



## Operation e-Reader

Costs at institutions of higher education are skyrocketing and no increase seems to impact students as much as the cost of textbooks. In reviewing these costs, students are caught between the bookstore and the publisher. UNC System President Erskine Bowles recently challenged each institution in the UNC system to carefully review and reduce textbook costs as part of an examination of the burden these costs place on students. A potential solution to the escalating cost of collegiate textbooks is e-Reader technology: electronic or digital textbooks are an exciting, emerging technology with the potential to significantly reduce the burden of rapidly increasing textbook costs.

Early in the fall 2008 semester, UNCW's Chancellor DePaolo approached Vice Chancellor Saunders-White to inquire about a new electronic reading device called the Kindle. The Information Technology Systems Division (ITSD) was in the process of researching this technology, so the Chancellor's inquiry proved timely and prompted ITSD to purchase a device for the Chancellor's use, while at the same time, continue to review the e-Reader product line. The Chancellor's impression of the device was positive—she found the Kindle to be a valuable tool—and a vision for a pilot project was born. The concept of the pilot program was for ITSD and campus participants to explore digital textbook technology as a cost effective alternative to hardcopy textbooks and examine its effects on the learning experience of UNCW faculty and students.

The Kindle pilot project consists of a product evaluation team involving faculty from the Department of English, chaired by Dr. Keith Newlin; Chris Stone, Assistant Director of Disability Services; and ITSD's departments of Technology Needs, Assessment and Consulting, and Technology Enhanced Learning. Each participant was asked to explore the potential added value of this innovative technology and report their experiences based on the criteria of cost avoidance, mobility, simplicity, comfort and durability of use.

In fall 2008, ITSD provided several Kindle units to targeted English department faculty members. After becoming familiar with the units' operational functionalities, these faculty



members determined their levels of interest, assessed the possibility of establishing a Kindle pilot course, and then provided students with Kindle units and proceeded to implement the device as a learning tool in their classrooms. Specifically, two faculty members in the English department agreed that instituting a pilot program in their upcoming courses could prove beneficial and pedagogically appropriate since literature text is pervasive in the e-Reader market. Consequently, ITSD launched the e-Reader pilot program with UNCW English students and faculty in the spring of 2009.

The pilot and product assessment is to be conducted for two, full semesters. During the pilot, ITSD will meet with participating faculty members and survey students who utilize Kindle units as a component of their coursework. At the conclusion of the pilot, ITSD will publish a program assessment for university review. It is important to note that the pilot's focus will be on the examination of e-Reader technology—its potential and performance—not its digital content.

In the course of evaluating the e-Reader experience, other issues will be addressed. First, the market for e-Reader technology is currently evolving with digital textbooks just now arriving on college campuses, so some features are not yet available such as true of color graphics and adaptations for close-up reading. Additionally, Copyright laws including "Digital Rights Management" issues must be addressed. Another challenge is the influx of multiple brands of electronic books arriving on the market with non-uniform publishing content—all texts are not represented on all products. However, most publishing companies currently offer electronic versions of their textbooks—McGraw-Hill education, for example, publishes 95% of its textbooks electronically, as well as in print. Finally, ITSD must remain diligent in exploring the field of electronic and digital textbook technology because its development is rapidly evolving.

Exploring this new form of educational technology is imperative since prices for hardcopy textbooks have increased significantly over the past ten years. Students are spending, on average, \$700-\$1,000 annually on textbooks. The ability to acquire a digital title could potentially reduce this cost by 40%-75%. Digital materials, whether delivered through e-Reader or other technologies, could substantially reduce a portion of this educational cost



and permit greater consumer control over source format and selection. The need for a solution is urgent and the exploration of emerging technologies could provide the answer everyone is looking for, while at the same time, substantively enhance UNCW's learning environment.

Update: Reports from Pilot Participants; April 2, 2009

(NOTE: Reviews and pilot were done with the first general Kindle.)

### **Faculty member participating in pilot**

The use of the Kindle marks the first exposure of e-Readers in a UNCW academic setting. Thus far, e-Reader devices appear to have niche applications. For passive readers or those who read for enjoyment, the Kindle provides easy access and mobility. A noted benefit to students is that much of the content used in class is in the "public domain" so the cost associated with downloading is non-existent. Additionally, the function of wireless access for downloading content is viewed as an excellent feature. Some students commented that they could read faster on the Kindle than they could a physical textbook.

Pedagogically speaking, discipline specific curriculums that incorporate heavy text based instruction would be best served by this technology. During the pilot, several students admitted to going to printed text in preparation for exams, thereby resorting to traditional habits of quickly flipping pages, reviewing highlighted passages and writing out study notes. This faculty member reviewer suggested it would be beneficial if several "Form Factor" design features were improved, such as the unintentional advancement of pages (which occurs when the page advance button is accidentally engaged), and the relatively slow speed of downloaded images.

*Next Actions: 1) End of Semester Student Survey*

*2) Identify future class (fall 2009) for piloting product*

### **Disability Services Review**

For the casual reader—for leisure, travel, etc.—the e-Reader can be very useful. There may be some students with disabilities who would benefit from Kindle type devices,



depending on the availability of texts. The facility of carrying multiple texts in one small device is considered a positive feature. However, this participant found navigation to be tedious, and commented on a lack of smooth, page-to-page motion comparing navigation to web page refreshing. Sharing a conversation from the Disability Student Services in Higher Education listserv, "In terms of (the) Kindle being used in an academic setting, it counters research regarding 'Active Reading' which is the student who engages with the text such as marking the text through, underlining, highlighting, tagging key points, which can be (a) critical element of higher level reading and comprehension." The disability services reviewer further commented: "Sometimes I worry that we're attempting to take a piece of non-academic technology and apply an educational purpose only so we can use a new toy."

*Next Action- Transfer of unit to Director of Disability Services*

### **UNCW Campus Bookstore**

The campus bookstore does not currently sell e-Reader technology, however bookstore staff does work with publishers to provide e-textbooks. While a listing of e-textbooks can be obtained from the bookstore, thus far, there have not been many inquiries from faculty or students for their acquisition. Last fall, only two e-textbooks were purchased; the final numbers for the spring semester are not in, but it appears few units have been sold. The campus bookstore reviewer indicated that bookstore staff routinely matches printed textbooks with digital textbook versions, when available, from the publisher. Also, it is noteworthy to state that the digital textbook typically sells for 60% of the cost of a traditional, printed textbook. The bookstore reviewer's position was that expansion of the e-textbook model is much more dependent on publishers than it is on university bookstores.

### **ITSD: Technology Enhanced Learning Review**

The competition in the e-Reader market has increased dramatically over the past several months. Hearst Publishing, iRiver, and Fujitsu have recently joined the digital textbook marketplace. In the end, determining which product is best for the educational market will likely be decided by determining which product best provides deliverable content at an affordable price. Currently, ITSD is evaluating the Kindle, Kindle II, Sony PRS-505, and



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iPhone and continues to keep an eye on emerging technologies as they appear in the marketplace.

*Next Action: 1) Product side-by-side technology evaluation 'Shoot Out'.*