OPENING THE TEXTBOOK

New opportunities for libraries and publishers

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Recent headlines suggest that a quiet revolution is gaining momentum. Students are opting out of purchasing required textbooks for their courses in response to what they feel are too-high prices, even if this means their grades may suffer. Costs are indeed high for this material, rising faster than the rate of inflation from 2002 to 2012. While estimates of student spend per year differ, examples abound of textbooks selling for $200 or more. Until now, students had few options when faced with expensive required readings: purchase the book new, buy a used copy, read it on reserve or borrow from a friend. Today, a wealth of alternatives has emerged, in part because of some entirely new players entering the textbook market, willing to experiment with the basic business model itself. The terrain long dominated by a small handful of higher education textbook publishers is now seeing challengers from many corners: faculty and library-led initiatives, a handful of tech start ups seeking to create open textbooks, pending federal legislation along these same lines, and even from MOOCs.

It is clear that a few years from now the form and business models of what we think of today as “textbooks” may well look very different, but which models and players will prevail? Given the potential to reshape the way textbooks are created, might there be an opportunity here for university presses and academic libraries to take more of a role than they have in the past? While not a typical area of focus for either, do the clear lapses of the existing textbook market signaled by the unwillingness/ inability of students to pay high prices offer a once-in-a-generation chance for these highly skilled players to help reshape the field in ways that will both benefit students and offer new business opportunities for presses, libraries, and societies?

BACKGROUND

For years, observers have noticed a troubling disconnect between the suppliers of the textbooks and their customers—students. Indeed, publishers spend a great deal of time and effort creating books and materials to suit the needs of students; the cost of developing a new textbook can be $500K-$750K or more and take several years. But the decision of which textbooks to adopt has long rested with professors. Students must then choose whether to purchase the book new, at list price or close, look for a used copy or opt not to purchase the book at all and rely instead on a borrowed copy or library reserve. At the same time, textbook publishers have experimented with different business models including rental programs, institution-level purchasing, and online password-protected sites. Despite evidence that publishers are complying with the Higher Education Opportunity Act (HEOA) and making pricing and format choices more transparent to faculty and students, faculty continue to “prioritize selecting the most appropriate materials for their courses over pricing and format considerations.”

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1 With sincere thanks to Joe Esposito, Rebecca Griffiths, Curtis Kendrick, Kimberly Lutz, Deanna Marcum, David Patterson and Roger Schonfeld for their valuable contributions and suggestions.
4 The actual figures on annual student spend on textbooks are difficult to come by. The Student PIRGs report rounds the findings from the College Board’s estimate to $1200, but this represents a category called “books and supplies.” See College Board, “Average Estimated Undergraduate Budgets, 2013-2014,” figure 1, https://trends.collegeboard.org/college-pricing/figures-tables/average-estimated-undergraduate-budgets-2013-14. On the other hand, the National Association of College Stores (NACS) reports that “student spending on textbooks continues to decline,” citing 2012 estimates of $655 per student, http://www.nacs.org/advocacynewsmedia/pressreleases/studentspendingontextbookscontinuestodecline.aspx.
Professional textbook publishers in the higher education sector, for whom this is over an eight billion dollar a year business, have continued to develop materials and formats to support teachers and student outcomes. For larger courses, textbooks are often not just books, but multi-media offerings that include a range of online supporting material, including learning assessments, question banks, and a range of other ancillary material and tools for students and their professors. For the largest publishers, the shift from textbook to fully integrated “learning environments” is quite clear. Pearson’s MyLab and Mastering and McGraw Hill’s recent acquisition of Area9 and ALECKS suggest an ongoing focus on adaptive learning, where the text may just be one of many tools used to drive and measure student outcomes.

But for the most part, university presses have steered clear of this highly competitive market, focusing on scholarly works and even trade and books of regional interest, while leaving textbooks to publishers with deeper pockets to fund the development and marketing they require.

Despite the big business that successful textbooks generate, for most university presses and academic research libraries, textbooks have long been a poor cousin. Many university presses have chosen not to publish in this area, either on mission grounds or because they are unable to compete with professional textbook publishers. There are exceptions, particularly in higher-level (as opposed to introductory) courses. But for the most part, university presses have steered clear of this highly competitive market, focusing on scholarly works and even trade and books of regional interest, while leaving textbooks to publishers with deeper pockets to fund the development and marketing they require.

