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Computers have become a common feature of the school landscape. In 1985 there were approximately 630,000 computers in schools. By the 1997-98 school year, that number had increased dramatically to over 8 million (Computer Use, Online). As a result of this tremendous growth, schools are wrestling with how to train teachers to integrate this technology into their classroom learning environments. Even though computers are now available in most schools, not all preservice teachers see the value of using computers for instructional support. We frequently work with teacher education students at Peabody College who question an emphasis on using computers for instruction because they have noted a lack of computer use in many high school classrooms. In their practica they have observed that many rooms are not connected to the Internet and that there may be a shortage of current software and equipment like LCD panels to use with computers and classroom overhead projectors.

Recently, in a teacher preparation class Steve asked, "Why are we talking about using technology in classrooms when at my school we don't have enough paper for the copier?" He initially doubted the wisdom of using resource monies to provide computer technology in schools; however, by the end of the semester he was a technology advocate. In fact, Steve went on to make extensive use of technology in his practicum and first teacher placement. Interestingly, many of the teacher education students who are initially resistant to the use of technology in the classroom become its strongest supporters. Because questions similar to Steve's are asked in colleges of education and school systems worldwide, we will describe the experiences that facilitated his surprising reversal.

#### **DEVELOPING A VISION FOR TECHNOLOGY**

Steve was in a methods class for preservice teachers in all content areas. Because of a technology initiative launched by the Provost of Vanderbilt University and the Dean of Peabody College, this course included a component that asks students to create multimedia units for classroom instruction. The units were designed for both classrooms with one computer and classrooms with multiple computers. Steve and his classmates created lesson plans based on constructivist learning theories and then enhanced the lessons with interactive computer activities, connections to Internet sites, scanned pictures and video clips. The lesson units were stored on a CD-ROM that the teacher education students could take with them to their practicum and student teaching experiences, and ultimately into their future classrooms.

Since the power of multimedia is difficult to grasp without hands-on experience, Steve was skeptical as he began work on the project. However, as he progressed, he began to develop a vision for what technology could add to instruction, and he began to change his opinion about using technology in the classroom. Choosing to develop a unit on the Japanese-Americans who were interned in camps during World War II, Steve began to collect resources that would enhance and support his lessons. Creating the multimedia lessons was not as difficult as he had imagined, and through the process of creating this unit, Steve became so comfortable with the technology that he wanted to try using it in his practicum. He found some unused computers at his school, borrowed several others, and created a small lab in his classroom. In years past the students in the classroom had made traditional scrapbooks about the United

States — filling in information about population, industry, agriculture, and lifestyle. This year Steve had his students create a multimedia scrapbook using both traditional and technology resources. His students were enthusiastic about creating their reports and used the technology to report their work. The project was so successful that the principal volunteered to videotape the students' presentations.

### **TECHNOLOGY IN ACTION**

Steve has graduated and gone on to teach middle school students who are considered at-risk. Technology has become a powerful tool in his attempts to reach these students. In his first year of teaching, his classroom was a section of the gymnasium. Nevertheless, he located four computers, wired his area of the gym for electricity and Internet access, and created a variety of multimedia programs for his students' varied ability levels. Ultimately, Steve had his students create their own multimedia projects. Clearly, he has become a powerful believer in technology since first asking why he should think about using technology in classrooms at all.

Why did Steve become a believer in using technology to support student learning? He became a technology A.C.E. when he became convinced of three things:

**Availability.** Computers are available in the schools if you want them and can show that you have a purpose for using them. With the growing number of computers in schools, access is becoming even easier.

**Careful planning.** Carefully planned use of technology supports student learning; therefore, Steve designed his lessons before integrating the technology. He was very selective about applying technology only when it was the appropriate tool, but not using it when other resources could convey the material more effectively.

**Enthusiasm.** Technology can motivate students by helping them to create high quality projects that effectively showcase their learning.

### **THE ROLE OF THE UNIVERSITY**

The key to Steve developing these beliefs was the opportunity he had to simultaneously practice using technology in the classroom while he was learning to design multimedia units in a supported environment at the university. He had guidance in how to create pedagogically sound lessons, answers to his technical questions when he needed them, and the opportunity to try his ideas in a real classroom. For Steve, designing multimedia lessons himself and seeing the benefits for his students convinced him that technology is a very effective tool for supporting student learning.

### **ADDED MATERIAL**

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### **REFERENCES**

"Computer use in schools, 1984-1985 and 1997-1998". 1998. In Information Please Almanac [Online]. [cited 5 December 1998]. Available at <http://www.infoplease.com/ipa/A0193911.html>; INTERNET.