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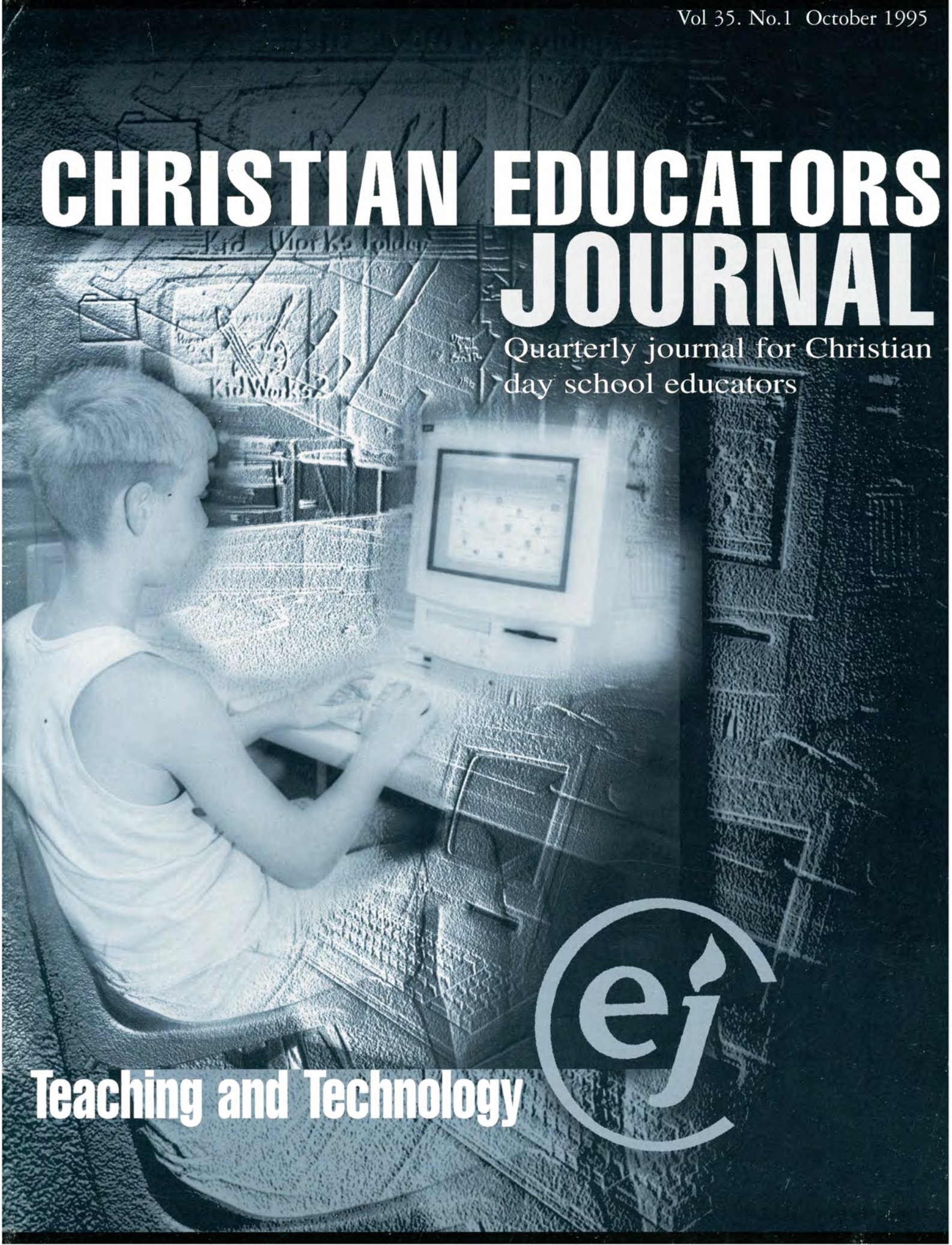


Teaching and Technology

Lorna Van Gilst

Entrusted with Technology's Tools

Try teaching for just three weeks without touching a computer, a printer, a copy machine, or even a telephone. You may find yourself reverting to chalk and talk.

Such was my experience last summer, teaching English to potential teachers at Kharkov Pedagogical Institute in Ukraine. Having been there the summer before, I arrived with two-sided computer-generated photocopied handouts, shrunk to 65 percent so I could squeeze more on a page. But there's a weight limit on luggage, and paper is densely heavy, so mostly, I adjusted my teaching strategies.

Arriving in Kharkov, I was pleased to note that the Institute had gained a VCR, a high-powered radio/cassette player/recorder, and a photocopier, in addition to the fax machine. Soon I realized, though, that the VCR and the recorder stay at all times in one small room, that only the secretary is allowed to touch the computer, that the photocopier sits idle for lack of toner, and the fax machine is too expensive to operate in an economy suffering from rampant inflation.

These icons of a technological age are supposed to serve as windows of understanding. Instead, they stand waiting, useless idols of would-be Western gods steeped in a techno-religion we try to promote in a place where even the electricity is subject to unexplained failure.

But the problem is not so much a Ukrainian problem as a North American assumption that if we have the tools of technology, we'll have better education.

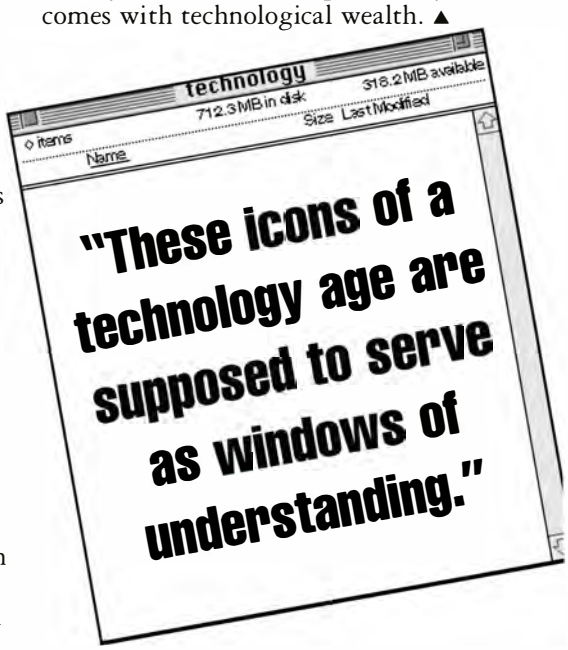
Careful attention to philosophy, theory, and pedagogy must precede purchase of software or renovations of space for technology centers. We can fill our schools with CD-ROM drives and color scanners and laser writers, but such equipment is idolatrous unless we use it responsibly, in service to God, as a way to better understand God's world.

Not long ago I visited an inner-city North American elementary school that was fully equipped with readily accessible computers for every student. A group of third graders sat glued to the screens, punching keys, laughing. I watched for awhile, horrified at what I saw. They were doing practice sessions for standardized tests. A question flashed on the screen, with multiple choice answers. Students hurried to punch a key before the screen cleared. Time and again the next screen flashed a croaking frog accompanied by a musical ditty: "You have guessed wrong. Guess again." The original question reappeared, with the same possible answers, and the student would punch in another guess—or sometimes the same wrong guess, not even bothering to read the choices. Each screen posed questions about sea creatures remote to these midwestern landlubbers. But every kid was seated and busy, and the teachers were gloating about the new technology. Nevertheless, their students were learning that school is random guesswork on a colored screen, and sea creatures are illusive beings with no context.

By contrast, I have seen young children access talking books that enable them to "read" stories as they activate the characters. There, too, the children make choices, but the choices are motivated by the context, and the outcomes give cause for connected thought.

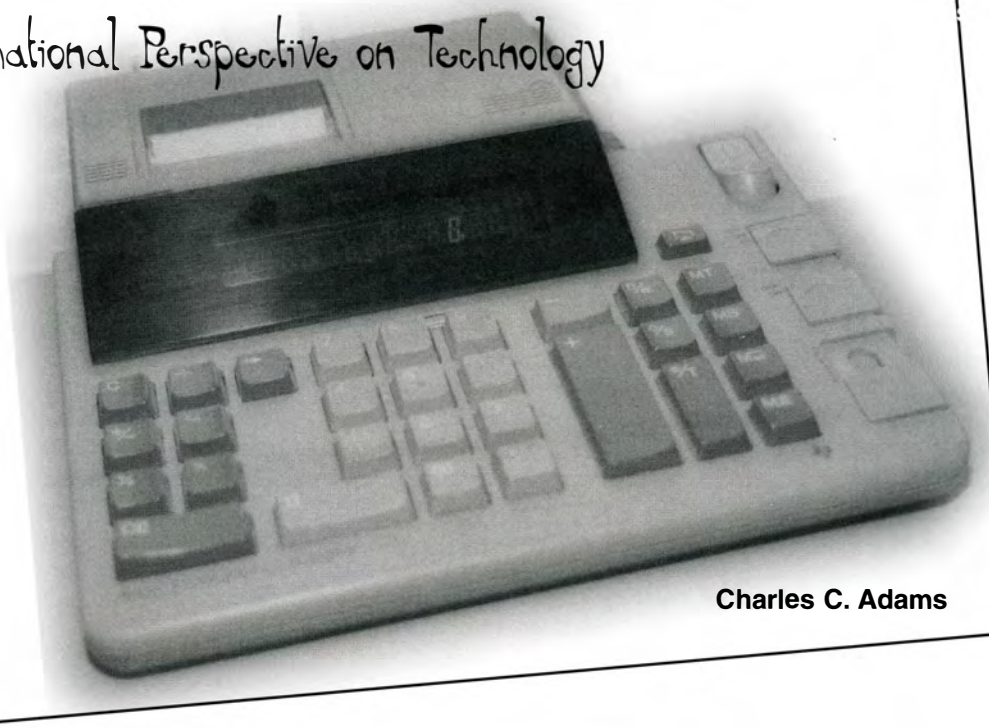
Children are growing up in a world in which they can access worldwide sources of information, perhaps right in their homes. Therefore, their parents and their teachers must be ready to help them make responsible choices, choices that enable them to know the world belongs to God, and to know they have a place as members called to serve God in that complex world.

Coming home last summer from Ukraine, I flew on a Boeing 747 jet equipped with an individual colored screen on every seatback, each displaying a world map showing the current position of our plane as we angled from Amsterdam over Scotland, over Greenland, over Ontario. We could read the latitude, the longitude, the wind speed, the flight speed, and even the wind angle. The technology gave me a new appreciation for all there is to know about the world. But I thought also of all the sorting and defining I have to do in a world that bombards me with information. And for a moment, I envied those students and teachers who don't yet have all the responsibility that comes with technological wealth. ▲



Transcending Technophilia and Technophobia

A Reformational Perspective on Technology



Charles C. Adams

Charles C. Adams is an associate professor of Engineering at Dordt College in Sioux Center, Iowa.

In 1973 technology changed my life. I was in my third year of teaching at a relatively large Christian high school, meeting two classes of physics and three classes of chemistry each day. Until that year I had calculated using a slide-rule. I even had a six-foot slide rule hanging in my classroom for the one week each year that I spent teaching chemistry students how to use it. But in 1973 I bought an electronic calculator. It was a clunker by today's standards, running on a rechargeable battery and able to do little more than the basic operations of arithmetic. I purchased it used, for $60, from a history teacher who confessed that for him it was merely an expensive gadget bought on impulse. Within two years practically all of my students had calculators more sleek and powerful than my own and the slide rule became a historical artifact, taking its place beside the vacuum tube and the wringer washer as symbols of a past technological age.