Research libraries, too, have most often had an arms-length relationship to textbooks; they will acquire monographs used for courses, and place them on reserve as needed, but generally, textbooks are not part of an academic library’s collections strategy. It is not uncommon for wholesaler approval plans to be configured explicitly to exclude titles in this category.

NEW CHALLENGES AND NEW PLAYERS

The Open Educational Resources (OER) movement has been around for a couple of decades already, with roots in instructional design and academic computing. At its heart is the idea that educational materials could and should be made freely available to anyone who needs to use and re-use them. In recent years, the movement has been fueled both by strategic grant making from public and private sources, including the UK funder Jisc and the William and Flora Hewlett Foundation. OERs, by definition, need not be comprehensive treatments of

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a given subject; they may be, but they can also consist of any material suitable for use in a teaching setting—a video, an online test, an infographic, a series of podcasts.

The benefits of open resources for teaching are obvious to many who use them. As David Johnston, assistant professor of Marine Conservation and Ecology recently pointed out in an interview on the PLOS Blog, “I think using OA materials is ideal. Educators can distribute materials and use them in their classes without the hassle of dealing with more restrictive licensing requirements or, in some cases paying for use of materials. These benefits are passed on to the students in the class who get a free ‘textbook’ and an educational experience that makes use of solid and up-to-date science.”

From learning objects to open textbooks

Only fairly recently has the link between OERs and “open textbooks” begun to emerge. Given the early enthusiasm for creating OERs, their uptake has been less clear, despite efforts of repositories like MERLOT in the US and JORUM in the UK to offer collections of OERs for anyone to use, and efforts of academic libraries to guide faculty and students to find materials to use. A recent study published by the Hewlett Foundation showed that the recent focus on funding the creation of new OERs (“supply side”) had led to the creation of plenty of material, but had left major gaps in content coverage and evidence of uneven uptake by teachers. Their evaluation of recent initiatives in this area found “few examples of complete off-the-shelf offerings that teachers can easily adopt as their primary resources” leading them to recommend that future efforts focus on “creating complete products.”

And this course-based approach has already begun to gain some traction. One model has been to encourage professors to abandon their textbooks and replace them with open materials already created by others. Temple University’s Alternate Textbook Project gave 11 professors a $1000 grant to “eliminate their existing traditional textbook and replace it with a nontraditional alternate textbook.” Led by CUNY, a task force comprised of academic librarians from New York state is currently seeking funding to incentivize professors to use OERs, rather than costly textbooks, in teaching their courses, with the goal of realizing cost savings for students. Some statewide initiatives have taken an aggregation approach to OERs, including Minnesota’s Open Textbook Library and Washington State’s Open Course Library.

Other efforts support the creation of new open resources. In California, two bills passed in September 2012 provided funding to support the creation of 50 free online textbooks, as well as the creation of the online repository, California Digital Open Source Library. Most recently, in November 2013, Senators Dick Durbin and Al Franken introduced the Affordable College Textbook Act, to fund a federal grant program to create, share and evaluate the impact of open textbooks.

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12 There are several examples, like the one at University of Maryland, University College, to offer a list of resources for certain courses. See http://libguides.umuc.edu/content.php?pid=66189&sid=4202119.
13 Ibid
15 See http://open.unm.edu/opentextbooks and http://opencourselibrary.org/.
Some collaborative efforts at the university level are encouraging faculty to develop new “open” textbooks. SUNY Open Textbooks, a collaboration among several campuses in the New York state system, has an ongoing program, though it has taken longer to produce finished textbooks than planned. Fifteen were slated to be released in fall 2013; as of Feb 2014, four are available. In Florida, the state-wide repository Orange Grove developed into a partnership involving the University Press of Florida, with the intention both of offering free content and identifying a longterm sustainability model. Connexions, an OER platform developed at Rice University with roots dating back to 1999, boasts “more than 17,000 learning objects or modules … and over 1000 collections, used by over 2 million people per month.” Other initiatives in the field are in early stages.

