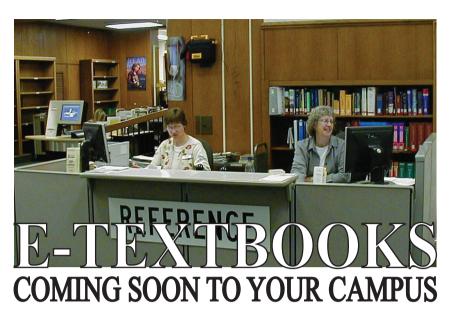
DR. ROD JENSEN

California State University. Long Beach, USA

• he advancement of the internet was made possible in part due to the proactive participation of academics and scholars throughout the world. The internet in its primitive stages was an excellent tool for sharing information and research data without consideration to communication costs or even time zones. Higher education became an innovator with respect to the presentation and acceptance of this new technology. The educational benefits of the internet are continuously being discussed, but at a minimum it has allowed students to have greater control of their informational resources and it has promoted student-centered instruction. Student-centered learning may become even more popular with the recent advance of etextbooks. Campus administrators have yet to give E-texts their universal endorsement, but that may happen very soon.

College and university campuses are often viewed as being monolithic bureaucracies where change occurs at a glacial pace. In some areas of academic curriculum development or administrative policy revision the pace of progress is uncommonly slow. But with respect to adopting and adapting applications for new or existing technologies for the benefit of students, colleges/universities have become effective trend setters. The start of the fall 2009 term has witnessed a grow-



ing interest among college/university campuses throughout the U.S. to incorporate the use of e-textbooks as soon as practically appropriate.

In the September 7th, 2009 issue of The Chronicle of Higher Education, there is a article that states "This Could Be the Year of E-Textbooks, if Students Accept Them." E-Textbooks, up to this point in time, have not been a widely accepted option for accessing course information due to a lack of available titles in needed subject areas. The start of the fall 2009 term has witnessed a noticeable change in the availability of e-texts in major areas of study. CourseSmart, an e-book distributer for 9 major publishers, currently offers 7,255 e-textbook titles in 943 course areas across 113 disciplines. The majority of e-texts currently offered through CourseSmart are merely electronic versions of textbooks with some interactive options. The University of Chicago Press has also converted 700 of its books and made them available in an e-book format through the distribution services of BiblioVault. The University of Chicago Press is one of the first university academic publishers that is moving many of its products into an ebook format.

VitalSource is another e-book distributor that works with publishers to convert standard texts into a proprietary VitalBook format. These converted e-books are then made available for purchase and installation onto student's notebook computers. Amazon is another large vendor of e-books but it requires the use of proprietary piece of hardware called the Kindle. Kindle's small size and portability make it an attractive e-reader option in comparison with the notebook computer. Amazon's inventory of e-books available for use on a Kindle grows each day, but currently totals approximately 350,000 book titles, in addition to numerous newspapers and magazines. But again the books purchased for Kindle are not transferable to another technology such as a notebook computer, an iPhone or the Sony e-Reader. (The Kindle and the Sony e-Reader hardware have numerous advantages and disadvantages that should be closely examined by anyone wishing to purchase an e-book reader.)

Most e-texts are simply electronic versions of existing paperbased texts, and are often provided free with purchase of the standard textbook. But e-texts are going through an evolutionary cycle where the instruction is becoming more interactive with the student—and the student is in turn becoming more interactive with fellow students and faculty with web-based e-texts.

The Reuters news service, on Tuesday September 8, 2009, announced that one of the largest textbook publishers in the U.S. has launched McGraw Hill Connect TM. The publisher in its marketing literature promotes their e-book system as "The mostadvanced all-digital teaching and learning exchange for higher education." The McGraw Hill Connect website explains in greater detail that this new e-textbook product is web-based and allows for a greater connection between text information, the professor and the student. Faculty can create assignments, add questions, and include homework and quizzes to complement the electronic text. Students can access instruction that has been implanted with video segments from the publisher or from the course professor. With only 76 e-texts currently available in its e-book inventory, McGraw Hill Connect has become a new but powerful advocate for the application of electronic texts on the college/ university campus.

Having an ample quantity of electronic versions of existing textbooks is an important consideration for students. Eventually students will come to expect texts that are exclusively produced as electronic books with a wider range of built-in interactivity. Another important consideration for students is cost.

