What’s not in your backpack?

The future of Textbooks in the 21st Century

Has the long-awaited acceptance of the e-textbook finally arrived? Yes, say several industry leaders, but what the digital learning application of tomorrow will look like is still unclear. Suffice to say it won’t resemble your father’s textbook.

“We don’t see the e-textbook as the learning tool that students or faculty are going to want to use or adopt in the future,” said Jennifer Eveslage, Follett’s vice president for intellectual property. “We think of print replica products, such as Café Scribe, VitalSource and CourseSmart, as transitional digital readers that eventually will be replaced with much more native, interactive products and games. I personally believe that gaming is arriving in education a lot faster than people might believe. Most K-12 students have used many game-based learning tools and are set to continue learning with these types of adaptive learning tools.”

CourseSmart CEO, Sean Devine, agrees that the look and feel of textbooks will change in the near future. “It will include textbook-like content, but you’ll interact with assessments, you’ll interact with other sorts of tools that will help you learn. It will be more adaptive and there will be analytics that enable immediate feedback loops. If you look at the products that are really impacting education right now, things like MyMathLab from Pearson, WileyPlus from Wiley, the CengageNOW products, McGraw-Hill’s Connect products, those are the ones that are the textbooks of the future. And frankly, if publishers could get to the point where they are not producing a textbook and these products replace the textbook, there’s nothing wrong with that.”
Eveslage and Devine participated in a panel discussion on reinventing the textbook at IMS Global Consortium’s Learning Impact Conference in May 2012. Moderated by journalist Jeff Young of The Chronicle of Higher Education, the panelists seemed to agree that, even in the near future, digitized textbooks will be replaced by interactive “homework applications” that will bundle content, digital assessment, and adaptive content based on the skill level of individual learners.

Widely predicted for the better part of two decades, the acceptance of digital textbooks began occurring in higher education some 24 months ago, said William Chesser, vice president and general manager of Education Solutions for Ingram Digital Group, a leading provider of e-textbooks. “You can argue whether or not it has arrived yet in K-12, but in higher education, especially in North America, it really hit about two years ago.”

Chesser’s observation is backed by statistics. A survey conducted by the Pearson Foundation in January 2012 of more than 1,400 American college students and college-bound high school seniors found that the majority prefer a digital format when reading books for fun (57 percent) as well as textbooks for class (58 percent). The finding is a reversal from the survey conducted a year ago when students said they preferred reading print over digital.

![Figure 1: Screen shot illustrating an example of an ePub3 layout and interactivity features.](image-url)
Seventy percent of respondents to the survey said they’ve read digital textbooks, compared to 62 percent a year ago, and among those college students who read e-textbooks, 81 percent indicated they have read at least one during the current academic year.

Chesser believes there are four key elements that converged to serve as the tipping point for broad acceptance of e-textbooks. One is that content providers like VitalSource, McGraw-Hill and others have conducted a good deal of research and development during the past decade into creating documents and devices that are portable and less static.

“On top of that foundation, three things happened: Number one was unquestionably the arrival of the Kindle and the iPad in the market. That fundamentally changed user attitudes in an important way. Prior to those devices coming out, every time we talked with anybody, the conversation would turn to their fear of how reading off a screen might cause eyestrain. When those devices came onto the market, and did as well as they did, we didn’t have to have those conversations anymore. We didn’t have to sell the concept of electronic readers.

“About the same time, content providers like CourseSmart came onto the market with a full inventory of books. You can’t underestimate the impact it has to be able to type in an ISBN and have a digital textbook come up as an option.

“And finally, that was the time for the for-profit college sector to explode,” added Chesser. “Those companies, because of their centralized decision-making about curriculum and implementation, almost without exception, they all are heavily distance-education oriented, so they understand how digital content can help them with that. The rise of those institutions was a lot of the business engine.”

Rob Abel, CEO of IMS Global Learning Consortium, a non-profit consortium of suppliers and institutions focused on enabling innovation in digital learning (see http://www.imsglobal.org/), said he has observed in recent years an increasing amount of effort among content providers to create and develop the next generation learning format in the digital evolution. The race is being driven largely by the size of the K-20 textbook and supplementary materials market, estimated roughly at up to $25 billion annually. To read Rob’s blog and assessment of the e-textbook discussion at Learning Impact 2012, visit: http://www.imsglobal.org/blog/?p=77

Eveslage said many institutions make the mistake of focusing on which devices and platforms to buy when they might want to spend more time thinking about keeping their options open and remaining flexible.
“My team’s message to an institution is this - adopt what you want to adopt right now and use it, and don’t get tied to systems that aren’t open enough or integrated enough to meet your future needs,” she said. “Don’t make a decision about a platform. Make decisions about course materials and the most appropriate thing to use in your classroom. What course materials will improve learning outcomes? We encourage our customers to evaluate what they use today, assess the programs, and establish goals for the future. Goals vary. They may want a delivery system they can integrate into their learning management system (LMS) or they want everything to be digital. In many cases affordability is a key objective.”

Devine said one trend occurring among colleges and universities today is a greater focus on institutional licensing. “More and more institutions are looking at ‘how does this fit into my content ecosystem on campus? Does it integrate with other platforms that I use like my LMS? Can I save my students money by negotiating on their behalf?’ There seems to be an increasing trend, obviously led by for-profit institutions, but the two- and four-year schools are starting to do this as well, towards the institutions themselves licensing the content which makes sense in a digital world.”

Hand in hand with that, Devine said, is the trend toward deeper integration with student and faculty workflows, like making sure content is compatible with LMS platforms and managing identities in ways so that students don’t have to manage multiple log-ins and things of that sort.

