

COMPUTING WITH CLASS



Computers— Boon or Boondoggle?

Computer enthusiasts, as a group, are optimists. To hear them talk, these wonder machines are the last word on just about everything—including education. Some of their impassioned sales pitches are quite convincing. So much so, in fact, that very few schools at any level are without at least one computer, and many have several in every classroom!

But the euphoria is giving way to a pessimistic realism: Computers haven't lived up to their rosy promises. There are at least three good reasons for this.

1. As we've described in earlier columns, there is a dearth of high-caliber educational software at affordable prices. Without software, the computer is nothing but an expensive paperweight.

2. Even relatively unsophisticated computers eventually cost a lot, when you factor in software, printers, and other peripherals, plus repairs and supplies. Schools that initially bought a cheap model and now want to upgrade their computing capacity may have to install a network, disk drive, more storage capacity, and elaborate software to the tune of \$5,000 to \$15,000.

When this budget request surfaces, there are likely to be some complaints from the PE teacher, who has only three basketballs (two of them flat), and the third-grade teacher, who thinks her maps were old when her children's *parents* attended the school. These teachers want to know, Why are we spending all this money on computers while other areas of

the curriculum go wanting?

3. Despite the current hoopla about using computers in the classroom, a recent survey showed that the average student in a computer-conscious school logs less than 30 minutes a week on the wonder machine—hardly enough time to make a significant impact.

Given these realities, some computer detractors are suggesting that computers can be expected to have the same impact in the classroom as television had in the 1970s.

Here are some suggestions for dealing with these criticisms:

1. Identify the types of software most useful to Adventist schools and commission programs to be written in much the same way textbooks are commissioned. If the church owns the programs, it can provide them inexpensively to the schools. If the software is well-written, both components of the first criticism—that no good, affordable programs are available—will be resolved.

2. More computers in each school would increase the chances of additional student participation, but that raises the question of whether kids need to know that much about computers. Do the benefits gained offset the large amount of money invested?

Let's try to solve several of these problems at once. Do you think the usual strategy of one student at a time using the computer, while everyone else waits, is the only way to integrate computers into the classroom? Let me suggest a totally different approach.

Picture, if you will, Miss Rodriguez's fifth-grade classroom. Sitting on her desk is a computer and monitor. Looking around the room you see that each student desk has a touchtone keypad attached to it. Miss Rodriguez is giving the morning quiz. But instead of the students writing the answers on a test paper, they enter their responses on their touchpads. At the end of the quiz, the teacher's screen tells her which questions gave the class the most difficulty and gives her the answers each student entered. The computer then prints out a copy of her explanations to the students along with the questions and answers for each child.

In addition, the computer automatically adds each child's scores to the class record.

Later in the morning, the class members discuss their science projects. Instead of students having to raise their hands if they have a question, answer, or comment, they press keys on their touchpads. On the teacher's screen, up pops the student's name and his or her desire to ask a question, provide an answer, or make a comment.

This way, bashful kids don't feel scrutinized as they would if they had to raise their hands. Glory-mongers can't dominate discussions with "Teacher, teacher, I know, I know, pick me, pick me!" The screen keeps a running tally of how many times Miss Rodriguez calls on specific students and can even indicate how long it's been since she picked Angela or Jason.

What about all the wiring for such a system? Wouldn't this be a hazard? The system I have just described would not require wiring. The same technology that runs most television remote control units could send infrared communications between the computer and the touchpads. And the hassle of changing batteries in the touchpads can be eliminated if the units are solar powered, thereby charging their own batteries from available light.

At this point, I can hear teachers moaning, "I'd have to be a programming genius to set up and operate a sophisticated system like that!" But they wouldn't. To prepare a test, the computer's quiz maker asks them to type in the questions, the possible answers, and how they want to respond to a wrong answer. Other applications could be just as simple with appropriate software.

With the above scenario, the computer benefits the teacher and every student instead of only dealing with one or two children at a time. As a result, one or two computers in a school can have a significant impact instead of the too-little, too-late roles they often play. Cost? Thirty to 40 dollars per keypad. Availability? None. But if you think the idea would be useful in your school, write to us. We may be able to get someone to develop the software and the touchpad system to implement such an application.—
Dave Ruskjer. □

The author is publisher of *Journal of the AMCA (Advanced Microcomputer Concepts and Applications)*.

Work-Experience Education

(Continued from page 29)

nothing; it fulfills an important goal of Adventist educational philosophy, and it can be implemented in any

school, regardless of size. This last point is of special importance, since most Adventist schools are small and cannot afford a lot of expensive equipment. The work experience program is made to order for the small school. The smaller the school, the easier the program is to implement, since fewer students need to be placed. On the other hand, it is not difficult to operate the program in a larger school, since there are more teachers who can help in the placement process. In terms of cost, the Berrien Springs school allocates \$500 per year to operate the entire program. The only expense has been \$10 per week for bus transportation to those businesses that are a great distance from the school.

How to Begin

Anyone interested in starting a work-experience program can purchase a booklet, *Step Ahead With Practical Arts*, by writing Harry Rogers, Seventh-day Adventist Church School, P.O. Box 230, Berrien Springs, Michigan 49103. The cost, including postage and handling, is \$2.25. □

Interaction, Service, and Outreach

(Continued from page 17)

ment. They can fulfill this requirement by participating in the activity themselves, or by assisting in its organization and supervision. Students are to keep logs of their activities, and report back to the teacher on a bimonthly basis. Possible options may include: officiating or assisting in the operation of intramural programs at local elementary or middle schools; becoming a junior leader at a YMCA or YWCA; helping special education students prepare for events in the Special Olympics; taking swimming lessons or helping teach swimming classes

sponsored by the Red Cross; riding in a local horse show or working as a volunteer for the county park service in a recreation program. These activities take place after school hours and require no school transportation.

Math and Geography

Teachers from these two areas may choose to work together for one of their projects. They could plan an orienteering course at a local park. Students from their classes will correspond with math and geography students at neighboring high schools, extending invitations to come out and try the course. The academy students will pair up with the visitors and go through the course with them. This activity will be scheduled two Sunday afternoons a month. Students provide their own transportation to the park.

Bible Classes

Sophomore Bible and Art I Class—These two classes can combine their efforts to create and produce a traveling gospel puppet show. The themes, typesetting, scripts, puppets, and stage props are all developed by the class members. Students can write to various non-Adventist schools and churches within a 50-mile radius, describing the Gospel Puppet Hour and offering to perform. Performances will be limited to one per week, and students from the two classes travel with the show on a rotating basis. (No more than one-third of either class should be on the road at any one time.) Bus or van transportation is provided by the school.

Senior Bible Class—Students from this class can join forces with local volunteer organizations such as the Salvation Army, Red Cross, American Cancer Society, United Way, and Candystriper organizations at local hospitals. They are to donate an average of eight hours per month