

Current Technology Trends for School Library Media Specialists

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Abstract

An overview of some of the current technology trends used in classroom instruction and school library media centers is provided in this article such as the use of handheld electronic organizers, CD recorders, digital video cameras, and interactive whiteboards. The article offers some suggestions or ideas on how to acquire new technologies to school library media centers that are low in budgetary funds.

Keywords : *Handheld electronic organizers; CD recorders; Digital video cameras; Interactive whiteboards; School media centers*

Introduction

Educational technology has greatly change the way teachers teach and students learn. As school library media specialists working with student and teacher patrons coming to school library media centers to locate and search for information, we need to keep abreast of some current trends in educational technology. Educational technology is more than just classroom hardware and software; it deals with issues of selection, utilization, design, development, implementation, and evaluation of all kinds of teaching/learning environments. Here are some of the current updates on what technologies are appropriate and available for instructional use and how they are being used. Some of the more important issues related to the use of technologies will also be covered.

Handheld electronic organizers, such as the Palm Pilots and Handspring Visors, have become indispensable tools for home, office, and school use.¹ Students use these hand-held electronic organizers to keep track of grades,

1. H. McCracken, "Elegant Palm VII Tasty Blackberry Pager Lead New Wave of Wireless Gadgets," *PC World* (August 8, 1999)[online]. Available: Britannica.com GALILEO database [Retrieved October 25, 2001]; and G. David "Exit Interview: Jeff Hawkins, Inventor of the PalmPilot," *PalmPower Magazine* (August 1998) [online]. Available: <http://www.palmpower.com/issues/issue199808/hawkinterview001.html> [Retrieved July 28, 2000].

homework assignments, and school expenses. Teachers use them to keep track of lecture notes, students' records, and school meetings. School administrators are using the "hand-helds" to keep students' and teachers' schedules, records of child's allergies to medicine, and parents' emergency numbers.² Palms or Handspring Visors can also be used to convert currencies, do translations, store street directions, access weather information, and keep names and addresses of U.S. embassies in foreign countries.

The major difference between Palms or Handspring Visors and the desktop computer is that the user can write or tap on the touch-sensitive screen of the hand-held computer with a special inkless stylus or the finger instead of using the regular keyboard. This stylus is also used to write "Graffiti," a special alphabet recognized by the hand-held. Special miniature keyboards with a docking port are available as accessories for hand-held electronic organizers and can be obtained from third party manufacturers. Due to their portability, these hand-held computers help the users manage addresses, appointments, memos, tasks, expenses from remote locations. Hand-helds can be connected to a HotSync cradle, a small peripheral device which attaches to an available serial port on the back of a computer, which allows the sharing or backing up of data with either Windows-based or Macintosh-based desktop computers.

CD-Burners. A "hot" storage media among professional users, small businesses, training companies, multimedia designers, software and hardware companies, and home recording artists are **compact-disc burners** (CD burners) or **compact-disc writers** (CD-writers). Students and teachers are using this new media to store or distribute their PowerPoint and other multimedia presentations that require huge amount of storage space. These burners/writers are drives which allow files to be recorded on a compact disc. To be able to burn a compact-disc, you need the compact-disc burner, authoring software, and a recordable disc. Many of the most current machines have built-in burners along with free authoring software. The two types of recording media that are available for burning compact-discs are CD-R and CD-RW.

The advantages of CD-R and CD-RW are many.³ These discs can store large volumes of data or archive large graphics, audio, video and game files. The discs are easy to distribute and less costly to package and ship than other media, such as videos. The estimated lifespan for recordable-CD media are around 100 years, while other tape or magnetic media are

2. P. Donsky, "Fayette Schools to Get Helping Electronic Hand," *The Atlanta Journal and Constitution*, (June 7, 2000)[Online]. Available: Lexis-Nexis Academic Universe GALILEO database [Retrieved October 25, 2001].

3. A. McFaddens, "Andy McFadden's CD-Recordable," *FAQ* (October 2001). Retrieved December 4, 2001 from <http://www.cdrfaq.org/>

only five to 10 years.⁴ A CD-R can be burned only once, thus making the data permanent, while a CD-RW allows discs to be erased and reused. Additionally, the CD-R disc can be “written to” significantly faster than can a CD-RW disc. A major difference between these two media is that a CD-RW disc has a lower reflectivity than a CD-R disc, meaning that older CD-ROM drives may have trouble reading them. It should be noted that some vendors have now developed a combination of CD-R/RW/DVD-ROM in one drive (combo drive), which saves space, burns CD-Rs at blistering speeds, and plays DVDs clearly.