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Some of the most interesting work in this area, however, has taken a slightly different focus. Rather than inventing many small modules in the hopes professors will radically change the way they assemble course material, this trend takes to heart the reliance faculty and students may already have on their favorite (or at least current) textbooks and seeks to “replace” them with less costly versions that essentially offer the same coverage of topics and same ancillary tools. And while there are some non profits in this space, a couple of commercial ventures have also begun to make significant strides.

Two starts-ups have launched in recent years with the explicit promise of offering open textbooks. Flat World Knowledge, founded in 2007, boasted that it would offer textbooks free of charge, and generate revenue from the ancillary materials students and faculty would purchase. Boundless, founded just in 2011, also came to market with the premise of making textbooks openly available, and supporting them by selling ancillary materials. A not-for-profit initiative has emerged in this space as well. OpenStax College, created in 2012 by the same team that launched Connexions, makes the leap from learning objects to “professional grade free textbooks for most courses,” according to its founder, Richard Baraniuk, an approach that has much in common with the commercial ventures.

These course-based initiatives have not been shy in taking on the major publishers directly. Boundless in particular seems to have devoted itself not just gathering and packaging up the relevant bits of pedagogical content one would need, but to also creating the supporting materials—flashcards, test banks, and the like—around them and offering recommendations of which bundles are considered “replacements” of specific actual

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18 The project partners for the pilot phase was funded by SUNY Innovative Instruction Technology Grants and included SUNY Geneseo, College at Brockport, College of Environmental Science and Forestry, SUNY Fredonia, Upstate Medical University, and University at Buffalo, with support from other SUNY libraries and SUNY Press. See http://opensuny.org/omp/index.php/SUNYOpenTextbooks/about/description.
19 For a case study of the Orange Grove, including the partnership with University of Florida Press, see http://www.oncoreblueprint.org/_doc/OGSustain2.pdf.
21 Some other examples are lumenlearninghttp://www.lumenlearning.com/ and PanOpen https://www.panopen.com/.
textbooks. Using Basics of Accounting by Smith? Try our free version here! This tactic, of course, is what led to a lawsuit with three textbook publishers, settled in late 2013. But the point is well taken: professors used to working with one text may be more receptive to flipping to open materials that have already been gathered and vetted, and presented in a way that mirrors the course they have already been teaching.

IMPACT?
The initiatives led by libraries and state-run collaborations to create OERs or to “flip” courses from expensive to free materials have generated examples of courses where students realized cost savings. Open Course Library, developed by The Washington State Board for Community and Technical Colleges, has developed “low-cost materials for 81 of the highest-enrolled courses at Washington’s 34 community and technical colleges.” A study by the Student PIRGs “estimates that the Open Course Library has saved students $5.5 million since its inception, including $2.8 million this academic year alone.” Their website lists individual success stories, course by course.

Temple’s Alternate Textbook Program was deemed a success; professors reported enjoying the more creative engagement they and their students had with the course material, though the students reported preferring traditional print textbooks because they “consolidated the learning material into a single source that was easy to use,” though in the end they “indicated that the cost-savings of the alternate textbook outweighed all the advantages of print textbooks.”

Teacher and student satisfaction, as well as student learning outcomes, will in the end determine which model succeeds.

These are local examples. Many of the initiatives are still in relatively early days, and it will be important to measure uptake and savings over to see if professors continue to use the OERs in subsequent semesters, and to see if the OER from one campus will be adopted elsewhere, replacing costly commercial textbooks, as their creators hope they will.

The initiatives taking the course-based approach may be faring better. OpenStax College Director Richard Baraniuk reports that the textbooks have been adopted by “more than 400 institutions, viewed millions of times, downloaded more than 400,000 times, and we’ve saved students over $5.5 million.” Its goal is to tackle textbooks in 25 major courses.

The commercial entities Flat World and Boundless, both backed by venture capital, have begun to generate some impressive numbers, as well. Flat World has over 100 textbook titles available, and an interactive map allows the user to locate schools in the country using its textbooks; the feature permits users to locate a school, see what Flat World book is being used there, and offers a figure for “total savings in this course.” Boundless offers 21 college level textbooks with a reach of 3 million students.

