ELECTRONIC ROUNDDUP

Understanding and Applying the Technology Forecast of the 2010 Horizon Report

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At the beginning of each year the New Media Consortium releases the Horizon Report, which aims to identify and describe emerging technologies that will “likely have a large impact on teaching, learning, or creative inquiry on college and university campuses within the next five years” (Johnson, Levine, Smith, & Stone 2010, 3). In this issue of the “Electronic Roundup” I will highlight four of the Horizon Report’s emerging technologies (mobile computing, open content, electronic books, and simple augmented reality) while discussing how we might incorporate them into our day-to-day service to patrons.

MOBILE COMPUTING: ADOPTION IN ONE YEAR OR LESS

Mobile computing is a large market of small devices. Smartphones like the iPhone, Droid, and Nexus One are helping propel the mobile market with billions of subscribers. Walk into any campus library and you will no doubt see students typing, touching, or clicking their way through the library’s Web site. Along with netbooks, laptops, smartbooks, and tablets, these mobiles are giving users the expectations to access anything from anywhere. The Horizon Report asks us to consider these devices as places to store reference materials and learning experiences. While it is true that many university libraries have already established a strong online presence, we need to make sure that our resources are quickly and easily accessible to the mobile computing patron. The library at North Carolina State University has created a NCSU Libraries Mobile site that can be accessed from almost every mobile device. Anyone may preview the site by visiting http://www.lib.ncsu.edu/m and selecting

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the preview mode. Students connected to the site have immediate access to library services such as reserving a computer or searching the catalog. There is even an application that allows them to connect with a reference librarian via instant message, text message, e-mail, or phone call. The NCSU Libraries Mobile site is an excellent example of a library’s successful attempt to engage in mobile computing.

OPEN CONTENT: ADOPTION IN ONE YEAR OR LESS

Open content is not a new issue for most librarians. With the growing expectation to maximize the Internet’s information sharing capabilities, however, now might be a good time to revisit the issue and make sure we are supporting the open access sources in our field. Open content promotes the dissemination of current, scholarly data and has led to the creation of learning communities in nearly every discipline. Increasing the awareness of available open content will also keep patrons connected to the evolving research as they graduate and lose access to subscription databases. One common hesitation in directing patrons to open content is the uncertainty of the quality of the data. However, open content and peer-reviewed, scholarly research are not necessarily mutually exclusive. The Directory of Open Access Journals (http://www.doaj.org) acts as a portal to open access scientific and scholarly journals, all of which must administer peer-review or editorial quality control. It is helpful to note that to be included in the directory, the journals are to be freely available with no embargo period, targeted primarily toward researchers, and should have an International Standard Serial Number. Within the field of social sciences there are currently several hundred different journals available through the directory. Each journal’s record includes the publisher information, its country of origin, and the language(s) in which it is written. While the Directory of Open Access Journals does not offer the same bells and whistles as some of the subscription databases, it does provide the means to freely connect to an international learning community.

ELECTRONIC BOOKS: ADOPTION IN TWO TO THREE YEARS

Your first reaction to this section of the Horizon Report might be, “Are you kidding me? Two to three years to adopt e-books? We’ve been providing access to e-books for years!” Like the issue of open content, librarians have been early adopters of this technology. I would like, though, to shed some light on the issues surrounding e-books in academia and what is stalling a mass adoption of this technology. The problem certainly is not with demand. The Horizon Report cites market reports showing enormous spikes in e-book sales. In light of mobile computing, portable e-book readers such as the
Amazon Kindle, Sony Reader, and the Barnes & Noble Nook are becoming mainstream devices as sales are already nearing the billions of dollars mark (not to mention the market saturation that will result from the release of the Apple iPad, which also functions as an e-book reader). Surprisingly, the confusion among textbook publishers themselves is to blame for the lack of a widespread adoption of “e-textbooks.”

In November 2009, the Association of American University Presses (AAUP) collected data from 59 of its member presses about the direction of their digital publishing programs. There are two key questions in this survey that I believe highlight the slower than expected adoption rate of e-textbooks. The first problem I see is the lack of standardization of the format of the e-textbook files. The issue is made clear in the survey question about the digital format in which they choose to make their content available. At the time of the survey, there were no less than seven different file formats for e-textbooks. While it is clear that nearly all the presses make sure to provide a PDF formatted version of their e-textbook, the problem is that reading a PDF is a bare-bones experience on current e-book readers. This is true especially when compared to reading a more dynamic version of an e-textbook that has been formatted for a specific e-book reader. I suspect that publishers are waiting to see which e-book reader (if any) becomes most wildly adopted by colleges and universities. If one e-book reader does emerge, then publishers should race to provide a highly interactive e-textbook that maximizes the specific e-book reader’s hardware. The other revealing question asked publishers to rate their concerns about pursuing digital publishing. Resources, production, rights, digital management, and business model all registered as causes for serious concern for a majority of the publishers. One publisher offered a further explanation:

Resource bottlenecks occur at metadata upkeep and binary-file delivery stages, as these are currently manual processes. Our production issues are centered around conversion, which must be outsourced. Rights issues surface primarily over image permissions. Business models are problematic inasmuch as there are currently too many options, rather than too few. (AAUP 2009, 5)

It is clear that digital publishing will continue to experience these growing pains as they branch out to the academic community. In the meantime, we should continue to keep tabs on the developments within this industry, as it will soon affect the direction our collections might take.

SIMPLE AUGMENTED REALITY: ADOPTION IN TWO TO THREE YEARS

At first, the simple augmented reality experience may draw a lot of skepticism from the library community. At its core, simple augmented reality is about
blending stored data with our immediate environment. Imagine you are out shopping and you stumble on a desired pair of shoes. Not only do you want to know the price of these shoes in this store, but you also want to know the price of these shoes at nearby stores. Imagine being able to use your cell phone’s camera to take a picture of the UPC code on the shoebox and immediately be able to see which store in your area has the best price for those shoes as well as comments and feedback others have made about those shoes. This is a simple augmented reality. While the technology is a little further on the horizon than some of the other technologies I have discussed, we should begin to consider how simple augmented reality can enhance our libraries. I would like to see the library catalog become a part of augmented reality that allows a student to use a smartphone to take a picture of a book’s call number and immediately retrieve the catalog record. Simple augmented reality can also take advantage of the GPS (Global Positioning System) features in many smartphones. Picture a student walking around the library’s stacks. His phone’s GPS knows exactly where in the library he is and can direct him to a specific collection or subject area. In order to provide this type of experience, librarians are going to have to form solid relationships with programmers and other professionals in the field of information technology. The benefit, however, might be an end product that delivers an engaging, information rich experience.

**REFERENCES**