The calculator was not the only technological novelty changing the lives of teachers and students in 1973. I distinctly remember visiting the home of a chemistry student one evening. I found him sitting at a desk, entranced in an activity that had little to do with acids, bases, or anything else even remotely connected with school work. He was playing Pong. He sat, hands tightly gripping two controls and eyes glued to a TV screen, trying to keep a spot of light "bouncing" between the "walls" of the TV screen by moving two "light paddles" up and down. The impression of dehumanization was intense, and doubtless contributed to the perhaps overstrict rules that I later laid down for my own children to govern their proclivity for playing computer games.

These two incidents point to the equivocal character of modern technology and to the responsibility that Christian educators have for taking great care when employing it with or teaching it to those they have been called to serve. On the one hand, technology is part of God's good creation, a blessing that has the potential for enriching our lives. On the other hand, technology is part of the fallen creation, a potential curse that can enslave us. And technology is not only equivocal, it is ubiquitous. Those who seek to escape it by adopting an ascetic or monastic lifestyle merely settle for the technological equivocation of a past historical-cultural milieu.

In its broadest sense, technology is *culture formation.* It is our response to God's command to

"Be fruitful and increase in number; fill the earth and subdue it" (Genesis 1:28). Read in the context of passages like Colossians 1:15-20, Romans 8:19-22, and Proverbs 8:30-31, those verses in Genesis direct us to develop and care for the world that God created, that he upholds by his Word, that is redeemed and renewed by the atoning work of Christ, and in which as the Designer and Master Craftsman, he delights. Modern technology, as we usually think of it, is one aspect of that culture-forming response to God's command. It is the activity wherein we transform nature, on the basis of scientific knowledge and with the aid of tools, according to a carefully developed plan, for practical purposes. It is easy to see why so many of us become excited by technological developments. Whether it be a breakthrough in medical technology, a new method of visual or sound reproduction, or the latest development in personal computers, there is something about technological progress that resonates positively with our humanity, our createdness in the image of God.

But from at least as far back as the Tower of Babel, we have learned that in technology, as perhaps in no other human activity, we have the potential of turning our sinful desire for autonomy, our desire to "be like God," into an instrument of self-destruction. The legend of Daedalus and Icarus, Goethe's *Faust,* and Mary Shelley's *Frankenstein* each in their way retells the Tower of Babel story, warning us of the consequences of idolizing our technological powers.

Whether as parents or teachers having particular responsibility for the education of God's children, or simply as Christians living in a technological age, I think the following five principles are essential for beginning to appreciate technology as we ought while being sensitive to its potential misuse.

(1) *Doing technology is part of being human, part of our response to the cultural mandate.* Therefore we ought never to reject technology as such, writing it off as somehow evil or of less value than other activities. Living in the times to which we have been called, we cannot worship God, love our neighbor, seek justice, play, or even communicate properly unless we respond appropriately to our technological calling. Yielding to technophobia is sin. The prophet Isaiah makes it apparent that when the Lord returns and New Jerusalem is established, the good things of this earth will be carried into the great city. For Isaiah those good things were herds of camels, fir and cypress, and the ships of Tarshish with their silver and gold (Isaiah 60). For the prophets of the twenty-first century (our students!) those good things may be computers, interplanetary transports, and the finest audio-visual equipment imaginable.

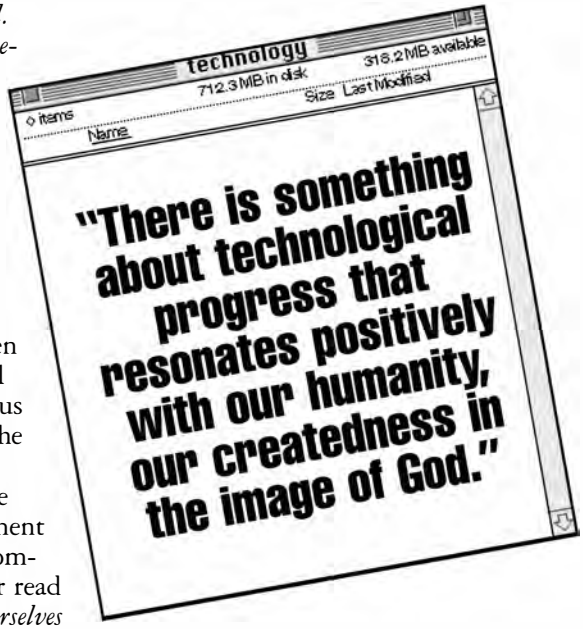
(2) *Technological activity is never neutral, it is normed.* If technology is something we are called by God to do, then we will inevitably find ourselves either in obedience or disobedience to that calling. To be sure, rejecting the call is disobedience. But enthusiastically pursuing technology that produces pain, suffering, destruction, alienation, or dehumanization is obviously disobedient as well. Thus we must be diligent in testing the spirits driving our technological activity to see if they are from God. This is especially critical because we live in a culture that falsely believes technology to be *religiously neutral.*

(3) *Technological artifacts are value-laden.* The products of modern technology not only have physical and economic properties, but social, aesthetic, and moral properties as well. These properties reflect the dominant values of the culture that produces the products, and they in turn influence those who use them. For example, the automobile has arisen in a culture that values individual freedom and autonomy. Those of us who remember what it was like the day we first obtained our drivers' licenses know that the automobile promotes and reinforces commitment to the value. In this regard, I recommend that every Christian teacher read Neil Postman's book, *Amusing Ourselves to Death*, where he demonstrates this value-ladenness of technological artifacts with special reference to audio-visual technology.

(4) *Modern culture idolizes technological power.* It is therefore important for us to teach our students that obedient technology is that which is of service to humanity and the non-human creation, bringing healing where there is brokenness, justice where there is oppression, beauty where there is ugliness, and hope where there is despair.

(5) *Modern culture has a perverse tendency to reduce technology to science, usually physical science.* Our students need to see that technology has as much to do with art, family life, church liturgy, popular music, great literature, sport, government, and the myriad of other areas of life, as it has to do with mathematics and physics.

In the final analysis, we must neither be technophiles, so enamored of technology that we idolize it and use it uncritically, nor technophobes, turning away from technology in ignorance, fear, or repugnance. Rather, thankful for its blessings and sensitive to its perversities, we must employ it and teach our students to employ it in ways that provide service to God's world. I strongly recommend the book *Responsible Technology* (edited by Stephen Monsma, published by Eerdmans in 1986, now out of print) to those who would pursue these ideas further. ▲



Christian Education Resources on the Internet

Samuel E. Wells

Samuel E. Wells is an Internet consultant and trainer in the Washington, D.C., metropolitan area and formerly worked with Internet at Gallaudet University.

The Internet, that virtual community often referred to as cyberspace, receives a tremendous amount of media coverage today. Unfortunately, it is predominantly unflattering news about mischievous hackers, pornography, and software piracy. When the topic is more positive, there is usually a slant toward business uses, videoconferencing or gaming; most of which has minimal application or interest to those for whom it is best suited. The utility of the Internet and the resources it provides to educators, for instance, far outweigh the much publicized hype and hysteria over this global computer network.

Teachers, administrators, staff, and students at Christian day schools, like those in other academic settings, use the Internet in three principal ways: communication, research, and dissemination of information. Here are some ways you can use the net to supplement and enhance your educational programs.

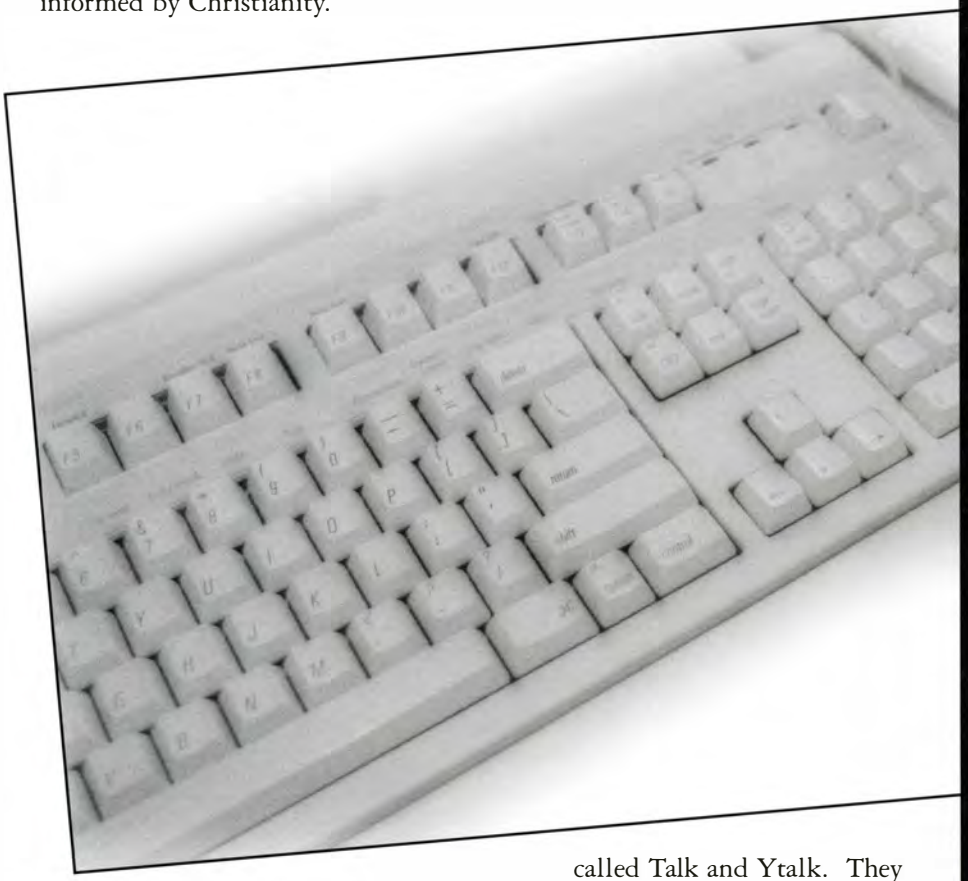
Teachers interested in exploring the following possibilities firsthand, must first gain access to the Internet by establishing an account, known as "getting on-line." A growing number of K-12 schools are already connected and offer free accounts to teachers, staff, and students. Getting started may be as simple as contacting the computer lab. Where there is no connection in place at the school, it will be necessary to locate a local Internet service provider. Several Internet reference books include information on national and regional service providers (see sidebar). The typical cost for a personal connection is $9.00 to $35.00 per month, depending on the level of service you choose.

E-mail Exercises. Electronic Mail (or e-mail) is the most frequently used application on the Internet. People use it to keep in touch with family, friends, and colleagues; but there is so much more. Sending e-mail over the Internet costs the same as making a local phone call, regardless of where a message is sent or how often. Moreover, the message will reach its destination in mere seconds.

Formatted documents can also be sent by way of electronic mail. Many e-mail programs (e.g. Eudora, Pine, Elm) can transport files along with the messages it sends. Suppose two teachers are drafting a joint paper on "Writing Across the Curriculum." One teaches in New York and the other in Chicago, but they both have e-mail access. Rather than printing out their WordPerfect (or other) drafts and revisions, then FedEx'ing them to and fro, they can simply attach a copy of the file to an e-mail message. Both the document and the message arrive in seconds, as opposed to days, and the cost is still only that of a local call. In cases where several such revisions are called for and time is a factor, one will be hard pressed to find a traditional courier service that can compete with this affordable efficiency.

