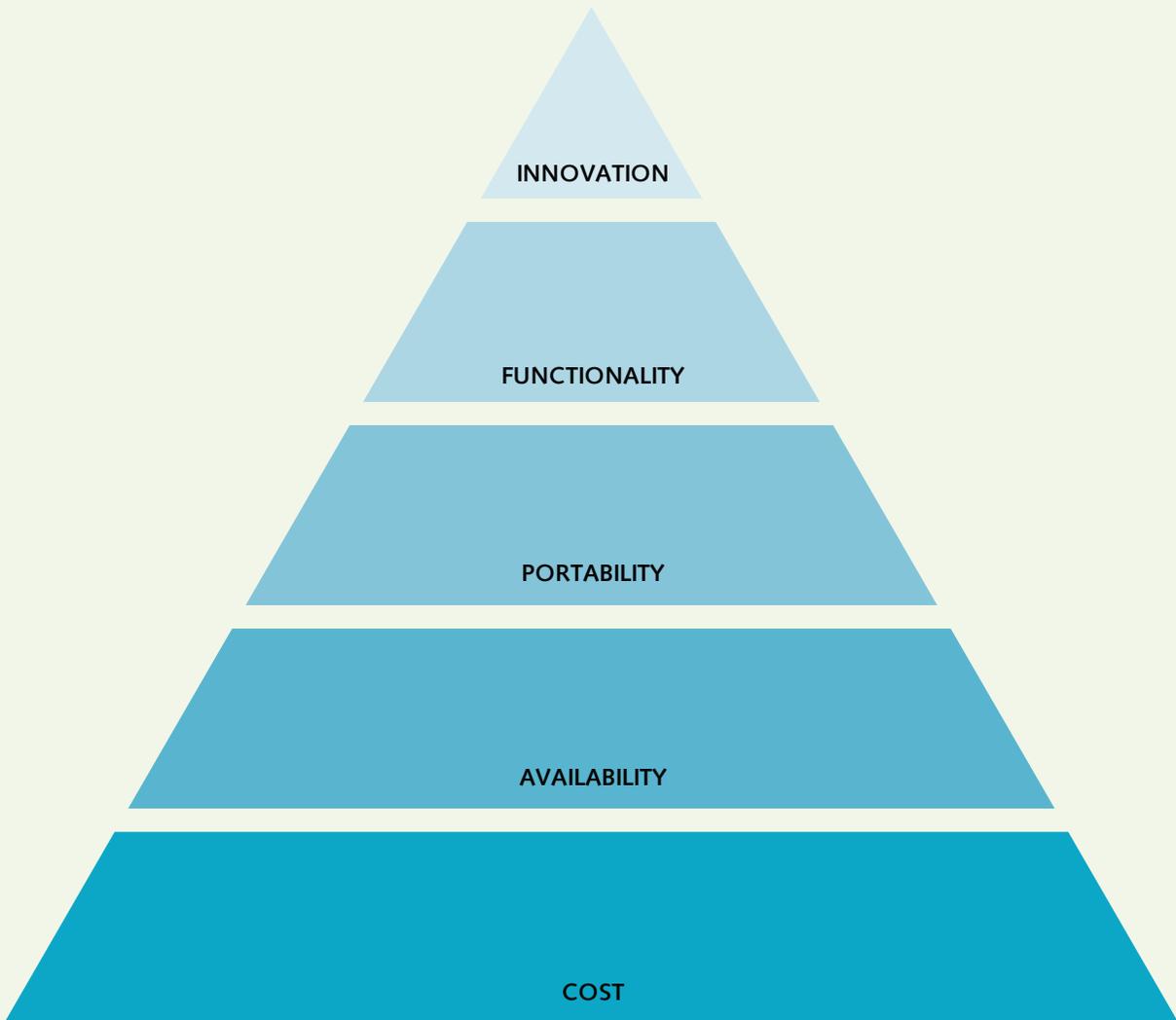


# Understanding What Higher Education Needs from E-Textbooks: An EDUCAUSE/Internet2 Pilot

## EXECUTIVE SUMMARY



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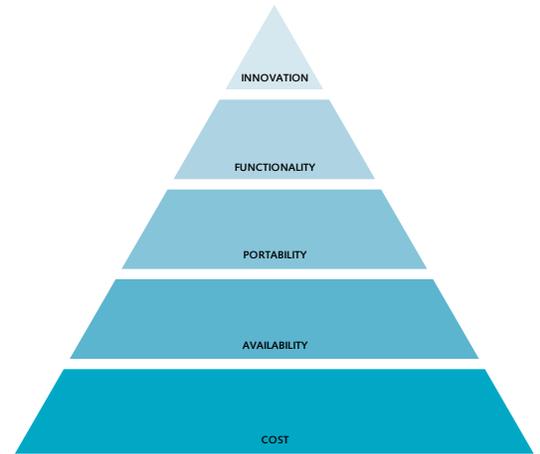
This Executive Summary contains selected pages covering the summary and key findings from the EDUCAUSE Center for Analysis and Research (ECAR) report *Understanding What Higher Education Needs from E-Textbooks: An EDUCAUSE/Internet2 Pilot*. The full report is available to ECAR subscribers. To learn more about an ECAR subscription, please visit <http://www.educause.edu/ecar/subscribe>.

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## EDUCAUSE

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## Executive Summary and Key Findings

### Pilot Structure

- Twenty-three colleges and universities collaborated with Internet2, EDUCAUSE, the publisher McGraw-Hill, and the e-textbook platform provider Courseload to deliver digital versions of textbooks to over 5,000 students and faculty in 393 undergraduate and graduate courses with a median class size of 28.
- Senior-most executives (CIOs, provosts, head librarians) sponsored the pilot in all but three institutions. Many different units helped to coordinate and execute the pilot, which required collaboration among IT (including academic computing), the bookstore, the library, disability services, enrollment management, and the general counsel.
- Pilot coordinators felt the pilot's strengths were (1) its structure (a relatively low-cost, research-based, controlled pilot), (2) Internet2's centralized and coordinated negotiating and demand aggregation, and (3) the cross-institutional collaboration and teamwork.

### Pilot Outcomes

- Faculty and/or teaching assistants and students in every course viewed the e-textbooks. Students in almost all courses (96%) used at least one special feature (highlights, sticky notes annotations, or bookmarks); faculty and/or teaching assistants used at least one feature in 57% of courses. Each specific feature was used by faculty and/or teaching assistants in only 27–35% of courses.