The textbook industry is big business. According to information provided by the National Association of College Stores, 70% of all college/university bookstore purchases are for textbooks. During the 2007-2008 fiscal year the total textbook sales at college/university bookstores in the U.S. was US\$6.86 billion. This does not include sales from Amazon.com or other online booksellers. Printed texts are an expensive addition to the college/university student's budget, although electronic texts can offer students significant cost savings. CourseSmart claims that the average saving per E-text is US\$62.35. According to Educause Quarterly (August 9, 2009) the average yearly textbook cost per college student is approximately US\$1,000. In addition, almost 40% of all college/university students do not buy textbooks because of their high cost. If the anticipated cost savings of 50% per e-textbook remains consistent from book vendor to book vendor than the savings for each student can be substantial. And with lower costs it would also be expected that a significant percentage of those students, who cannot afford to purchase textbooks, might be able to pay for e-texts. Perhaps even students in developing countries might be able to afford state-of-the-art subject- specific e-texts.

The popularity of e-textbooks as an instructional tool is expected to grow as it becomes more accepted among faculty and college/university administrators. One of the early advocates for campus-wide conversion of etexts is Northwest Missouri State University. As part of its initiative to become a leading campus in the application of electronic learning tools Northwest Missouri State University is exploring the option of becoming a complete e-textbook campus. During the spring 2009 semester the campus initiated a limited experiment where 500 students were provided e-texts instead of their traditional printed texts. Northwest Missouri State University already has a program where it charges each student only US\$6.00 per credit hour for the rental of all needed texts in a class. Moving to an all e-text system will result in additional cost savings for the campus and for the students. The preliminary response from students is still somewhat mixed in terms of their preference for printed or electronic texts. But it has been well documented that in comparison with traditional printed texts students who have used e-texts spend more time interacting with the information. Northwest Missouri State University is continuing its move forward with electronic texts, but has elected to promote the use of small laptop computers known as netbooks rather than a specific e-reader (Kindle or Sony e-Reader).

Andrews University, a small liberal arts school in Michigan, is also interested in experimenting with the use of e-texts and is launching a small-scale e-text experiment. During the fall 2009 term a select number of courses at Andrews University will require students to use Universal Digital Textbooks (UDT-their terminology for e-texts). The reduced cost of e-texts is an obvious motivation for initiating the UDT experiment. But Andrews University is also interested in converting to e-texts as a response to becoming a more ecologically responsible campus. Saving paper that would have been consumed during the printing of hundreds of books will increase the ecological footprint of the campus.

Amazon.com has made an agreement with seven U.S. universities to provide each of them with a determined number of Kindle DX e-readers and accompanying electronic books. This e-text implementation experiment is also scheduled to begin in the fall 2009 term. The seven participating campuses are Case Western Reserve University, University of Virginia (Darden School of Business), Pace University, Princeton University, Reed College, Arizona State University and the University of Washington. Every entering graduate student (est. 40) in the department of Computer Science and Engineering at the University of Washington will receive a Kindle DX with every required text installed. The experiment will run through the spring term with results to be reported in the summer. Traditional engineering textbooks have been well known for their large size and impressive weight. Reducing the need to carry heavy books around campus may end up being one of the more positive findings of this pilot program among the engineering students at the University of Washington.

The concept of e-books is probably much more popular at the moment than is the reality of acceptance. The convenience, reduced cost, and instructional applications of e-books already renders them a fair competitor in the textbook marketplace. Traditional textbooks may not be able to maintain its share of the market when current limitations for e-books have been removed. The payment plans for e-books through Amazon are simple and straight forward, but purchasing e-texts is a bit more involved. For example, CourseSmart uses a lease instead of a purchase which allows the student access to the e-text for a limited period of time such as a quarter or semester. This limits the use of the e-text for future reference as the student progresses from one course to another. Another key limitation rests with the proprietary interests of the e-readers. E-books are generally not able to be placed on more than one type of e-reading device. Kindle and Sony e-readers as well as laptop computers are not compatible with each other's e-books. (There are exceptions to this rule due to some format conversion options available on the internet.) The initial purchase price of an e-reader is high and the life of the battery differs according to model and whether it includes an MP3 player. E-readers need to continue to innovate and improve upon their performance as many students find it difficult to read black and white text with no color options. Future e-readers which will have color options, higher screen readability, text highlighting, note-taking options and sharing capacity will greatly advance the broad acceptance and adoption of e-texts. It should also be noted that there are numerous other e-readers currently on the market which have not been mentioned. Some of these may eventually become as popular as the Kindle or the Sony e-Reader but that remains to be seen.

The instructional applications for e-texts could be the ultimate reason that universities and colleges advance the use of e-readers. Existing e-text features such as basic word search, faculty created audio and/or video segments, and interactive guizzes provide faculty with additional instructional options beyond that which is available with traditional textbooks. With more interactive features being added to e-books as well as to e-readers. electronic books should become a common feature on the 21st century campus.