Electronic newsletters and mailing lists enable educators and administrators to routinely share ideas, professional experiences, and concerns. In addition to the on-going discussions, announcements about professional events and conferences, job openings, and the latest developments in the field are also included. Many electronic peri-

odicals specifically address issues relating to K-12 education. A mailing list called T321-L, for instance, focuses on teaching science in elementary schools. SCICHR-L is a list specifically created for practicing Christians who are students, teachers, or professionals in the sciences. Finally, CHRISTLIT is a list that discusses the pedagogical and theoretical implications of literature that is informed by Christianity.



There are literally hundreds of such lists on nearly every conceivable topic. The easiest way to identify a specific list of interest is to send an e-mail message to listserv@bitnic.bitnet. Leave the subject line blank, and in the body of the message simply write "lists global"(without the quotation marks) and send it. You will receive, in return, a rather lengthy response with all of the known lists to which you may subscribe. For more information on how to subscribe to the lists and maintain subscriptions, send another message to "listserv@bitnic.bitnet", again with nothing in the subject line. This time in the body of the message you will include the word "help." A reply with basic commands and subscription information will be returned to you.

Two other useful communication programs the Internet supports are called Talk and Ytalk. They allow two or more people to communicate in "real-time." The program names are a bit of a misnomer. You actually type, rather than talk. The person with whom you communicate sees every keystroke on the screen as you type, and vise versa. You initiate a "conversation" by typing talk followed by the e-mail address of the person you wish to reach.

This is by no means a more efficient method of communication than making a normal telephone call, but it is

THINGS TO DO, PEOPLE TO SEE, PLACES TO GO
by Samuel E. Wells

Internet References. There are several quality instructional books on the market that can bring you up to speed on the background and use of the Internet. If you don't have Internet access through your school or place of work, any of these books will help you determine how to select the best commercial service provider, and locate one in your area. The HTML reference is listed for those who wish to put their own information on the World Wide Web. These books are sold at most major bookstores.

Christian Cyberspace Companion by Jason D. Baker, Baker Book House Company ($19.99) Call 1-800-877-2665 for ordering information.

The Whole Internet User's Guide & Catalog (2nd Edition) by Ed Krol, O'Reilly & Associates, Inc. ($24.95)

The Internet Complete Reference by Harley Hahn and Rick Stout, Osborne/McGraw-Hill ($29.95)

The Internet Navigator: The Essential Guide to Network Exploration for the Individual Dial-up User by Paul Gilster, John Wiley & Sons, Inc. ($24.95)

HTML Manual of Style: Clear, Concise, Reference for Hypertext Markup Language by Larry Aronson, Ziff-Davis Press ($19.95)

Mailing Lists. Here are just a few of the electronic discussion groups and publications to which you can freely subscribe. Programs called Listserv, Mailserv, Majordomo, and Almanac facilitate the operation of mailing lists and vary slightly in the way you subscribe to or sign off of a list. The information next to "To SUB:" tells you how to subscribe via e-mail. Contact Prescott Smith (pgsmith@educ.umass.edu), at the University of Massachusetts, Amherst, to receive other mailing lists related to education.

NAME: FAITH-LEARNING
ADDRESS: MAILSERV@BAYLOR.EDU
SUBJECT: Encourages creative thinking and leadership among Christian educators seeking to integrate religious faith and effective teaching, and learning.
TO SUB: Send the following line to the above address, leaving the subject blank.
SUBSCRIBE FAITH-LEARNING YourFirstName YourLastName.

NAME: CHRISTLIT
ADDRESS: LISTSERV@BETHEL.EDU
SUBJECT: Focuses on the interrelations between Christianity and literature.
TO SUB: Send the following line to the above address, leaving the subject blank.
SUBSCRIBE ChristLit YourFirstName YourLastName.

NAME: SCICHR-L
ADDRESS: LISTSERV@NETCOM.COM
SUBJECT: A moderated mailing list for practicing Christians who are students, teachers, or professionals in the sciences.
TO SUB: Send a request via e-mail to the moderator, Steven Schimmrich, at schimmri@hercules.geology.uiuc.edu with your reasons for wanting to join.

NAME: EDNET
ADDRESS: LISTSERV@NIC.UMASS.EDU
SUBJECT: A forum exploring the educational potential of the Internet.
TO SUB: Send the following line to the above address, leaving the subject blank.
SUBSCRIBE Ednet YourFirstName YourLastName.

extremely cost effective. You are still paying the price of a local call regardless of the distance between parties. It's a great way to clear up last-minute details where numerous questions may arise. Both people must be on-line, however, for the program to work. This is something that can usually be coordinated in advance through electronic mail.

The Ytalk program works the same way, but is intended for use by three or more people. Think of it as an on-line conference call.

Rethink your research. If you have thus far limited your research and other information gathering to traditional methods, you are missing out on a wealth of resources and expertise on-line. The Internet has several programs (sometimes referred to as "resource discovery and retrieval tools") capable of locating and placing at your fingertips a wide range of educational resources. Gopher, Veronica, File Transfer Protocol (FTP), and Archie are key examples. The World Wide Web, however, best exemplifies the power of the Internet as a research tool, and it is uniquely situated to remain the "killer application" for the next several years.

The World Wide Web (WWW) is like a large electronic text, complete with graphics, and replete with cross-references that come alive when activated. Although it is only one part of the Internet, the two are quickly becoming synonymous because of the Web's ability to incorporate other net features in a more user-friendly manner. Like icing on the cake, it also supports multimedia applications including graphics, photos, video, and audio. Software programs called "web browsers" are used to view WWW resources. Mosaic, Netscape, and Web Explorer are popular examples. A growing number of businesses, non-profit organizations, government agencies, and individuals use this medium to develop an Internet "presence" whereby they are able to disseminate information about themselves to the rest of the world. Christian schools are no exception (see sidebar).

If you are new to the Web, take a look at Yahoo first. It is a search tool at Stanford University that can help you locate on-line educational resources by keywords. The results of your search will be displayed as one of the "cross-reference" links mentioned earlier. By selecting it, you will automatically be "taken" to that resource.

Build it; they will come. The Internet is more than what you are able to get out of it. It is also what you can put back. After all, most of the resources that are available are there because someone thought it was important enough to make it accessible to a larger number of people. Chances are your organization (or you as an individual) will have something to share with others of like interest. Putting up a web page is one way to do that.

A number of commercial (and

free on-line) texts will lead you through the process of building your own web page, which can include links to related resources that already exist on the World Wide Web. You can literally have a page up and running in a matter of minutes, complete with text, graphics, audio, and video. The degree of sophistication is completely up to you. A growing number of free lancers are willing to develop your web pages, if you prefer to delegate the task.

Experience the Power: Network Technology for Education, and *Global Quest: The Internet in the Classroom* are videotapes that describe the advantages of such technology in education. They were produced late in 1993 by the U.S. Department of Education's National Center for Education Statistics, and NASA respectively. Both tapes are less than twenty minutes long, and make an informative resource for administrative decision makers.

Still, you cannot fully appreciate the Internet through books, tapes, or media accounts. You have to experience it for yourself. Get on-line, and you will find a number of practical resources that greatly enhance your research or avocational interests. ▲

Web Sites. Some of the most interesting information and resources are found on the World Wide Web. While you can access these gems with the most basic web browser, programs such as Netscape or Mosaic are recommended. These graphical web browsers will let you enjoy the visual resources as well as the textual. Many of the addresses below (Uniform Resource Locators or URLs) are rather lengthy, but most browsers will let you save your favorite URL as a bookmark, alleviating the need to retype them each time. Make certain that you enter the URLs exactly as they appear below, paying particular attention to upper and lowercase. Once you see how others are using the web, it won't be long before you weave your own.

http://www.yahoo.com/ Yahoo. List links to a wide range of subjects including education and religion. Entering the words *Christian* and *resources* or *education* as keywords will yield still more links to other very useful information.

http://ns.wentworth.com/classweb/ Classroom Connect. Provides links to lesson plans, libraries, museums, science projects, and much more. The graphics and layout of this site make it all the more interesting.

http://www.st.pauls.edu/ St. Paul's School Home Page. This site, developed by the Florida Council of Independent Schools, is a good example of how Christian day schools are using the Internet. Its link to other FCIS schools is particularly interesting.

http://ericir.syr.edu/ AskERIC. Provides educators with a link to an extensive collection of ERIC's education-related literature. Educators can direct their questions about K-12 education, learning, and teaching, to the AskERIC staff.

http://www.ed.uiuc.edu/ The Learning Resource Server. Developed by the University of Illinois, it provides electronic learning resources for K-12 teachers and students, pre-service teachers, education faculty members, and educational researchers.

Technological Tools in Christian Schools

David M. Taylor

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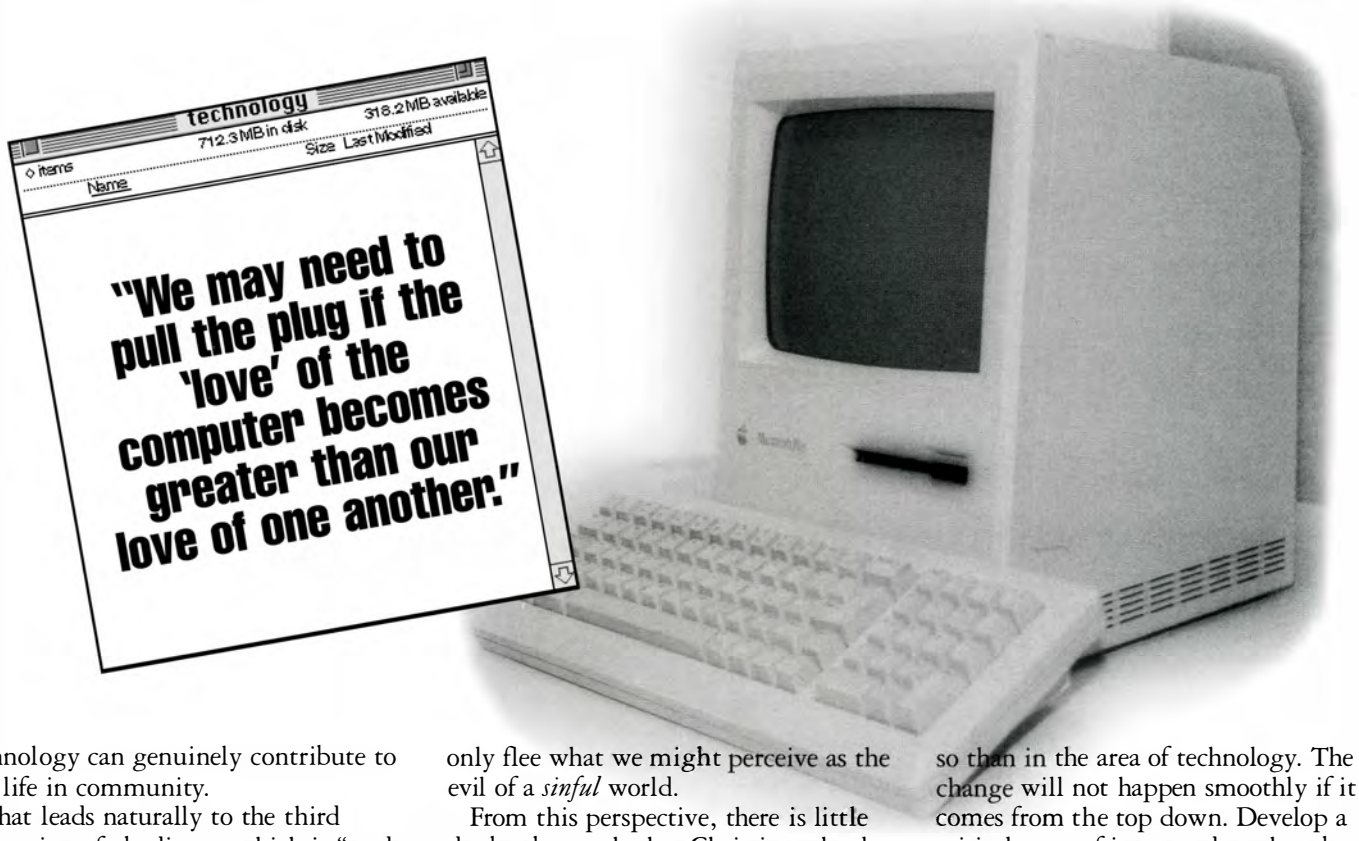
Getting It in Perspective

We have heard the comment "Educational administrators have a dual and sometimes contradictory mission: to preserve tradition and to be agents of change" (Foster 1988, 68). In the Christian school, in the realm of educational technology, the two roles may not be contradictory if we properly understand and implement our Christian educational tradition. The perspective from which we teach is very much about constant reformation of culture along with the preservation of the precepts of the Christian faith.

