EdTech News

This issue of *EdTech News* deals with some of the software applications that allow educators to produce on-line content and also some of the web-based computer conferencing tools that allow for new methods of collaborative learning.

Collaborative learning

Driven by the tremendous growth in the number, quality and availability of software applications that allow educators greater control and ease of creating content, the web-based "virtual" classroom is becoming a reality.

As was noted in the last edition of *EdTech News* (*www.col.org/et0598.pdf*), non-linear desktop video editing systems that combine powerful computing hardware and software applications, have given educators the ability to produce content from conception to final product, whether it is print, audio, video or web-based content.

Educators are now looking at the global movement of on-line distance education as an opportunity to enrich both their students' learning experience and their own professional strategies for teaching. In the post-secondary sector, institutions are moving quickly to reach students in remote locations and to increase their enrolments both locally and internationally.

Institutions serving all sectors, including technical/vocational education and training and open schools, in both developed and developing countries, are embracing forms of "virtual" delivery. A growing list of institutions engaged in virtual delivery is maintained by Athabasca University in Canada (*ccism.pc.athabascau.ca/html/ccism/deresrce/institut.htm#virtual*).

As a consortium of traditional and distance education institutions, and with assistance from the World Bank, the African Virtual University (*http://www.avu.org*) is now producing and delivering post-secondary education on-line to students throughout the continent.

An important measure of success with virtual delivery of education will be the quality of the learning content. While in many areas of the world, print-based delivery methods will continue to be the most cost-effective, accessible and flexible of systems for the next few years, they may well give way to newer technologies within the next decade.

When computerisation, information technology access, and associated costs of communications become cost-effective and accessible globally, the institutions and organisations that have developed the instructional design skills and experience using on-line delivery software applications and systems, will have a sound foundation for the production and adaptation of quality multimedia learning materials.

This will be especially important as high volumes of courseware become available across the Internet. Large institutions and private training organisations will compete for students everywhere in the world. Adaptation and multimedia courseware development and instructional design skills for on-line delivery will be key to maintaining the cultural character of learning resources and curriculum within Commonwealth nations.

On-line course development tools

Several on-line software applications have been developed that help to simplify the process of creating web-based content and delivering it over the Internet. Many of the applications contain an integrated set of tools or components that can be used to create entire courses on-line, or to introduce another environment to supplement learning already occurring within the classroom. Because the development tools are web-based, they can also be easily linked to existing learning resources anywhere on the web. Among the special functions offered by most programmes are forums for class announcements, assignments and tests, which can, in turn, be marked automatically on-line.

Web-based systems can also provide versions of documents, which are specially formatted, for printing, and a glossary or hypertext index to selected terms appearing in these documents.

Some of these course development applications employ templates that guide the developer through the process of creating

Some of the course development tools available in WebCT are discussion forums, audio and video materials, multimedia enhancements and hyperlinks to other resources.

web-based content. An example of one such product, WebCT, which is gaining popularity at the post secondary level, was developed at the University of British Columbia, Canada.

Companies that have developed tools for development of on-line teaching materials include:

LearningSpace: *www.lotus.com*
TopClass: *www.wbtsystems.com*
WebCT: *www.webct.com*

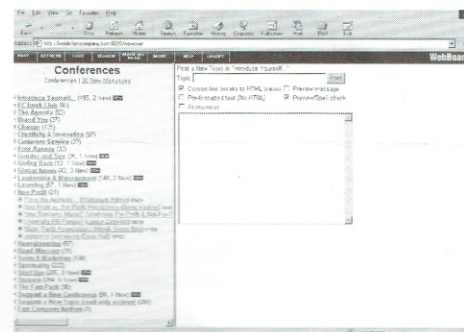There are also several organisations that have evaluated web course development packages:

www.atl.ualberta.ca/demos/conf/webbased.html
homebrew1.cs.ubc.ca/webct/papers/book
ccwf.cc.utexas.edu/~mcmanus/wbi.html
www.douglas.bc.ca/~landonb/dt
thinkofit.com/webconf

An example of a web-based computer conference in WebBoard. On the left side of the screen are the different discussion groups that are simultaneously taking place. Indented messages are postings within a given discussion group. By clicking on a particular message, the body of the message will appear on the right.

Web-based computer conferencing

Computer conferencing allows for moderated discussions to take place that permit the learner and instructor to post messages, comment on others and follow a flow of individual discussions. Computer conferencing, in the last number of years, has migrated from very basic messaging systems that grew from the early mainframe computer systems, to systems that now employ web-based interfaces.

How do these conferencing systems function? In a web-based conferencing system there can be many independent conferences on-going. The conferences could be public, private, read-only or moderated by a designated chairperson. Inside each conference there would be topic areas. Messages that are posted to these topic areas

within a conference would be "threaded", or organised, and kept within the specific topic area.

These conferencing systems eliminate the need for user software that can add to the expense and computer configuration difficulties at the learner end. The user would only require a web browser such as Netscape or Internet Explorer to view and participate in a conference. Web-based conferencing can enhance discussion already taking place in the classroom and facilitate interaction among students, and their instructors, in courses taught over a distance.

WebBoard and FirstClass are two of several systems that focus entirely on computer conferencing and have become valuable additions to tools employed by learners, educators and administrators in facilitating discussions at a distance.

WebBoard: *www.webboard.com*
FirstClass: *www.softarc.com*

While these systems specialise in web conferencing, there are many web course development software packages (such as WebCT) that now include discussion group systems.

For teachers and students in open schools

There is also software that has been developed that provides teachers with tools for developing, planning and delivering lessons at the Kindergarten to Grade 12 level. These applications help to organise and easily reference Internet resources into an educational context.

By encouraging students to ask themselves questions and set goals, the systems help guide learners through a learning process. One example being used in open schools in India and Canada is the PlanIT series.

PlanIT: *www.morganmedia.com*
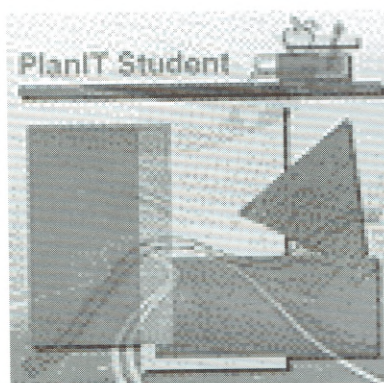
PlanIT software

Distance education—non-virtual delivery. Australia's "Travelling School" delivered education into remote areas of Australia at the turn of the century. Photo credit: Mr. John Eaton

The virtual book—a reality!

The virtual book

The concept of one book replacing thousands of books and even entire libraries, has been a sought after development by several publishers, as well as computer hardware and software producers. New "virtual books" are a step toward this goal.

One virtual book publisher is marketing SoftBook, which is a hardware device that is used to access, carry, and read "virtual" content. Just like a book, this device becomes ready to read by lifting the "book cover" (which is leather in a SoftBook). Readers can search for words and phrases, view text in a choice of font sizes, make annotations directly on the screen, erase them, highlight text, bookmark pages and link to related information.

Books are downloaded from the publisher's "bookstore". When you touch the title you want, SoftBook charges your credit card and downloads the book. It stays in your device until you are ready to delete it. Once deleted, if you want to see it at a later date, you can download it again without charge (from your own "bookshelf"), because your master account shows that you have already paid for it.

This concept has a long way to go before becoming mainstream, and is still impractical for many areas of the Commonwealth where phone lines are scarce and credit cards non-existent, but it does show good potential for being an important resource in education.

SoftBook Press: *www.softbook.com*
NuvoMedia, Inc.: *www.nuvomedia.com*