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e-Books & e-Readers: Trends, Issues, and Opportunities from the Educause 2009 Conference Discussion Forum

About 75 people gathered in a meeting room at the Denver Convention Center on Wednesday, 4 November 2009. It was standing room only. The topic was e-Books and e-Readers: will they be Successful in Education? Interest in e-Books and e-Readers and their potential impact on education is high in the popular press, as well as education industry-specific magazines. There have been high profile announcements about e-Readers from Amazon, Sony, and Barnes & Noble in recent months, as well as coverage of pilots in the education segment. E-Books are a great hope for potentially reducing the cost of text books, as are the growth in open educational resources (OER), which include many types of online resources, including open textbooks. In addition, I have talked with many educational leaders who believe that once there is an e-Book reader device that is useful for the needs of teachers and students, with all the learning materials resident, it will be a true game changer for the educational experience.

A preparatory article—The Promise and Challenges of e-Books and e-Readers in Education—is available here: http://www.imsglobal.org/developers/articles/nov2009eReaders.cfm

The format at this meetings was an open discussion. I served as the moderator, and, thanks to a little gizmo called the LiveScribe pen (no, I don't own stock) I was able to record an audio transcript that has allowed me to reproduce the meeting fairly accurately here. The disclaimer is that with all group discussions such as this, there has been no fact checking. The attendees seemed to represent a rather pragmatic lot who are the ones in their organization who have an important role in deciding how to act on this evolution to e-Books and e-Book readers. Some were literally

given some e-Book readers by institutional officials and asked to make them work. Here is my attempt at grouping the discussion into key topics, attempting to focus on trends and issues being encountered.

When Shall the Twain Meet?

My first question to the audience was a brief survey as to whether they were here at this session primarily because of e-Books (separate from the issue of e-Readers) or because of e-Readers. Less than 20% indicated they were here because of e-Books alone. This means that it is the buzz around e-Readers that is drawing lots of attention right now. However, the discussion indicated a predominant interest in textbook materials—as opposed to supplementary course materials—distributed on the e-Readers.

However, the problem right now appears to be that while providers such as CourseSmart (http://www.coursesmart.com/) and Café Scribe (http://www.cafescribe.com/) have available thousands of textbooks as e-Books, these don't work on the e-Readers. And, the textbook offerings from the likes of Amazon and Sony that work with their devices are very limited. This seems to be primarily an issue of limitations on what the e-Book devices can render in conjunction with each provider focused on a different format. The devices today, while conducive to reading text, are not good for much more. The primary Kindle format is Amazon proprietary—not an open standard. Attendees expressed reservations about getting locked into the Amazon proprietary approach. While Amazon Kindle can support Adobe PDF, it supports PDF documents only as images— making their use too limited for textbooks and most educational materials. Sony, in contrast to Amazon, uses the open ePub standard. The challenge with ePub is that it is apparently costly to move books into this format, thus greatly limiting the number of textbooks available. There was excitement among some attendees about the reported features of the Barnes & Noble Nook—which seems to be more flexible than either the Kindle or Sony. But, it is not shipping yet. Interestingly, Apple, which is rumored to be producing some type of device that will support e-materials of some sort, was not mentioned in the discussion.

Today's leading e-Book providers in the educational domain, such as CourseSmart and Café Scribe, provide access to their e-Books through web-based applications for use on computers. This allows for faithful rendering and also useful features to the student such as highlighting and commenting, as well as searching—a staple in the digital world. Café Scribe also provides a collaborative environment "around" the online book experience. Attendees indicated that "integration" with the learning environment—such as the course management system—is key to success in the education segment. Attendees also indicated that inclusion of assessment is critical to learning. Surveys by CourseSmart of students using their e-Books indicates a favorable experience: 80% indicate they will buy an e-Book for at least one course in the next term and 20% indicate they will buy e-Books for ALL their courses. So, e-Book usage for education seems to be growing, but is still a very tiny percentage (estimated 2%) of the market.