- The majority of students reported that using e-textbooks did not change their reading habits or studying. Less than one-third of students felt that e-textbooks improved their studying, learning, or engagement in the course “quite a bit” or “a great deal.” At least 40% of students reported that e-textbooks had little or no effect on their studying, learning, or engagement.
- Faculty struggled to find the time and support to effectively adopt e-textbooks, and many expressed a lack of motivation to invest time in a pilot that they would lose access to after the pilot's end. In general, less than half the faculty incorporated the e-textbooks into their teaching, and only 40% of students reported receiving an in-class orientation.
- Instructors' adoption of e-textbooks is a key influencer of students' experiences. In courses where faculty engaged with the e-textbooks, more students reported positive learning outcomes.
- Faculty were critical of e-textbooks when their students experienced difficulties with them. Faculty who were supporters based their assessment of the e-textbook on their own experiences and its impact on their ability to teach more effectively.

- Faculty and students were both clear and consistent in their criteria for adopting digital course materials. In order of decreasing importance, they are cost, availability, portability, functionality, and innovation.
- Cost savings
  - ▶ Institutional pilot coordinators were cautious about whether widespread implementation of this model of an independent e-reader platform solution delivering publisher content would generate savings for students.
  - ▶ Institutional costs to implement this model were predicted to increase over current costs due to such factors as digital content subscriptions, the cost of changing institutional processes, and managing disability issues.
- Students appreciated the greater portability of e-textbooks and the fact that their textbooks were more conveniently available. However, students' frustrations using their devices to access e-textbooks outweighed their appreciation. The segregation of content in a textbook platform system from the learning management system as well as from students' primary devices was inconvenient and frustrating to many students.