Devine agrees with Chesser in that a key element to the acceptance of e-textbooks today is scale. “The iBook from Apple and the Inkling textbooks are really good efforts. But it’s really hard to do in scale. People are learning that it’s not easy. CourseSmart has a catalog of 30,000 titles right now. For iBooks to get to 30,000 titles there’s some heavy lifting involved. It’s not inexpensive to do it, particularly with rich content like higher ed content. It’s one thing to get Moby Dick into iBooks and an entirely different thing to get Stewart’s Calculus into iBooks.”

Along with the need for scale is also the issue of open systems and platform ubiquity. “I can use iBooks on my iPad, but I can’t use it on my Android or my Kindle Fire,” added Devine. “You can use CourseSmart content on any device you have right now. That can’t be said of other closed systems.”

“Along with the need for scale is also the issue of open systems and platform ubiquity. I can use iBooks on my iPad, but I can’t use it on my Android or my Kindle Fire. You can use CourseSmart content on any device you have right now. That can’t be said of other closed systems.”

– Sean Devine, CEO, CourseSmart

Along with the need for scale is also the issue of open systems and platform ubiquity. “I can use iBooks on my iPad, but I can’t use it on my Android or my Kindle Fire,” added Devine. “You can use CourseSmart content on any device you have right now. That can’t be said of other closed systems. Closed systems, as rich as the content might be, may not spur broad adoption. And administrators have to ask themselves: ‘How broadly usable is this across my campus?’ The fact is 85 percent of kids have a laptop or desktop right now and I’m sure the percentage
of students with iPads is under 10 percent. We can make it great experience on an iPad and have it be singing and dancing, but if it can't be used by the kid who is on a desktop in the computer lab, which is a significant percentage of the market, then it's not broadly impactful."

Along with making content more ubiquitous, Nicholas Allen, provost emeritus and collegiate professor at University of Maryland University College, said publishers and institutions need to be vigilant about containing the costs of these new technologies. "We have to keep it simple. We can't afford to lose sight of 'straight-line' learning. Many first-generation students are being pushed out of the system because of increased costs." Allen also advised that content providers must remain focused on making their offerings available in a mobile, portable environment since that's the channel of choice for many students today.

A recent survey of more than 500 college students found that more than 90 percent said they save time by studying with technology, which includes e-textbooks, mobile devices, eReaders, and tablets. The survey, sponsored by CourseSmart, also discovered that a majority of students (67 percent) said they couldn't go more than an hour without using some sort of digital device, and 40 percent indicated they couldn't go more than 10 minutes.

What makes digital learning so attractive to students is its ability to move away from the static medium of printed material and make the content more engaging and interactive. Which raises the question: What is going to be the compelling learning solution going forward?
“At Cengage, as a content publisher, we don’t just make a book. We work with an author to create pedagogy,” said Curtiss Barnes, Cengage’s vice president for corporate development. “That’s inherent in everything we deliver, from table of contents, through the content itself, from end-of-chapter exercises to the assessments we develop to party with those elements. We strive to develop interactive content that can not only be manipulated by the instructor, but also something that can be manipulated by the user so that it’s personalized. Certainly in the context of course design, the faculty and students will want to personalize the look and feel, while allowing for additional resources to be pulled in based on their preferences. As technology evolves, we look at personalization for the students more along the learning pattern itself.”

Chesser said there is a growing awareness among both content providers and institutions of the need for interoperability standards. “On the school side, what you hear is: ‘Please make it easy.’ They don’t realize they are talking about standards a lot of the time. On the publisher and the technology industry side, we are just ecstatic that the industry is finally arriving at these standards we can all take advantage of.

“I remember years ago one of my mentors telling me that man can accomplish anything if he’s willing to not take credit for it,” he added. “I think that’s pretty close to what IMS does. They are one of those organizations that is willing to be behind the scenes, building consensus, pulling people together to have those conversations to establish standards and get things done.”

“Interoperability standards have been huge for us,” added Devine. “Just about everything we do is IMS standards based. We try to stay ahead of the curve on that. That’s one of the things that is so beneficial about our partnership with IMS. We work on their groups, we adopt the standards. We were the first company of our sort that was LTI (Learning Tools Interoperability) compliant certified.”

Ensuring that content and devices meet interoperability standards needs to be a primary criteria that institutions consider when purchasing products, said Eveslage. Adhering to IMS standards is something she says they advocate with all of their vendors.

From a global standpoint, Chesser said they expect the broader acceptance of e-textbooks to be experienced in colleges and universities throughout North America this year. They see the UK and European countries lagging about a year behind the U.S. with tremendous growth in those markets.
expected during the next three years. “And in much the same way cell phones leapfrogged over the use of wired phones, you’re going to see the tablet device surpass laptops and come into higher education in places like South Africa, India, and a lot of places in the Middle East.”

Abel concludes that the education industry is in the infantile stage of figuring out how best to leverage digital content and materials effectively and efficiently. “It is only through leadership and collaboration of individuals and organizations across K-20 that we’ll realize interoperability of content, applications and systems. The IMS community is leading the revolution to enable digital technology to play a more effective role in education.”

About IMS Global Learning Consortium

IMS Global is a nonprofit organization that advances technology that can affordably scale and improve educational participation and attainment. IMS members are leading suppliers, institutions and government organizations that are enabling the future of education by collaborating on interoperability and adoption initiatives. IMS sponsors Learning Impact: A global awards program & conference to recognize the impact of innovative technology on educational access, affordability, and quality. For more information visit www.imsglobal.org or contact info@imsglobal.org.

Twitter: @LearningImpact
Learning Impact Blog: www.imsglobal.org/blog/
tel: +1 407.362.7783
fax: +1 407.333.1365


Copyright © 2012 by IMS Global Learning Consortium, Inc.
All Rights Reserved.

The IMS Logo is a registered trademark of IMS Global Learning Consortium.