It is important to review the philosophical underpinnings of our Christian perspective on education, especially when we encounter new cultural challenges like technology and consider our educational response to them. Let us affirm again the basic understanding of what we do when we educate from a Christian perspective. Our primary educational task is the development of the Christian mind. We must instruct our children to see the world from a Christian perspective and live in obedience to God in all areas of life as we work in a technological society.

The obedience has at least three biblically derived dimensions—personal piety, obedience in community, and cultural obedience. The first dimension, personal piety, is about doing the right and fleeing the wrong. For the young child (and probably older ones, too) the issue may be as simple as sharing time on the computers. From there the issues progress through all the ethical considerations of the use of technology. Copyright violation is rampant in school-age computer users, and dealing with it is often made more difficult by the winking indifference or participation of many adults. The ready availability of pornography on the Internet is a tremendous concern. Entering into an "appropriate use contract" with each student is a fine way to model accountability in Christian community. I am thankful that software is now available to filter objectionable material, and this software prevents accidental access and exposure to temptation, although there is no substitute for careful supervision.

Piety overlaps with and leads to the second dimension of obedience, that is, to love one another in human community. We share with and are accountable to one another in Christian community; we also serve the cause of Christ and each other by putting these powerful tools to use. This involves the use of technology to enhance interpersonal communication and organization and the choice of appropriate applications of technology that will free up time that would be better used in interpersonal interaction. Sometimes, critical evaluation of technology will detect ways in which it contributes to the erosion of community. We may need to pull the plug if the "love" of the computer becomes greater than our love of one another—a phenomenon that is easily detected among computer enthusiasts. The popular notion that *virtual* communities are developing on the Internet must be regarded with healthy skepticism. Clifford Stoll, author of *Silicon Snake Oil* reminds us that "real life and authentic experience means much more than anything the modem can deliver" (edupage [On-line serial] 1995). As we contemplate the types of activities to encourage in our educational programs, let us be discerning about what



technology can genuinely contribute to our life in community.

That leads naturally to the third dimension of obedience, which is "to do the world's work in cultural affirmation and transformation" (Beversluis 1982, 4). Computer technology is an area of culture in which we are mandated to have dominion, to master it and direct it, to bring it into the service of God and humankind. We ought to be critical users of technology, carefully analyzing the potential good and bad in it, reforming our practice when we fail to use technology effectively, and avoiding technological bandwagons that may divert us from our educational goals. When seen from this perspective, the debate about whether or not to use the Internet becomes refocused. Our first inclination may be to shun this area of our technological culture because in it there is the potential to be exposed to sinful elements. To apply that principle consistently would also mean that we would all have to remove the televisions from our homes. Rather, we must teach our children to work affirmatively in this area of culture, too. Our responsibility is to teach the ethics, to covenant together in accountability and teach what it means to subdue technology. We must exercise discernment and be a redeeming influence in *God's* world, not only flee what we might perceive as the evil of a *sinful* world.

From this perspective, there is little doubt about whether Christian schools ought to strive for technological excellence—we have a mandated responsibility to do so. Technology is an important part of a Christian education, not so much because our children need the skills to get a job, but because our work in this world is God-given and ought to be God-glorifying. In the Christian school classroom we need to be asking how we, as Christians transforming our culture through our work, will relate to technology as another agent of cultural transformation.

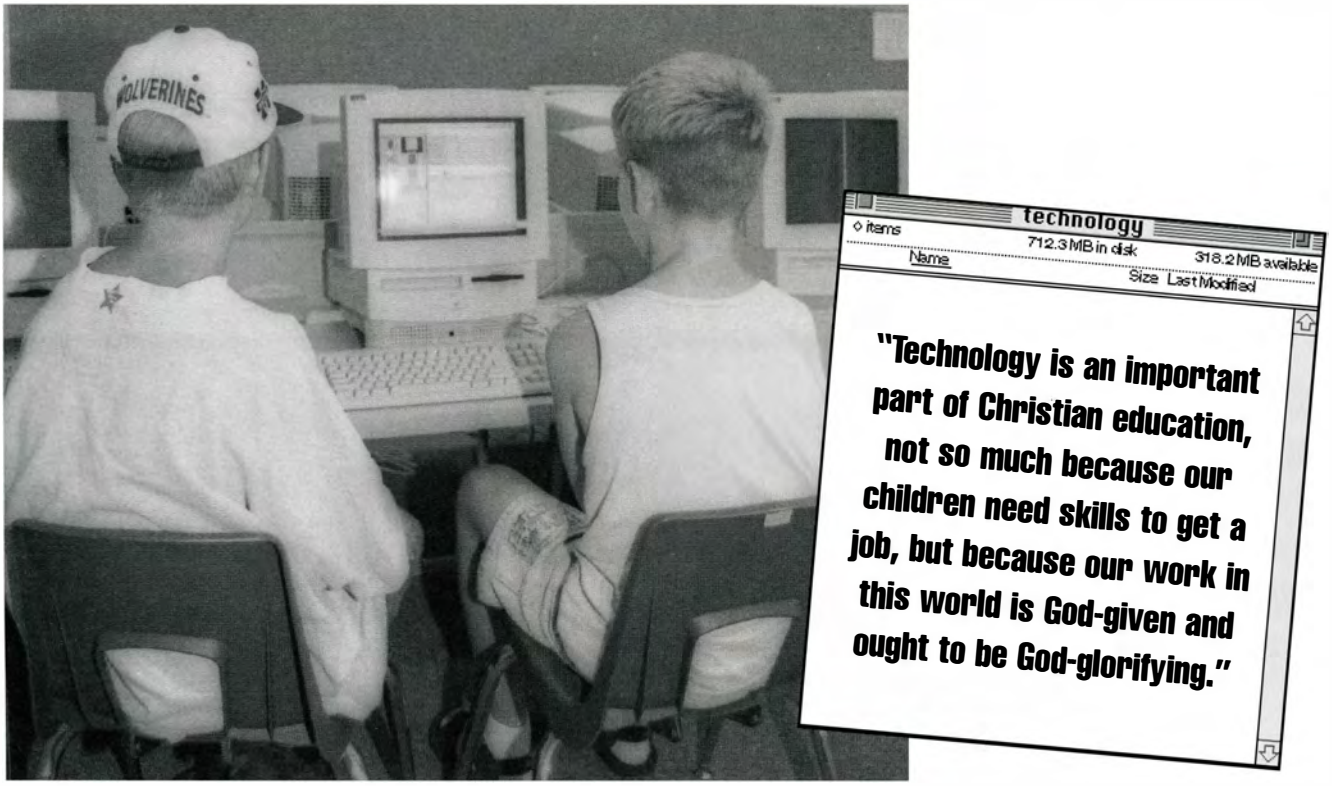
Getting with the Program

The job of implementing technological change in a Christian school setting is often a trial and error process. I bring you these suggestions as one who might have done some things differently and hopes to proceed from here with greater insight into what it takes. Frankly, I have learned most of these lessons the hard way.

First, identify the staff members who have an interest in technological progress. This is the group that will begin the implementation and spread it. Entrenchment in convention is a reality in all areas of practice and nowhere more so than in the area of technology. The change will not happen smoothly if it comes from the top down. Develop a critical mass of interested teachers by providing access to equipment and holding inservice sessions. Others will come on board as they see the benefits working in the classroom (Harris 1994).

When the time comes to implement a school-wide change, don't expect everyone to jump on board simply because you give them all the good reasons for doing so. Peter Marris said it so well: "However reasonable the proposed changes, the process of implementing them must still allow the impulse of rejection to play itself out" (cited in Grant 1988, 252). Marris reminds us that those who propose change have made sense of it through months or years of analysis and debate. We risk insulting those we desire to convince if we deny them the opportunity to go through a similar process. How I wish I had understood that before initiating some of the changes about which I have been so enthusiastic and convinced.

Second, brainstorm with the core group and come up with reasons to move forward with technology that emanates from your philosophy. The reasons should include but not be limited to the kinds of reasons discussed earlier. You will eventually undertake several



projects, but agree on a single focus for immediate development that fits with your philosophical framework.

Third, write a discussion paper for the decision makers so they too can go through the process of analysis and debate. Give them some time to digest the concepts and then pitch your proposal in person. It is much easier to reject a piece of paper than the people who believe in and can justify the project they hope to undertake. The presentation should include the projected costs and a proposal for accomplishing it, in stages if all the resources cannot be made available at once.

In your efforts to keep costs down, try not to underestimate tangible or intangible costs. Don't recommend hardware that may require several costly upgrades in order to do the job that it is intended to do. Be realistic about the amount of training that will be required in order to get staff up to speed. Recognize the real costs of technical support, network administration, and the instruction of students and staff. If you have a staff person with some expertise, provide him or her with time through some relief from teaching duties and/or extracurricular responsibilities. If you don't have the expertise on staff, hire some or train some. When beginning a new project, it is most effective to bring your resident "expert" into the classroom to work along with a teacher and the class over an extended period of time. Without that kind of investment, it is unlikely that implementation will proceed on its own.

Finally, connect with other educators and share ideas. Get in on seminars offered in local school districts for help with pedagogical and technical questions. There is tremendous wisdom and experience out there, and it was bought with your tax dollars. As for the questions that pertain to Christian schools in particular, open a dialogue with other Christian school educators through conventions and special interest group meetings. Of course, we shouldn't forget to connect technologically when distance and time constraints prevent assembly.

If you don't yet have access to Internet e-mail, get connected. Many states and provinces provide economical Internet access for educators, and if that is not available, contact local service providers for educational pricing. E-mail alone has tremendous educational benefit—it can help bring back the lost art of letter writing, and it can help us communicate across the cultural divide to bring perspective and redemption to what we do.▲

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MEDIA EYE

Taking on the Cybernetic World

Kenneth Verhulst

Kenneth Verhulst teaches computers and English at Mount Vernon Christian School in Mount Vernon, Washington. He also operates the CSI District 7 electronic bulletin board, which interested individuals may call free of charge by dialing 206-337-4501 with modem and computer.

A generation ago the Swiss Horological Society had just invested seven million dollars developing the electronic quartz wrist watch only to discover that most of the country's traditional watch makers would have nothing to do with the newfangled technology. Their unwillingness to accept change opened the door for U.S. and Japanese watch manufacturers—and cost the Swiss economy millions in lost business.