So, it appears a major challenge going forward, given the interest in e-Readers, is how to make them supportive of textbooks, additional features students want, and integrated into the educational technology environment. How do we get from the thousands of e-textbooks available from CourseSmart and Café Scribe to work in a useful manner on an e-Book reader? No one seems to doubt that within a couple of years the e-Book readers will have improved to support better rendering in color and so forth. However, what format will enable features in the e-Book readers

around the content so that it is more useful to students and integrated with other learning systems? One attendee experienced with large centralized e-Book production extolled the virtues of using the widely accepted Adobe PDF standard—as students end user platform requirements are very diverse. In other words, e-Book readers need to be supported, but so do all the other possible computing and communication platforms. At IMS we see direct and straightforward application of the Common Cartridge and Learning Tools Interoperability standards to enabling e-Books in a variety of formats running on a variety of reading platforms to provide the features and integration needed for the education segment. While the major educational e-Book providers and publishers are active in these standards, we have yet to see leadership emerge from the e-Reader organizations.

(Not) Better, But Faster, and Cheaper (Maybe)

E-Book readers seem to be gathering a lot of interest because they have "found a niche"—seems like those who like to read text and carry a wide variety of books in a small space—like people who travel. However, this is not for everyone. Many seem to have tried it and given their Kindles away to someone else who likes this mode of reading. Let's face it, paper-based books are a compelling format and book sales (in general) are not going down despite the rapid growth in digital alternatives—unlike for instance, CD sales in the music segment. This conundrum, for those of us interested in e-Books and e-Readers, comes under the age-old marketing test of "Is it better, faster, and cheaper?" Let's take each of these in turn as captured in the session discussion.

Better? Well, the e-Reader experience today is certainly not better than the book experience based on the constraints discussed above—other than if you are willing to read only text you can now do this in a more mobile format. What about the e-textbook experience from CourseSmart of Café Scribe? It is not clear. The reports are encouraging though. It certainly seems that the inclusion of features that are easy with printed materials is important—like highlighting and commenting—but can these ever be made as easy on a computer? If they can, the attractiveness of other features that are not available in a printed book—like searching, collaboration, or connection to a course management environment—seem compelling. And the tendency to highlight or make notes on a printed page may have to do more with socialization, i.e., how we learn to do this in early school, more than it has to do with it being all that great. Therefore, introduction of e-Book experiences and features at an early age may be important to evolving to this as a preferred approach. E-books certainly have the potential to be better. And, when all of your books for all of your courses are on this one lightweight reader—well, that makes your life a whole lot easier in many respects. So, in one word it all comes down to "usability." Signs are encouraging and the potential is there, but work needs to be done.

Another key issue with quality is accessibility. Attendees at the session indicated an absolute requirement for e-Books to work with the Daisy (Digital Accessible Information System) standards.

Faster? This is the area that it seems both e-Books and e-Readers shine. The e-Book option has become important in education when a physical book cannot be obtained in time or at all. And one of the really nice things about the e-Readers is their wireless connectivity to the online store.

Cheaper? By now, we all know that lowering the price of textbooks will turnaround the economy of California. But seriously, the cost of textbooks is a major component to educational cost and electronic options have the potential for the proverbial win-win: lower cost to students and lower production costs—thus still enabling a business model that can sustain quality. Generally, the price

of an e-textbook seems to be settling in around 50% of the paper book price. One attendee, an economics professor, pointed out that bookstores will buy back books at 50% and will sell a used textbook for 75% of the new price. This means that in fact savvy students can get their hands on hard copy textbooks for a similar price to the e-Book. However, it is not clear that these ideal economics are really what the student gets in negotiating with the bookstore. Perhaps though this economic equation is too close to make e-Books compelling? If the e-Book can deliver on higher value features than the physical book, then, the current pricing seems compelling in favor of e-Books. But, as discussed above, this is unclear at this point.