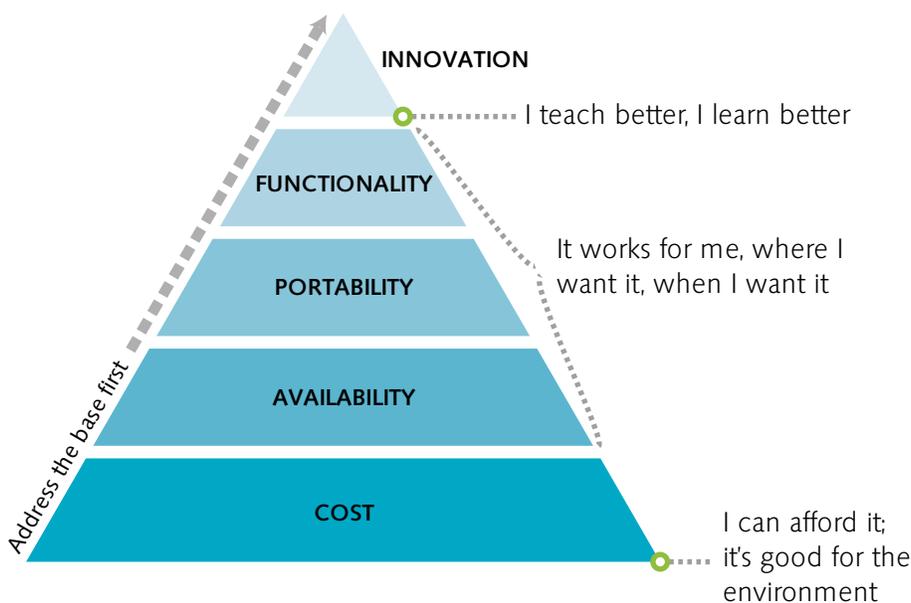
#### Recommendations

- Initiatives to bring e-textbooks to students must offer significantly lower costs than traditional textbooks, provide paper text options, and give access to the e-textbooks beyond the end of the course.
- In addition to focusing on reformulating an existing model of publisher-provided content for electronic media, higher education would be wise to expand explorations to new forms of content and new models of content delivery.
- Continued professional development is needed to help faculty explore new approaches to pedagogy through the use of e-textbooks with advanced functionality, such as collaborative tools or interactive or multimedia content.
- The usability of e-textbooks and associated technologies (such as delivery platforms and personal devices) should continue to evolve to meet the expectations of faculty and students.
- While IT clearly has a role to play to support, deliver, and help design new methods of providing digital course materials, it must collaborate and co-lead with many other groups. Each institution has a different culture and a different set of strategic priorities that will influence its e-materials strategy, projects, and services, but all will need to work across multiple areas.
- Any exploration in the area of digital course materials must not just involve faculty but also empower and incentivize them.

## Summary and Conclusions

The pilot shows the path forward: Address faculty's and students' fundamental motivations.

- They overwhelmingly believe today's course materials are too expensive and both want those costs lowered. They also consider the environment in their cost calculations.
- They want choice: choice of platform (including print), choice of place of access (including offline), choice of sourcing their textbooks.
- They see digital course materials as the way of the future. They expect those materials to be available on contemporary and emergent devices and interfaces. Their requirements are shaped by their experiences as consumers at least as much as by their experiences using institutional applications.
- They are here to teach and learn, and, with varying degrees of enthusiasm, most welcome opportunities to be more effective. They need support, though, to do this.

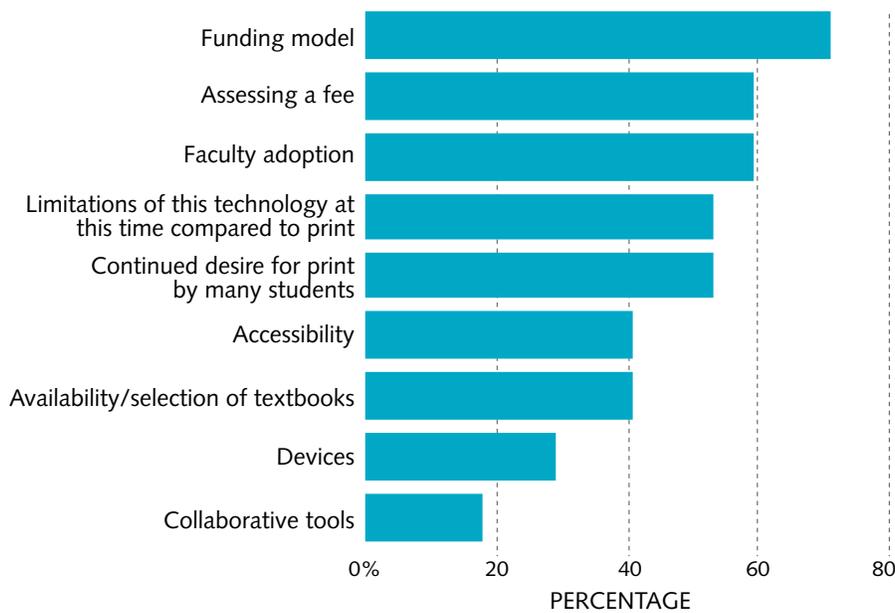


How did the pilot fare with these criteria? Students' and faculty's biggest motivations are also seen as the biggest barriers to widespread adoption (see Figure 22).