There's a lesson here: Students, teachers, and schools have much to gain by placing computers in their classroom, and much to lose by keeping them out of classrooms. The Software Publishers Association looked at 133 studies and found that "educational technology clearly boosted student achievement, improved student attitudes and self-concept, and enhanced the quality of student-teacher relationships" (Reinhardt 52). To achieve these benefits, teachers must overcome fear associated with technology and use computers in their own classrooms.

Christian educators strive to integrate God's word into every aspect of the school curriculum, knowing that God's message does not belong exclusively in Bible classes. Similarly, language instruction must be reinforced and taught throughout the curriculum, not just in English classes. By confining English instruction to specific content areas, educators send the message that clear communication is important

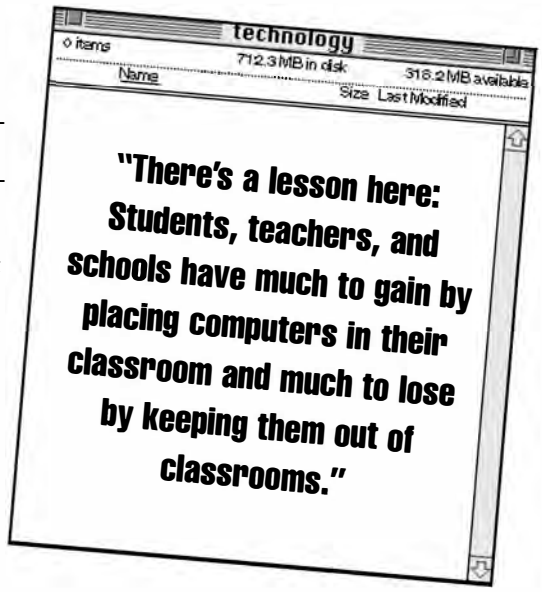
only on certain occasions. "The English language is nobody's special property," observed poet Derek Walcott, and English instruction is the responsibility of no single class.

Every classroom requires computer instruction because, like English, computer instruction is nobody's special property. Teaching computer skills in a variety of classroom settings benefits students. First, students gain valuable knowledge using computers to complete tasks ranging from calculation to communication, from desktop publishing to data processing. Students need a large repertoire of computer skills in order to be prepared for the future. As computer importance grows in home and office, students require more instruction than typical computer literacy classes provide. Because it is impractical for schools to offer computer classes covering every possible computer application, computer instruction in the classroom must supplement computer literacy courses.

Second, computer instruction in the classroom reinforces the importance of excellence in education. Teachers who do not appropriately utilize the computer's strength compromise a student's education. We expect excellence from our students, and they expect excellence from us. Teachers who fall behind in areas requiring computers set poor examples for students they teach. Think of the irony when teachers require current sources in research papers, but don't even mention the latest computer methods for obtaining recent articles and information.

Improved instruction is the third way students benefit from computers. The writing process clearly illustrates this point. Writing courses taught by experienced English teachers provide the best places to learn writing skills. Computers, however, are an essential part of this process. A 1993 meta-analysis of writing instruction examined thirty-two studies. Each study divided students into two groups receiving similar writing instruction, but only one group used word processors. The findings: "Almost two-thirds of these studies concluded that access to word processing during writing instruction improved the quality of students' writing. . . . Only one study found significantly negative results" (Bangert-Drowns 77).

Improved writing is one reason many colleges emphasize computer use for the writing of research papers. Some colleges, for instance, teach word processing and Internet research skills in required freshman English classes. A new state college in California even replaced the traditional library with computer terminals that provide information electronically (Hafner 63). Undoubtedly, the computer has become a necessary writing tool.



Science experiments, mathematical problem solving, research projects, and countless other tasks also require computers. *The Education Market Report* reveals that "more than half the schools in the country now use computers in almost every discipline" (Reinhardt 52).

Students are not the sole beneficiaries of classroom computer instruction; advantages also exist for teachers. Studies show that computer-aided instruction can motivate students to do better work and to enjoy this work more (Dalton 29). Having motivated and contented students makes teaching easier, and it makes teachers happier.

Computers can act like a teacher's assistant by providing individualized instruction. The independent nature of computer instruction helps shelter students with low self-esteem by insulating them from critical and intimidating peers. In fact, *Effective Schools* noted that using computers for instruction raises self-esteem among students who typically fail in traditional classrooms (Gerard 2). Computers are excellent tools for accomplishing classroom tasks. Students and teachers benefit when students print signs, announcements, and calendars for the classroom. Computer modems allow teachers to exchange lesson plans through telephone lines on commercial computer services and free electronic bulletin boards.

Computers also open information doors easily and inexpensively by allowing access to large databases. *Educational Research and Technology* reports, "Certainly teachers have always made use of libraries and resource materials, but frequently at the cost of many extra hours of preparation. Readily accessible databases make it easier to go beyond asking all students to read the same chapter and then recite what they read" (McDaniel 75). My wife, for example, helps students check out library books using a computer located in her sixth grade classroom. The computer, equipped with modem, allows students to access the King County Library System and the Internet. Finally, computer games can provide a method for entertaining students—and teachers.

Computers in classrooms also provide advantages for Christian school administrators. Computer literacy is an important part of attracting and retaining students. Harlow Unger writes concerning the evaluation of private schools in his book *How to Pick a Perfect Private School*: "A good school sees to it that all its students are computer literate" (119). Computers in the classroom, of course, will strengthen any school's computer program.

Classroom computer instruction may offer financial advantages. Schools could save money by not hiring a computer teacher if existing teachers would provide computer instruction. The savings could help fund classes that train teachers in computer use. In addition, a computer teacher cannot teach every subject involving computers. Training teachers to incorporate computers into currently taught subjects is a practical alternative

to hiring designated computer teachers, especially in elementary schools.

Before computers will become useful tools in the classroom, the fear associated with new technology must be dispelled. Alfred Hitchcock remarked, "There is no terror in a bang, only in the anticipation of it." To eliminate the terror associated with technology, teachers must take the initiative and start using computers themselves. Teachers must encourage each other, and they must experiment and explore. As with any learning process, they will make mistakes, and they will need help. Initial questioning and advice gathering, however, should not deter computer use.

In order for teachers to use computers, they must have access to them. Recognizing that fact, the Shoreline school district in Seattle provides every teacher with a computer, which may be left at school or brought home ("Computers and Schools" NPR). Teachers without home computers should at least become familiar with the computer resources available at their schools. Classes offered at local colleges are useful in starting teachers down the computer literacy path. Educational Service Districts in Washington, for instance, offer a range of introductory computer classes starting at $20 to $30.

Incorporating new ideas into well-tested lesson plans is not easy, but it's impossible when teachers fear innovative technology. A 1991 study reported that 60% of teachers did not use computers at all (Hannafin 26). According to a survey conducted by the Dell Computer Company, more than 32% of Americans expressed concerns that by their inexperience they might damage the computer in some way (CompuServe 4). But the benefits to students, teachers, and schools make it worthwhile to overcome the fear of technology.

The greatest obstacle to providing computer instruction in many of our classrooms today is fear. Although computer games may be addicting, computers are no more threatening than a quartz wrist watch. ▲

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Stepping Forward with Confidence

Mark Sneller

Mark Sneller teaches computer labs at Zeeland Christian School for grades 1,2,3,4,5, and 8 in Zeeland, Michigan.

When the inventor of the first IBM mainframe computer projected the future of his invention, he thought there might be a use for two such computers in the world. Computers now dominate almost every aspect of our lives. As educators we are expected to use this technology in our lives and in our teaching. How can we keep up with the changes?

We can't ignore the future, but to many of us, the future is intimidating. Some of us want to wait for the fastest and most powerful machine before we begin a computer program, but technology continues to change too quickly. The best that any of us can do is begin with what we have and develop upward from there.

Many of our students come from homes that have computers. These "techno-wiz-kids" can be intimidating to a teacher who thought a hand-held calculator was an amazing advancement. I often have students who point out aspects of a software package that I did not know before. In a few minutes I have learned many things from students in the computer lab that would have taken me months to learn on my own. I think that's great! My primary goals for my eighth grade labs are still what they were when the program began eight years ago: basic keyboarding skills and word processing. While the goals remain, the technology and tools have changed considerably.

When the computer program began at Zeeland Christian Middle School we had eighteen stand-alone terminals in our lab. We split a class in half, with the students alternating between Physical Education and Computer Lab from day to day. We worked on basic keyboarding skills and word processing. I had to rotate the students around in the lab because there was such a variety of computer quality and technology.

As time went on we continued to upgrade our computers as best we could. Over the years we've received different monetary gifts specified for the computer program. Our lab today consists of thirty 486 terminals networked to a Pentium 90 network server.

In our computer lab I can hook up a video projector, which projects my monitor up on a screen on the front wall of the lab. We also have a large TV monitor up in one front corner of the room. I begin my lab lessons with a demonstration that the middle school students watch from their terminals. I show them first on the monitors what I expect them to work on during the class period. After the demonstration is complete I pass out the assignment sheet, which has an overview of the demonstration on one side and the actual assignment on the other. (I don't pass this out before the demonstration because I want their undivided attention while I'm demonstrating.) As my students work on their assignment, I am available to help as needed. When they have finished their assignment or the end of the class time is near, I have them either print out what they've done or save it on their diskettes. Then I can look over the printouts or screen view the files from their diskettes to see how well they've understood the concept for the day.

Our computer lab at Zeeland Christian School has a unique setup. I wanted to be in a position where I could see all of the terminal monitors at once, so I arranged for our teacher station to be located in the back row of the lab. From there I can easily see what the students are working on.

Our computer curriculum at Zeeland Christian School is continually changing. When we began, I used Professional Write 2.1. Later I used Word Perfect 5.1. For three semesters now I've been working with eighth graders using Microsoft Word 6.0 for Windows. I have developed my program to match my students' needs while increasing their abilities. Each semester I've changed or added to assignments from previous semesters to better meet these needs and abilities.

This fall another instructor will be teaching beginning WORD to seventh graders. My eighth grade curriculum is obviously going to have to change when these students come in already having had a semester of instruction. But that's progress.

Where is technology taking us? Who knows. *Intel* is now close to perfecting a voice-recognition chip that would make a keyboard obsolete. I'm sure that ten years from now I'll look back at the computer lab I worked in at Zeeland Christian School in 1995 and be amazed at the changes that have taken place. But I'll also think back to those students who were better equipped to face their future and their present by the learning that took place in that lab.▲

Grandma DeVries Visits School

Robert L. Otte

Robert L. Otte is the librarian at South Christian High School in Grand Rapids, Michigan.

Until a few days ago, Lucy DeVries' grandmother hadn't been inside a high school for over twenty years, not since Lucy's father had graduated from South Christian. Lucy had forgotten her lunch and knew that her mother was working all day at the Bunsen Burner factory, so she called her grandmother. Of course, Grandma DeVries was happy to bring her some lunch. Lucy had told her that her locker was #478 near the library. What Lucy's grandmother didn't know was how much high school had changed.

Lucy's grandmother peeked into the library after putting the lunch in the locker. She noticed a few kids working on computers, and she walked in. The students were looking up magazine articles for a research project on various social problems. Many of the articles, she found, were right there on the computer on something the helpful librarian called a CD-ROM. She didn't really know what that meant and wasn't about to ask. What would Lucy think if she heard her grandmother had hung out in the library that morning? She noticed too that other students were typing papers on other computers in the library.

On her way out, Lucy's grandmother walked past Room 34. She couldn't help checking out what appeared to be a kind of computer-television combination. The kind computer teacher explained that it was something called an interactive videodisc player. The students were going to use it to learn to understand how credit cards worked.