There were several other alternate models discussed as related to the cost issue. The first is for those institutions that can manage a more centralized digital production and distribution model. Two very different institutions—The Open University UK and University of Phoenix—that have a centralized model were at the session. Open University currently provides free access to their online course materials, primarily for potential students to review. They are still considering how to achieve electronic distribution of printed materials. University of Phoenix works with the major educational publishers to provide all of their "book" materials to all students in electronic format. The students pay a course material fee for which they get access to the entire University of Phoenix library online, and save a bundle on textbooks. Phoenix does not distribute any hard copy materials. The students can print the materials if they wish at their own expense—but very few do. What is most encouraging about the Phoenix model is that it would appear (at least on the surface) that an institution can move from hard copy to all digital in about three years if it has the centralized ability to make that happen. The second model relates to the library. We found out at the session from several library staff that the e-Book readers are "seen" as a potential cost saver because, in theory, they can loan them out with any book on them. Meaning they don't have to buy as many books to be on reserve. Of course, they do have to buy lots of e-readers. Unfortunately, the fallacy in this argument is it is not clear how useable the materials are compared to a physical book. The third model is widely known as OER—or open educational resources or open textbooks. Attendees at the session were skeptical about OER. It is not clear that they have achieved the level of quality or sustainability of textbooks. A good OER takes just as much work as a good textbook but it is unclear how education and educators support that in a sustainable way. It was mentioned that open access journals have been around for quite awhile and quality is still a major issue there. Finally, a fourth model mentioned was the ability for students to access and pay for select "chapters" of e-Books. There appeared to be interest in this model (most courses don't use all chapters in the book), but a lot of uncertainty around distribution and pricing.

So, the net-net on "better, faster, cheaper," seems to be: faster? – yes; better?— some day—not yet for most; cheaper: probably—but I wouldn't bet that this will turn around the economy of California —you can't have sustainable quality without cost.

Are We There Yet?

Clearly there is progress and lots of enthusiastic activity around e-Books and e-Readers. We are in the learning phase in which innovators and early adopters are the primary participants. We should all continue to monitor and stay abreast of the developments. At IMS, we will certainly do our best to help with the standardization and adoption issues. I expect that some of our institutional members will be interested in conducting pilots and eventually large-scale adoption, as they are doing with other digital resources. It is an exciting time.

But there are also many barriers to be addressed to move from niche-oriented adoption to wider adoption. Perhaps Apple will show up with a consumer driven device that institutions will need to scurry to support, as happened with iTunes U. Unfortunately, the general consensus on iTunes U is that is has provided marginal value to the education segment. However, starting with the broader consumer and hoping for adoption in education may be the only viable model for the bigger suppliers. So, we may be in for an iTunes U-like scenario from some provider with respect to e-Readers and e-Books.

From the discussion at the session and my own analysis, I would highlight the following compelling opportunities for those organizations that can make them happen:

#1 Centralized digital production and distribution models based on publisher textbook content: It appears that this can work and probably has the most realistic potential to reduce costs for students in a sustainable way. The challenge, of course, is the ability to implement a centralized model (including decision making on the materials)—difficult for most traditional institutions. Not so difficult for school districts.

#2 Why not more e-Books without the e-Readers for the libraries? Is the next obvious cost savings area the use of CourseSmart of Café Scribe e-Books coming on loan from the library for use on the student's PC? Why have we confused the issue with e-Readers? It seems like this is a no-brainer—reduces the number of books that need to be bought while retaining quality.

#3 E-Readers as the “front-end” to the course management environment. E-Readers may be limited in functionality, but so are mobile phones—yet they have become ubiquitous communication devices. Experience over the last several years has shown that it is relatively easy to implement IMS Question and Test Interoperability and Common Cartridge on iPhones and other mobile phones. Doing this on an e-Reader would greatly expand the educational usefulness and provide a direct connect to the learning systems at the institution.

About IMS GLC

IMS Global Learning is a nonprofit member organization that strives to enable the growth and impact of learning technology in higher education, K-1a2, and corporate education worldwide. IMS GLC members are leading corporations, higher education institutions, school districts and government organizations who are enabling the future of education by developing interoperability and adoption practice standards for educational and learning technology. IMS GLC sponsors Learning Impact: a global program and conference that recognizes the impact of learning and educational technology on access, affordability, and quality – the world's most significant educational challenges. For more information, visit www.imsglobal.org.

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