Cost, the biggest driver of value for students and faculty, was not an issue in the pilot because the pilot was intentionally structured to provide students with e-textbooks

at no cost to them. Pilot participants, however, were uncertain about the ability of the current model to deliver ongoing savings to students or to institutions. Students were ambivalent about the hypothetical future prospect of being assessed a mandatory materials fee: 33% of baseline study students said they would enroll in a course that had a mandatory e-text charge, 24% said they would not, and 43% said maybe. In written comments, students wrote that if fees were to be charged, they wanted to be able to opt out of them and find alternative sources. Faculty and administrators expressed uncertainty about whether the current publisher-driven model would ever yield significant savings. Without cost savings, students would continue to incur high expenses for course materials or to forego them entirely (as many do currently with expensive paper textbooks) in an effort to economize.

The pilot identified challenges in the areas of availability, portability, and functionality that need to be addressed. The transient nature of the pilot deterred many faculty from dedicating appreciable effort to the e-textbooks.



Source: Institutional survey, n = 17

**Figure 22. Biggest Barriers for Future Widespread Deployment of E-Texts Using a Collaborative Course-by-Course Model**

### Who's in Charge?

This pilot involved many stakeholders, from IT to the library to the bookstore to disability services. In all but 2 of the 17 baseline study pilot institutions, IT was at least one of the executive sponsors of the pilot. While IT clearly has a role to play to

support, deliver, and help design new methods of providing digital course materials, it must collaborate and co-lead with many other groups. Each institution has a different culture and a different set of strategic priorities that will influence its e-materials strategy, projects, and services, but all will need to work across multiple areas.

The most important stakeholder was arguably underrepresented: the faculty. Their motivations—to reduce students' costs, expand students' choices, and improve their teaching—were always in their students' best interests. Students had more positive experiences in courses whose faculty enthusiastically adopted the e-textbooks. One of the biggest barriers to faculty support of the pilot was their limited access to the e-textbooks, which didn't begin until the course started and lasted only during the course. The prospect of investing in e-textbook annotations and other markups only to lose them at the end of the course deterred many faculty. Any explorations in the area of digital course materials must not just involve faculty but also empower and incentivize them. All the usual challenges of innovation and change apply: The early adopters and evangelists lead the way, the recalcitrant resist at every step, and the majority can be brought along with assistance, compelling use cases, incentives, and time.

## Beyond E-Textbooks

E-textbooks are part of a larger environment of digital course materials that includes open educational resources (OERs), MOOCs, and other potential resources. These materials have their own challenges and limitations, but they may at least contribute to a future of lower-cost course materials with the features and conveniences of digital resources.

This is a period of rapid development and intense experimentation in digital course materials. In addition to focusing on reformulating an existing model of publisher-provided content for electronic media, we might be wise to expand our explorations to new forms of content and new models of content delivery. The world of scholarly content is unsettled. Many of today's stakeholders are scrambling to gain or retain position. Academia can leverage this disorder to drive out costs and challenges of today or simply remake the future in the image of the past.

The 2012 ECAR study of undergraduate students and technology suggests that OERs currently appeal more to students than e-textbooks: 47% of students wished their instructors used e-textbooks more (up from 32% in 2011), while just 18%

“Textbooks [are] one of the last areas of publishing to undergo significant technology-driven change. But a move from print to online does not guarantee lower costs for consumers—witness what happened with scholarly journals. This is our opportunity to help ensure that the transition to e-textbooks results in genuine savings for all those involved in purchasing them—students, parents, instructors, and the overall institutions of higher learning.”

—*Pilot coordinator*

wished they used them less. That is a positive sign for e-textbooks, but the trend is even stronger for OERs: 57% of students wish instructors used OERs more (up from 19% in 2011), and only 10% wished they used OERs less. The rapid year-over-year change in students' preferences is itself a warning that the resources and the market are still evolving.

If this environment is still unsettled, much of the settling needs to happen in the marketplace. Students want the portability of smartphones and tablets, the availability of the Internet, the convenience of offline storage, the features of apps and e-readers, and the readability and interoperability of paper—all on their own personally preferred platform. Each year provides new advances in the marketplace, and those advances shape expectations, stimulate demand, and create new possibilities for further innovation and improvement in educational course materials. Moving beyond consumer devices and applications, a great deal of development and innovation needs to occur in the delivery of scholarly materials and services. In that space, academic institutions and faculty are major stakeholders and have both significant interest and value in contributing to solution development. Leaving them out of the equation will lead to less useful solutions, more design dead ends, and lower adoption.

Cost, availability, and portability—these are the factors that most concern faculty and students about course materials. This is what we should strive to provide them. Functionality and innovation matter, but only when these three more-basic requirements have been met.