A little farther down the hall, she peeked into Room 28, which seemed rather dark, but she did notice the stocky teacher writing numbers on an overhead projector. The students were not sleeping, as the darkened room first suggested, but carefully watching the screen and copying the numbers onto their own papers. It seemed to be an accounting class of some kind.

Just across the hall, she again saw the familiar glimmer of a television screen. She noticed that the students were watching a video about the Civil War. This all seemed a far cry from the endless history lectures she had heard all through high school. All these machines seemed to make education really interesting. Grandma DeVries wouldn't have minded sitting in on the Civil War video, but the diminutive history teacher looked rather scary to her.

So she continued down the hall. In the next room, she noticed one boy had a camcorder in hand and seemed to be recording a number of students acting out a scene of some kind. It was a bit noisy, she thought, yet all attention did seem to be focused on the drama in the back of the room.

The classes in the next couple of rooms seemed more ordinary to her, but then she arrived at Room 10. "Video Technology" the sign over the door said. That really made her curious, and she peeked inside this room too. What she saw—four television sets and several cameras—confused her at first. But then a very tall, nice-looking fellow arrived. He was the assistant principal, he said. He explained to her that in Room 10 students could have classes with students in other schools by means of something called fibre optics. She said that was something her doctor was urging her to eat more of, but the principal assured her that this was something quite different. He told her six students had just finished a literature class taught by a Sally DeVries at Grand Rapids Christian.

Grandma DeVries didn't think she knew Sally, though she might be one of Klaas' grandkids, but she did know that high school had certainly changed since her day.▲

Reprinted, with permission, from the South Christian Hi-Lites.

News

Australia—Way to GO!

AN INVITATION

Take a walk through an Australian Christian school classroom and you will see a lot that is familiar. The schools that have emerged in Australia since the 1960s bear a close resemblance to Christian schools in North America in their history, their educational priorities, and their denominational diversity.

You will have an opportunity to see this for yourself in July 1996 as you are invited to spend a week in an Australian school, living with a family, teaching a few lessons, talking about North America, and generally having one of the most exciting professional development experiences you could imagine.

Name your climate, setting (city or rural), and size of school. You will be made very welcome and people will hardly even mention your funny accent! Get yourself there and we'll do the rest!

Following a week in a school, you can join us in Sidney for an International Conference of Christian educators. People will be there from all over the world, attending workshops, sight seeing (the venue is right on the world's most beautiful harbor), hearing speakers, singing, visiting coffee shops, and more.

The theme for the conference is "Reclaiming the Future," and it will feature speakers and workshop leaders from all around the world. Advance publicity should now be in your school, so make a note of the dates of the conference, July 22-25, 1996, and start saving your air fare. For more details see the advertisement in this issue.▲

Haan to Retire as Executive Director of CSI

At the July 1995 meeting of the Board of Directors of Christian Schools International, Sheri D. Haan, Executive Director, announced her plans to retire on August 31, 1996. While accepting the announcement with regret, the members of the Board of Directors recognize the strong leadership and productive years the organization has enjoyed during Ms. Haan's tenure, and are grateful for her dedication to advancing Christian education throughout the world.

Ms. Haan joined CSI as a curriculum author in 1969. In 1984 she was named Director of Operations and was appointed Executive Director in 1988. Under her leadership CSI has developed new school service programs, has published several new textbook series, has expanded the range of employee benefit plans, and has expanded the financial base of the organization.

Ms. Haan, author of several books, including *Precious Moments: Stories from the Bible*, will turn her attention to writing after leaving CSI. She also expects to continue serving religious organizations in various capacities, including maintaining her current role on the Calvin College Board of Trustees.

Christian Schools International is a service organization serving nearly 500 Christian schools that are located primarily in the United States and Canada. The organization was founded in 1920 with its headquarters located in Grand Rapids, Michigan.

A search process is being planned, with the search committee to be announced this fall. The Board of Directors hopes to name the next executive director in January 1996, with the person to take office on August 1, 1996.▲

Technology Hooks ECMS Students

Fifth graders in social studies class at Eastern Christian Middle School in Wyckoff, New Jersey, composed a seven-chapter book about Canada. The project was a compilation of historical data, information about the economy, and a host of research information. Having a computer to do word processing made it easier for students to produce in-depth reports. They liked seeing their efforts rewarded. "It's fun to type up all this information, change it, or add to it and come up with this report," said student Paul Steenstra.

Most of the students are computer literate and find the computer user-friendly.

Ralph Hutton is in charge of the computer room at the Middle School. He helps students input copy and learn the commands for word processing. With the assistance of language arts teacher Florence Nieuwenhuis, students edit and return to revise reports.

At the Middle School there are enough computers for all the students in a class, but the technology is not up-to-date. Currently Apple IIe computers are being used. Computers that use a mouse and mouse pad, like the newer Macintosh models, are more desirable. The Media Center has a new computer with a CD-ROM that enables students to retrieve information for research. This computer is used all the time, and the school hopes to purchase four or five more of these computers in the near future.

The Accelerated Reader program has been flourishing because of a generous gift from the Middle School PTA. As a result of their efforts, there are computers in the fifth and sixth grade language arts classes and in the Resource Room.

The Accelerated Reading program encourages students to answer questions on books they have read and earn "cash" with which they can "buy" supplies at the new bookstore.

Using a CD-ROM to access the New Grolier Multimedia Encyclopedia on the Macintosh is something students look forward to for science research. Teacher Henry Lootsma's class learned about birds. Sitting at the computer, a student clicked a button and pasted the image of a mockingbird to his report. Another used a small tape recorder to tape the bird call from the monitor for the classroom demonstration. Then they printed their reports. Technology is fun, and they are hooked!▲

By Shanti Jost

Adapted, with permission, from the Eastern Christian Herald, April 1995.

E-Mail Connects German Students with Native Speakers

Sally Jongsma

Some days, when the list of e-mail messages fills the screen, faculty wonder whether e-mail is a blessing or a curse. But for language professor, Dr. John Struyk, one of these seemingly superfluous messages changed the way he taught last spring's Advanced German Grammar course.

Struyk responded to a graduate student at the University of Helsinki and learned that Aki Taskinen took an English course via e-mail with a class at Indiana University and with one in Poland. The professors linked each of their students with a student at each of the other institutions to give them a regular opportunity to use and write English.

Struyk immediately thought of his German grammar class. "I had been wrestling with how to challenge the students registered for the course, since they had such wide ranging backgrounds," he says. Aki's model seemed to hold promise.

After months of fingerwork on the Internet, Struyk is enthusiastic about the results. Through the Helsinki student, he was linked to a German professor at the University, another in Japan, and several German students in other countries who were willing to work with Struyk's students. Despite some initial trouble finding the right number of people to link, each of his students now has at least two others with whom they correspond.

The correspondence is fairly structured. Struyk has his students write six one- to four-page "papers" during the semester, covering specified areas. The first was a biography of themselves in which they also described what their Christianity meant for their lives. The second was a description of their college, the third a paper on their home community. The fourth was a free topic that could be a response to something their correspondents had asked or written. The last two papers were on American television or film and an issue of their choice, such as environmental problems, child abuse, or a political issue.

These topics opened up many opportunities for discussion, Struyk says. It is difficult to express your faith in a different language, and many of the correspondents were not familiar with what a Christian college would be like. "It is also challenging to write fluently on substantive issues," Struyk adds.

"This arrangement has given them something to really work for," says Struyk. "It's tough, but the students want to communicate well; they don't want to embarrass themselves." It is not just a grammar exercise, it is real communicating, using the grammatical principles they are learning.

Jeremy Van Nieuwenhuyzen, a member of Struyk's class, believes it is crucial for a foreign language major to be able to communicate with native speakers of the language. "If you don't communicate regularly in the language, the little picky things immediately make you stand out as a foreigner," Jeremy says. He admits that initially he worried about having to write to someone whose native language was German. But having Struyk correct his pieces helped him feel more comfortable. And it became easier as he wrote more.

Struyk also works through a grammar text with his class as the semester goes on. But he is convinced that having students put their skill to use is the best way for them to improve.▲

Of Grecian Urns

(For Danny Cade, 1951-1975)

They study with me, tell me their dreams,
ask the unanswerable questions,
savor college-town springtimes.

They come back,
fat and placid and balding,
and I struggle to hear
through their beards, through graying mustaches,
the darting eager minds
of the boys I knew.

They write exclaiming letters
for awhile;
then they join Kiwanis,
they produce children,
they buy mortgaged houses.
They become as remote from me as a Lafayette
or Henry Ford.

Not you.
Not you.

You walked, laughing, from my summer door
to death.

While I am mortal
you will always be twenty-three
and laughing
and as handsome as morning.
You will always wear
the resplendent young clothes
and speak the exuberant young ideas.

Nothing, nothing
will ever detach
the fidelities, the appreciations
I had from you.

You are a very paradigm
of Grecian urns.

Elva McAllaster

Hate!

Ruth Warnick

Ruth Warnick is a former teacher from Manhattan, Kansas.

The semester started out normally. The halls shone, reflecting vague shadows as students pushed along them during change of classes. Students looked forward to the new school year, keyed up mostly at seeing their friends again.

My language lab intrigued them. There were knobs to twist, buttons to push, headsets to try. It was fun to start another school year—new people to get acquainted with, new teachers to enjoy and a renewal of an old rhythm. The pulse of a school year felt so right! As a teacher I didn't expect every student to necessarily like me or my subject, but by and large we enjoyed the time we shared. Until . . .

Something made me sense that all was not well at the table where eight students bent over their books. Well, six of them bent over their books. The two girls had much to whisper about, punctuated by militant glares in my direction. What began as something that I merely sensed developed into an overt show of hostility in that particular class. At first, I wasn't certain what was going on. Were Pat and Fern carrying some turmoil into my room from their outside activities? Were they setting themselves apart from the rest of the class? Why did they seem so resentful? What triggered the animosity that was interrupting our learning?

Pat was tall, blonde, slender, and very dominant in an organization of which she was president.

Fern wasn't nearly as tall. Her brown hair hung straight from a straggly part, lightly brushing her round shoulders. Both girls were good students.

The real question was, what was making both girls so unhappy? I didn't worry much about Pat's sharpness because she seemed at home in the role of outspoken fussbudget. Some people simply like to be critical.

Fern was different. She was quieter. She wasn't a leader. If she were angry at the world, she didn't show it. Was her anger provoked entirely by Pat? Her body language certainly made it clear that she was very angry with me, however.

In class Fern sulked. When I crossed her path in the hall, she immediately put a sneer on her face. She glowered intently at me with malevolent penetration. Her mouth curled down, her shoulders rounded, and with one elbow she prodded her neighbor as if to say, "Look, there goes the loathsome one."

Hatred is much more comfortable if shared, so she did her best to make converts. I never found out what caused all this emotion. Later I heard about very serious problems Fern was having, but why the anger at me I never did discover.

Although I never knew why I was personally hated, I do know how it ended.

One of the nicest times for a teacher occurs after the students have left the room. I could smell the chalk dust on the felt erasers. The cleaning compound that the janitors used left a slight aroma. Ink, papers, and books each have their own perfume. An empty classroom is full of memories and of promise.

An aura of peace filled my empty room. It was time to think through the day's lessons and make the next day's plans. It was also an excellent opportunity for me to pray and to consult with God: "Where do we go from here? What am I supposed to do with this

situation?"

My experience with students had shown me that to have a meaningful conversation with students in conflict, you need to get one alone. If Pat were around when I tried to talk to Fern, there would be role-playing from each of them. Each had to live up to her reputation in front of her peers. Alone, each could be herself.