DV camcorders. Businesses, schools, and home users are using a new generation of camcorders called **digital video camcorders** or **DV camcorders**. DV camcorders are commonly used in home movies, sports events, travel, sales, and training. Their ease of use, unbeatable prices, portability, extraordinary video quality, light weightness, ability to edit quickly and conveniently, ease of distribution on CD-ROM or the Internet, make these a “hot” item format in training programs and schools over the traditional, older-model video camcorder.⁵ Digital video is not affected by subtle changes in the storage media; it always has the same quality as when the video was first recorded.

With digital video cameras, students can send video greeting cards to relatives for the holidays or special occasions. They can record video reviews of their favorite books or movies. Video clips can be produced for a school’s web site and distance learning classes. “How-to” videos can be produced for class projects, social science fairs, and state media festivals. Students can make digital videos on the oral history of a particular town or village or produce a documentary about a community issue and share it with the class or in club meetings. Teachers can do video case studies during their in-service training. Video clips can be produced by anyone to send through e-mail to friends and relatives.

There are two kinds of DV camcorders. The first uses DV mini-cassettes in either 30- or 60-minute durations, which many DV camcorders can extend to 90 minutes with an “LP” mode. DV mini-cassettes are however, fairly expensive, ranging from \$15 to \$20. The second type of DV camcorders is the Digital8, which uses the more affordable Hi-8 tapes.

Interactive whiteboard. The interactive whiteboard, a new emerging technology and electronic presentation board, is finding acceptance among teachers and trainers in businesses, military agencies, schools, colleges and universities, and hospitals. Although they look like a conventional drywipe

4. B. Starrett, & J. McDaniel, *The Little Audio CD Book* (Berkeley, CA : Peachpit Press, 2000).

5. D. Pogue, *imovie : The Missing Manual* (San Francisco, CA : Pogue Press/ O’Reilly & Associates, Inc., 2000).

whiteboard, these **hi-tech interactive whiteboards**, which also serve as touch-sensitive screens, are peripherals connected to a PC and a video projector and come with an accompanying software. The boards provide an input to a conventional PC and capture instantly everything written or drawn on the board's surface with an electronic pen that acts as either a marker or a computer mouse. Electronic information, such as video and video-conferencing, can also be displayed. Because the interactive whiteboard also acts as a touch-sensitive screen for the user, one can highlight or change screen quickly on a PowerPoint presentation graphics program, **Inspiration** idea mapping software, or other applications by the mere touch of a finger or fingers. When used in conjunction with teleconferencing products, real-time broadcasts of interactive whiteboard displays can be created and presented to participants in remote sites.

The interactive whiteboard has several advantages for classroom use because it can attract students' attention during a lesson.⁶ It allows drawings, diagrams and writing to be larger and easier to use, read and understand. Teachers can draw more detailed and technical drawings using the different packages and programs available on the computer. **PowerPoint** and **Inspiration** presenters can face the audience while presenting, pointing, and demonstrating concepts on the whiteboard, thus maintaining direct eye contact with the audience. Some teachers, who are teaching computer applications, "multitask" with their overhead projector and the whiteboard.

K-12 Access to Current Technologies. Not all K-12 schools have the luxury of acquiring current technologies because of budget limitations. What can economically-disadvantaged schools do to keep up with these technologies? Here are some strategies:

1. Schools can work with their district office staff, public librarians, or university librarians in their surrounding areas to locate grant funding sources.

2. Accrediting associations have begun to emphasize collaboration between university faculty members and K-12 school personnel. Teachers and administrators can partner with university professors on projects so that software and equipment can be shared.

3. many companies provide opportunities to teachers and staff to use and test their products. For example, interactive whiteboard manufacturing companies (Poly Vision, Smartboard, and Mimio) encourage K-12 schools to participate in contests and/or proposal writing activities to win one of the interactive whiteboards.

6. M. A. Bell, & D. Henson, "Why Whiteboards???" Using electronic interactive whiteboards in classroom instruction,"(2001). Retrieved December 4, 2001, from http://www.shsu.edu/~lis_mah/documents/why_whiteboards.htm.

Summary/Conclusion

Changes and upgrades in educational technology are inevitable. Companies will always introduce new technologies that are more powerful, more portable, more compact, more digital, and less expensive. No matter in what direction technology is heading, school librarians or school library media specialists should always be ready to keep up with its changes.

