

Display Your Knowledge: The (Often Missing) Element of Effective One Computer Classrooms

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(Published, TechEdge, Summer 2003)

The one computer classroom is a reality in Texas schools, as the majority have at least one computer that is powerful enough to run current software and is connected to the Internet. Much interest has arisen concerning using the one computer classroom in the most effective manner. Workshops and articles on the subject continue to generate attention, as evidenced in the TCEA 2003 Convention. The Texas Center for Educational Technology continues to see strong interest among school districts requesting inservices dealing with this very issue. One element often missing in the one computer classroom, however, is a display method large enough for the entire classroom to see what is occurring on the computer screen. Essentially, there are three good ways to achieve this desired effect: through LCD projectors, larger monitors, and scan converters attached to television sets.

Projectors

Of the three options for displaying computer content in the classroom, LCD projectors provide the most effective solution. Good LCD projectors can provide a clear picture from across a fully lighted room. Some of the more expensive models are now being manufactured with wireless capabilities to avoid the hassles of cables strung across the floor. Newer models are light, portable between classrooms, and are easy to store in a locked cabinet or drawer.

The biggest drawback to LCD projectors remain their high cost. While it is technically possible to purchase one at or near the \$1000 mark, finding a good one at the lowest end of the price range remains problematic. Typically, you should expect to pay \$1200-\$1700 for a

projector adequate for classroom use. Additional cost concerns revolve around bulb replacement which can hover around \$300, depending on the model.

When purchasing an LCD projector, the key feature to pay attention to is the lumens rating; the higher the better. In order to be satisfied with the image in a fully lighted room, you will typically want a projector with a lumens rating of at least 1000. Models in the sub-\$1500 range that fit the bill include the Dell 2100MP. Another contender is the Infocus X1, which also has digital capabilities for easy hookup to DVD players and other video equipment. Dell and Infocus as well as other manufacturers maintain state prices for educational purchases.

Due to their high costs, pursuing grants for projectors remains a primary means of acquisition. Other ideas include setting aside money in departmental budgets to share a projector between classrooms in the department, or to acquire one or more to be stored in the library and checked out when needed.

Monitors

We used to think of large monitors as anything over 17 inches. Today, however, truly giant computer monitors can be purchased for well under \$1000. Districts in the state that have equipped classrooms with large monitors hook them directly to the teachers' computers in tandem with traditional monitors. Cabinets in the classrooms can be built to elevate the large monitors, enabling a clear line of site for students. The traditional monitor remains attached to the computer, allowing the teacher some privacy when working separately; the larger monitor can be turned on or off as needed.

Large monitors are a cost-efficient means of allowing teachers a display device without sacrificing quality. They will display crisp resolutions without needing to dim the lights. Large

monitors are excellent choices for group work as well. Groups of two to seven students can congregate around the monitor to explore Web sites or programs.

Some of the caveats to using large monitors include issues with glare; their placement angle sometimes needs to be adjusted in order to avoid the distracting glare from windows and lights. Also, the size of the display will be smaller than the wall-sized features a projector affords. The reduced size will necessitate larger fonts and graphics be used with presentations.

The Zenith model H32E46DT is in a class sometimes referred to in sales literature as “monitor/receiver” because it can display traditional television signals as well as direct computer video. It also has the benefit of front computer and video jacks, allowing an additional laptop, camcorder, VCR or DVD player to be hooked up temporarily. Look for prices in the \$700-\$800 range, with bulk discounts available. Another contender in this size and price range is the RCA J32435.

Scan Converters

Scan converters are the least expensive means of adding a large display device to computers. They allow a computer’s video output to be ported to a television set. The TView Gold scan converter is a reliable selection in this product category, priced in the \$150-\$170 range. Simply plug it in, connect the monitor cables to the PC and television set, and you are ready to display your computer’s video. It should be noted that televisions with S-Video connections and laptops with S-Video output don’t need scan converters to mate with one another. Additionally, some laptops have analog video output capabilities for TVs without S-Video connectors. For all else, scan converters will be necessary to pair the two.

While the price is certainly attractive, using a scan converter has some serious drawbacks. Besides the additional cables needed, the output will typically be a tad fuzzier on television sets,

particularly on older models. Again, the size of the display will depend on the size of the TV, and larger fonts and pictures in presentations will be needed for the sake of visibility. Despite their shortcomings, the price will make scan converters an attractive option for budget-strapped school districts.

Conclusion

The one computer classroom is a reality, and one for which we as educators should be grateful. Excellent strides have been made in Texas public schools with equipment and connectivity. Providing a large display for multiple students, allowing them to see what is occurring onscreen, will result in effective implementation in the one computer classroom.

John Rice serves as Program/Project Coordinator for the Texas Center for Educational Technology. You can reach him by e-mail at j7r7@hotmail.com.