I felt as if the Lord were telling me three things. First I was to pray for my "enemy." Second I was to try to schedule a private talk. Third I should write her a letter and hand it to her in person.

The purpose of the letter was to fill the gaps should the conversation not go well. The letter was reinforcement. As an adult teacher, my emotions should have been untouched, but I found myself dreading this conversation. So, I started where I could start most comfortably. I was obedient in my role as intercessor. I wrote the letter, being very affirming of Fern. It was a simple letter explaining that God loved her, and that I found her very lovable. I tried to reach into her heart, deeply affirming her as a person.

If I had done more than try to make an appointment with her when her friends were around, it would have been disastrous. So I put the letter in a drawer and waited for whenever she would come into my room. When that could happen would depend on school buses, after-school activities, jobs, and her mood.

She was still glowering at me daily. She had gotten the message that I needed to see her after school. Fern wasn't very eager to show up in my room, any more than I was in a hurry to meet with her.

When it happened, I was not in the least prepared. My empty classroom was filled with peace and love. My mind was totally relaxed on other things when suddenly there she was.

She blew into the room, hurled her bookbag onto a desk, and pivoted to be at her defensive best. I found myself genuinely filled with love for her and pleased to see her. With a sincere smile, I welcomed her and handed her my letter with the comment that I had written it some time ago.

Without a word she sat beside me to read the letter. When she finished she looked up quietly and said, "I'm awfully stubborn!" We visited peaceably for a few moments. Then she left. There was instant healing!

I immediately leaned over the papers I was working on. It may have appeared that I was busy. I was, busy thanking God! How in the world could he prepare me for such an encounter? How did he prepare Fern so well? In his time, he put everything to rights without a painful confrontation.

That's our Heavenly Father. Concerned about the little things. Even about the atmosphere in a classroom!▲

Marlene Dorhout

QUERY

I try to have classroom discussions with my sixth graders, but students seem either to take over the whole class chaotically or they just won't discuss. I've really given up trying and resort to group work or the like, but I'd like to be able to get the whole class involved sometimes. What can I do?

I appreciate your concern and willingness to keep trying. A variety of teaching methods is important, but don't neglect the art of discussion. Perhaps you struggle more because previous teachers did not practice discussion with these students, or maybe you jumped in prematurely without establishing a comfortable, safe environment and an open, trustworthy teacher image. Regardless of the reason, you and the students can still develop this technique of learning.

If there is another teacher on staff who successfully holds classroom discussions, talk with that colleague and visit the classes to observe the skills of interaction. Or venture into better discussion with the help of your students.

Sixth graders can analyze a situation quite well, so give them the opportunity to brainstorm about this problem. Write their ideas on the board, with only one important rule: they may not mention specific names. They will readily tell you about certain kids dominating the conversation, interrupting one another, or ridiculing others. Be prepared to hear about teacher roles and remarks. Remain objective and learn. Then with a student as a scribe, ask them for good, concise discussion rules that would improve the conditions that hinder them from talking and listening. If even during this discussion, they can't come up with specific rules, illustrate a scenario for them so they will discover the answer without your telling them.

You and the students should check rules for clarity, and then ask class members to volunteer to put them artistically on poster board and display them in a prominent position in the room. Their rules really won't differ much from yours, but now they have ownership, and you will be helping them to adhere to their own rules.

You the teacher can be a tremendous help to students during discussions by mediating and sometimes validating or connecting irrelevant comments to the topics. Encourage, but don't push, reluctant speakers; non-contributors are not necessarily non-participants.

Exploratory talk, creative thinking, and personal connections are difficult skills, but they improve with practice and add another dimension to the joy of learning through discussion.

We are getting computers in our elementary school, to enable students to become literate in this area. Doesn't it seem that the computer is just another fancy and expensive tool used to educate our students? Computers will be outdated, collecting dust, faster than our textbooks and videos, and they are much more costly too. Isn't the teacher still the best educator?

Most definitely the teacher is still the best educator; however, as the best educators, we teachers must be familiar with all the available educational tools, including computers.

As Christians we also must be good stewards of our intellect, time, and money. Sometimes computers may be a more expedient way to dispense or review information, or a more desirable, hands-on approach for a student struggling with the traditional textbook, or even a challenge to the avaricious learner consuming inordinate teacher time and energy. Also, the computer is a mode of learning that today's student is expected to know.

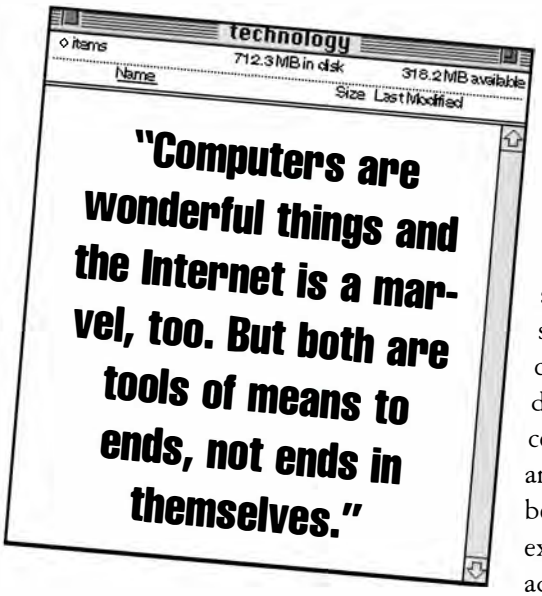
I agree that cost effectiveness and long-term results should be studied, holding educators responsible for expenditures that might be a "band wagon" venture. Computer knowledge, we hope, is more than high-tech, advanced programmed learning that deprives students of human contact and interaction, which are also vital to education. Ideally students will learn to operate computers to such a degree that transfer of knowledge is adapted to

advanced equipment of the future.

Bret Hume and T. R. Reid, nationally syndicated columnists for the Washington Post, have some interesting comments regarding education and computers.

> Education, it is commonly believed, is one of the main potential benefits of the great information highway, of which the Internet is now the major artery. Computers are wonderful things and the Internet is a marvel, too. But both are tools of means to ends, not ends in themselves. Learning to use them may help you learn, or work or even get ahead. But computer literacy is no substitute for literacy and may even be an impediment.
>
> . . . Computers are like most other technological advances: They provide the chance to see, hear and learn things faster and more easily than ever before. But they are not in themselves educational. For all its sophistication, the computer on-line world offers at least as many trivial pursuits as educational possibilities.

I believe this exciting new educational tool can and will be used in classrooms, but it also can and will be abused as well. We as Christian educators should be challenged to investigate this pedagogical wonder and should challenge, as well as contribute, to the development of programs intended for educational use.



Everybody I teach with seems to have it so together, so I've never mentioned to any of them how much I worry. I prepare for my classes and they most often go well, but I still waste a lot of time and energy worrying ahead. Usually later I realize how foolish it was, but I can't stop myself. Is this unusual for teachers?

Christ really makes a clear directive in Proverbs 3:5-6. We are to trust him and not lean on our own understanding. We are supposed to cast our burdens on Him and not worry (I Peter 5:7). As Christians we know that; but often as teachers, dispensers of knowledge or ways to attain it, we appear to have it all together. Students and colleagues don't always recognize our uncertainties and fears. God takes these doubts and weaves them into our preparations, turning them into useful lessons in our classrooms and our lives, if we let him.

It is not unusual for new teachers to worry about the next day's plans or a specific student's needs, but that should not continue every day, especially not in regard to routine procedures. Ideally, all teachers have a real concern for the kids in their classrooms and a motivating desire to do their best, but you seem to think you worry excessively even after you have adequately prepared and succeeded. Your unwillingness to share this problem with your colleagues doesn't allow them to assist. Perhaps you can find a trusted friend in another profession or a pastor or counselor to give you an objective perspective and helpful advice and support.

You may be an extremely conscientious worker and simply need reassurance, or possibly you are a perfectionist trying to control the outcome for a classroom full of imperfect students and teacher. On top of that, if you are the least bit insecure, your worrying could adversely affect you and your students with undue pressure. If you can't conquer this worrying, it may end up stifling your creativity, robbing you of necessary relaxation time, and preventing you ultimately from being the teacher you so much want to be.▲

You are encouraged to send questions for this column. Confidentiality is assured. Address questions to

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Bicycle Rodeo

IDEA BANK
Marianne Klein

Marianne Klein is a grade two teacher at Abbotsford Christian School, Heritage Campus, in Abbotsford, British Columbia.

Spring is the time for new and varied outdoor activities. With this in mind, the grade one and two teachers of Abbotsford Christian School's Heritage Campus planned a safety unit. They stated their goals for the unit as follows:

> God has created the world for his children to use, enjoy and care for in a responsible manner. This is a responsibility that requires knowledge of God's natural laws and man-made laws so that we can live safely, avoid danger, assist others, and show loving care to others.
> Ultimately, our safety rests in the Lord, who cares for each of his children.

The teachers enjoyed creating this unit. They worked side by side to develop the overall concept and assisted each other with the individual lessons. The students were divided into five groups, so that each teacher prepared a one-hour lesson about one aspect of safety. The culminating activity involved learning as well as fun: a bicycle rodeo!

In preparation for the rodeo, all children were asked to take their bicycle helmets to school. The manager of a local bicycle shop came to school to adjust the fit of the helmets. Students who had no helmet were mea-

sured for size. Pamphlets were sent home for parents, emphasizing the necessity of wearing a helmet. This activity was time well spent, since head injuries account for 75% of all deaths from bike injuries.

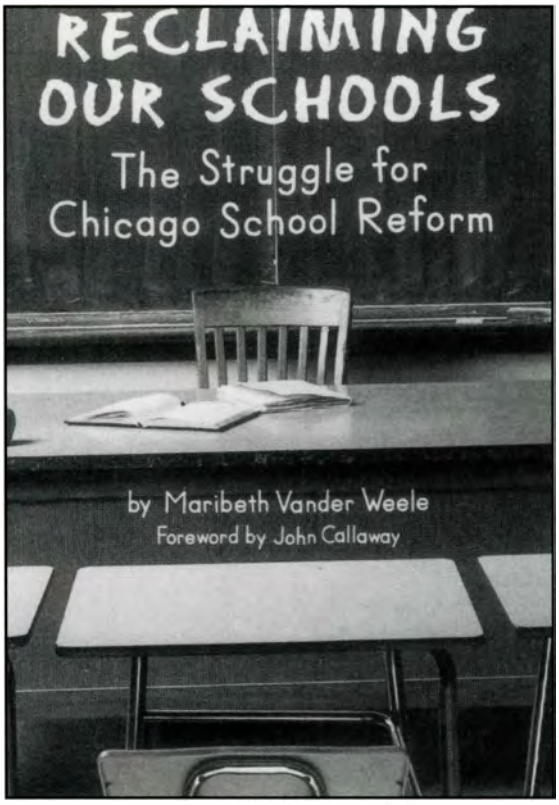
On Rodeo Day, students brought their bikes to school. First of all, mechanics from the bike shop checked each bicycle for safety. They made minor adjustments on the spot and gave parents a sheet evaluating the bike's condition.

The actual rodeo took place on the playground field where roads, crosswalks, and driveways were marked with lime. The city provided an operating stoplight, a stop sign, and yield sign. These authentic signs, at children's eye level, added excitement for the students. Cardboard-box cars were made by the grade seven students who also drove them around the course to simulate actual traffic.

