**

We are in the midst of a communications revolution that is as sweeping as any in history, as computers and information technology are transforming every aspect of American life. We must make technology literacy a reality in order to prepare our students to reap the full benefits of this revolution. Hopefully, the suggestions offered above can serve as a starting point for serious discussions concerning the integration of technology education within the District.

<sup>1</sup> “Technological Literacy: A National Priority,” in Getting America’s Students Ready for the 21<sup>st</sup> Century: Meeting the Technology Literacy Challenge.

<http://www.ed.gov/Technology/Plan/NatTechPlan/priority.html>

<sup>1</sup> Moursund, D. (1995, December). Effective practices (part 2): Productivity tools. Learning and Leading With Technology, 23(4), 5-6.

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<sup>1</sup> Eisenberg, Michael and Doug Johnson (1996). “Computer Skills for Information Problem-Solving: Learning and Teaching Technology in Context.”

<http://www.wam.umd.edu/~mlhall/teaching.html>

<sup>1</sup> ibid

<sup>1</sup> U.S. Congress, Office of Technology Assessment: Teachers and Technology-Making the Connection (Washington DC: US Government Printing Office,1995)

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<sup>ii</sup> Moursund, D. (1995, December). Effective practices (part 2): Productivity tools. Learning and Leading With Technology, 23(4), 5-6.

<sup>iii</sup> “Technological Literacy: A National Priority,” in Getting America’s Students Ready for the 21<sup>st</sup> Century: Meeting the Technology Literacy Challenge.

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<sup>iv</sup> Eisenberg, Michael and Doug Johnson (1996). “Computer Skills for Information Problem-Solving: Learning and Teaching Technology in Context.”

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<sup>v</sup> ibid

<sup>vi</sup> U.S. Congress, Office of Technology Assessment: Teachers and Technology-Making the Connection (Washington DC: US Government Printing Office,1995)