Parent volunteers took charge of various stations on the playing field. Every parent received a card with written instructions, which helped them operate each of the ten stations as a learning center. Students were instructed to do shoulder checks, to avoid rocks, and to exit a driveway safely. They also watched out for unpredictable car drivers and practiced the hand signals that had been taught in class. Riding between closely-placed pylons challenged even the experienced cyclists.

Finally, students made bicycle safety posters, which qualified them to enter a drawing for prizes provided by the bicycle shop. Practicing the safety rules helped the students grow in awareness of their responsibility to themselves and to others.▲

Reclaiming Our Schools: The Struggle for Chicago School Reform



Reclaiming Our Schools: The Struggle for Chicago School Reform
Meribeth Vander Weele
Chicago: Loyola University Press, 1994.
285 pp. plus 79 pp. of appendices: Statistics, Resources, Endnotes, Bibliography, Index.
Introduction by John Callaway.

Reviewed by Steve J. Van Der Weele, Calvin College, Emeritus

Many of the acute problems of our large cities come to a focus in their school systems. The Chicago school system, by common agreement, has the most numerous and deep-seated educational problems of all our major cities. Urban schools, of course, have the major problems. Suburban schools have swimming pools; urban schools lack textbooks.

In this metropolis, the problems range from arthritic and inaccessible bureaucracy to unsafe buildings; from drugs, guns, and violence in the schools to poor administrative coordination.

A great deal of energy goes into political preservation–protection of jobs and security. Planning is incredibly poor. Schools make no projections about enrollment; administrators wait until opening day to ascertain teacher assignments. Principals have very little authority–none over the maintenance staff, hardly any in choosing teaching staff (although they are not infallible judges either; some fail to see the difference between a teacher who can keep the class under control and one who truly inspires.) Curricula are "dummied down" in the wake of low expectations and the blithe assumption that children from low-income, poor families cannot learn anyway.

These urban schools constitute "a bottomless pit of need." Overcrowding is chronic, buildings are unsafe, teachers are assigned and re-assigned–especially during the first month–so that continuity is lacking, a situation hard on teachers and children.

The problems are hydra-headed. City council members, who have great responsibility for administering the schools, it turns out, often have criminal records. Although background checks should be mandatory, they are strongly resisted. Again, a disparity often exists between demography and the number of classrooms available in the given area. Top administrators live extravagantly on school expense accounts. Successful reforms in one area often lead to abuses at other levels; "pinstripe patronage" describes one such development.

I have compiled a minimum list of 100 abuses that the author of this book describes in her careful study of the Chicago school system. She has been on numerous television and radio programs exposing the dry rot of the city's educational institutions and the incompetence and self-serving mentality present at every level, including the state legislature. What concerns her most is that the dynamics of adult relationships involved in the educational enterprise are carried out with blatant disregard for the true purpose of schools: educating children. Students often become mere pawns in squabbles over turf, in union short-sightedness (although

unions have provided much stability and discipline in a system of revolving-door school personnel), patronage, protection of jobs and their prerequisites, power struggles, and constant litigation.

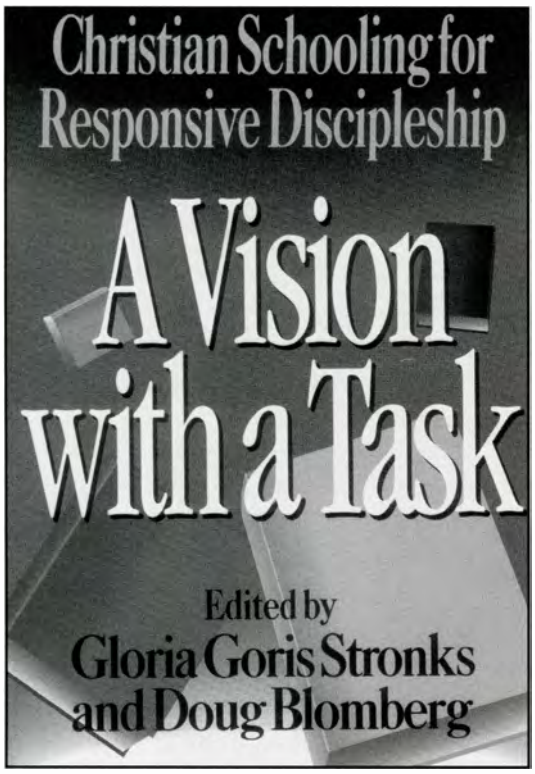
John Callaway, Broadcaster and host of Chicago Tonight, in his fine introduction, compares the sad situation–"the new colonialism"–with the plantation system of bygone years. He brings into purview, for purposes of comparison, traditional colonialism in which nations enriched themselves at the expense of the poor and oppressed. The "new colonialism" is, in fact, worse; it relegates its victims to inner-city ghettos. And the new colonial leaders do not live anywhere near the "plantations" they are administering. Some of them, it seems, wish the schools to fail so that they can have their worst racial prejudices confirmed.

The book is not without some hope. The teacher strikes of 1979 and 1983 and the parental discontent these disruptions aroused, together with the increase in violence and crime, unleashed a strong impetus for reform. Reform advocacy groups, parent volunteers, outside initiatives, and some uncommon heroes with courage and common sense are beginning to make a difference. Decentralization is under way, principals are being given more authority, communication is being improved, and different groups have actually begun to talk to each other. "School reform is Chicago's perestroika," says William Ayers.

The hardest task will be to change attitudes—in parents, administrators, legislators, students. Questionnaires administered to the students revealed that students perceive themselves, in comparison with students of other nations, as very competent in math and extremely high in self-esteem. South Korean students who, in fact, scored four times better in math, rated themselves very low in math skills. Apparently with the principle that educators must not bruise fragile egos, they are doing an excellent job of teaching self-esteem. But students will have to encounter a large dose of reality in the form of discipline–both external and self-imposed–if they are to avoid becoming walking disasters to themselves and the society they will be taking over. They will need to understand something about punishments and rewards as consequences of their actions. Teachers will have to fail students, and administrators will have to support those judgments. And everyone involved, from legislators down, will have to develop, with integrity, the will to do better for the rising generations. That resolve will have to be expressed in additional funding, including a graduated income tax.

Suburban schools suffer far less, of course, from these untoward situations. This "savage inequality" will have to be remedied. Ms. Vander Weele includes a list of twenty-six proposals–recommendations she has received from many people during her career (274-280). She also provides a list of nineteen funding priorities, which, if followed, would go a long way toward remedying the sorry state of Chicago's urban schools. She often digresses helpfully to describe initiatives taken in response to similar problems in other large cities–New York, for example, and the state of Kentucky, which is undergoing comprehensive school reform.

Ms. Vander Weele's book should hearten those school boards and legislators and teachers and principals and parents everywhere who have the children's interests at the center of their concern. This chronicle of disaster should alert others to the danger of letting things get out of hand. And it should rouse all of us–the private school community as well–to do whatever we can in our cities to ensure that our children have violence-free and well-maintained buildings, competent teachers, requisite supplies and equipment. And the book calls for all adults to provide an atmosphere that signals to the children that education–and life itself–is a serious matter and that students have no time to waste as they prepare for a life of responsible maturity. Otherwise, Chicago's pathology will metastasize. Very few students can be motivated to learn by sheer indignation. It still takes a community to rear a child.▲



A Vision with a Task: Christian Schooling for Responsive Discipleship

A Vision with a Task: Christian Schooling for Responsive Discipleship
Edited by Gloria Goris Stronks and Doug Blomberg
Baker Books, Grand Rapids, Michigan. 1993. Calvin Center for Christian Scholarship.
Reviewed by Andrea Struyk, Assistant Professor of Education
Dordt College, Sioux Center, Iowa.

While driving to a recent conference with fellow Christian educators, one teacher expressed the concern that unless the Christian schools we serve remain unique in vision and in application of that vision, we may expect to see a decline in student enrollment and parental support. Naturally this shifted to a lively discussion regarding what this vision should be, how and where it is implemented in everyday teaching, and whether the graduates from Christian schools demonstrate the results of such an education. While this discussion produced more questions than answers, it became evident that all of us recognized within ourselves the need to be involved in research, in dialogue with fellow Christian school educators and the broader school supporting community, and to systematically evaluate whether the biblical principles we profess do indeed come to expression in the many facets of schooling.

To address similar and additional issues of concern related to Christian schooling, the authors of *A Vision with a Task*–Doug Blomberg, Peter DeBoer, Robert Koole, Gloria Goris Stronks, Harro Van Brummelen, and Steven Vryhof–solicited input from many Christian school supporters across North America via interviews and discussions. A number of people were asked to respond to the question, "What one issue or aspect of Christian schooling is causing serious concern in your community today?" (9). With a clearer understanding of general and specific concerns, the authors have provided us with a well written resource that covers a broad spectrum of topics, all of which demand reflection and challenge Christian schools to review their vision, mission, and related tasks.

As the authors indicate in the preface, the intent of this book is to help not only teachers, but also parents and school boards to "come to a deeper understanding of how to make their own school the kind of school God wants it to be" (12). To assist in this formidable task, the authors present us with many insights and direction-giving suggestions.

The first few chapters address the necessity for schools to reaffirm their vision of education and to be aware of cultural constraints that may both threaten and challenge that vision. Foundations may need reshaping and restructuring, if they are to undergird effectively all school related activities. A clear vision needs to become the driving force that helps students become responsive disciples as they are assisted

to "unwrap their gifts, share one another's burdens, and seek shalom" (16). Each Christian school community, including parents, administration, and teachers, are encouraged to work collaboratively at formulating a mission statement, one that clearly articulates that vision and prescribes the broad goals and hopes of the community. As participants in this process, able to state clearly what "their" school is all about, teachers are more likely to take ownership of the content, ask themselves why they use particular teaching strategies, and identify those components of the curriculum crucial to achieving the goals.

The following chapters focus on how the vision comes to expression in the school by way of team work and collaboration: how to develop learning communities where building relationships between students, teachers, administrators, and parents takes on covenantal meaning; how to gain a better understanding of what it means for students to learn and gain knowledge; how to select and plan a school's curriculum that has a rhythmic pattern of "play, problem-posing, and purposeful responding" (193); how to decide on course content and methods of instruction with an emphasis on developing the "integral" unit; and how to apply evaluation methods consistent with the school's mission.

The authors observe that within the framework of unwrapping everyone's gifts and developing the God-given abilities of all children, schools are slow to develop appropiate content and methods for children with special needs. For many parents, inclusion of their child in the Christian school community remains a hope or dream, not a reality, despite promises made at the child's baptism.

The authors rely heavily and effectively on case studies to clarify how a school's vision, or lack thereof, comes to expression in a myriad of school-related activities. Although some scenarios seem contrived, most typify school-related situations and provide clear illustrations of what the authors intend.

In the last chapters of the book, the authors provide some detailed recommendations and helpful suggestions for bringing about necessary changes within the Christian school. Scheduling time for serious reflection and shared insights is obviously a must. Perhaps parents, teachers, alumni, board members, and any others associated with a specific Christian school could begin to write the stories that reflect the unfolding of their school. They need to identify events that deserve celebration for Christ's sake, and celebrate! Situations that portray a lack of biblically wholesome school activity need to be challenged and changed within that school setting.

A Vision with a Task is devoted to assisting all those interested in meeting challenges that face our schools today. The authors' suggestions of thinking about school curriculum can also be applied to thinking about effective change: allow for creative, playful problem solving; acknowledge unique contributions of all school supporters; and work toward solutions that support the school's vision. This excellent resource leads to thought-provoking discussions and reflections, and nudges us on to innovative practices in establishing schools that truly honor the King.▲