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While these measures of impact—the reach of the course books and the potential cost savings to students—have so far been the easiest to measure, other measures may be less clear. Teacher and student satisfaction, as well as student learning outcomes, will in the end determine which model succeeds.

And while the cost savings angle is still quite powerful, over time the message has clearly shifted from “free” to “low cost.” Each of these three course-based initiatives has had to shift course as their models have developed, redefining exactly what will be “free.” In December 2012, Flat World announced that as of January 2013, it would no longer be offering textbooks for free. At the time, founder Jeff Shelstad said, “We have an issue of fairness with our retail partners and institutional partners who are all charging an access fee,” and acknowledged that the free-access model also threatened, “our overall sustainability.” Today, they offer “high-quality affordable” textbooks, from the $24 “Study Pass” which includes online access and some tools, a “digital all access pass” for $39 and print options in color and black and white.27

Boundless offers a web-based fee version and a full “textbook alternative” complete with “additional, premium study tools for each of these textbooks, including flashcards, quizzes, and SmartNotes” for $19.99. OpenStax, the non-profit course-based open publisher, also acknowledges the need to charge for content. Its web-based materials are available free of charge, with options available to purchase print only ($41.00); printed text plus online resources ($91.00); and e-book plus online resources ($50.00).29

SOME OBSTACLES
Despite a widespread popular enthusiasm for new solutions, lower cost materials, and generally poking a stick in the eye of “traditional” publishers, it is not at all obvious to what extent the current crop of challengers will be able to unseat them, or where the balance of cost and value will land. The current system includes certain barriers to change:

• **Some authors may like the current system just fine.** Experienced textbook authors, some of them distinguished scholars as well, may have financial incentives to stick with their publishers. A textbook that retails at $100 may be sold by the publisher to the bookseller at $80 net, and an author’s royalty may be 10% of that, or $8 per book. An introductory course text selling 20,000 units per year, then, would yield a royalty payment of $160,000 to the author. Of course, there may be a range of publisher discount rates and author royalty rates, and books for higher-level courses sell fewer copies than introductory texts (though the largest course books can sell over 100,000 units per year).30 The basic point is the same: potential or experienced textbook authors may have financial reasons to continue with the current system.

• **An “arms race” of features and functionality.** Textbook costs are indeed very high, but so are the costs of developing the materials. New entrants risk competing with vastly more bells and whistles than they can afford to develop themselves. Whether teachers and students require the large number of illustrations,
figures, and features is a very important question. But in the current environment, the imbalance of production values may discourage competition on the supply side, and on the demand side, discourage professors to adopt new, open titles if they don’t appear to measure up.

To overcome these obstacles, what will tomorrow’s textbook publishers—whether commercial, not-for-profit, libraries, or otherwise—need to consider, in order to develop incentives to appeal to authors and instructors, while still drastically cutting the costs to the students?

- **Investment in editorial development.** Creating effective teaching materials is not easy or obvious. There is a steep learning curve for those who seek to write and publish this material. As one publisher has gently put it, without training, “most faculty authors do not have any idea how to write for their students.” They struggle with offering the right amount of context, with providing useful examples, and with pitching the text at the appropriate reading level.

- **No discovery, no usage.** Despite the efforts of the OER repositories, systems of discovery, including review and referral systems, have not reached Amazon- or eBay-level volume, so users are on their own in evaluating new offerings. The reputation of the author, often a key selling point for a new textbooks, seems not to be highlighted as well with OERs as in traditional higher education publishing. Community ratings systems may eventually provide an alternative to establish credibility, but so far, it is hard to see evidence of robust community uptake or peer review systems. Some form of useful evaluation and rating will need to emerge.

- **Convenience matters.** A few OERs does not a comprehensive textbook make. Evidence from the Hewlett report and the student feedback from the Temple experiment support this, as does the investment Boundless has made in producing OERs that look and act like, well, textbooks.

WHERE IS THIS ALL HEADING? SPECIFICALLY, IS THERE STILL ROOM FOR A NOT-FOR-PROFIT ALTERNATIVE HERE?

With the experience of professional textbook publishers on one side and the momentum of some venture-funded start ups on another, is there still room for actors in the not-for-profit educational space—academic libraries, publishers, faculty and students—to play an active role in building a new system that delivers best of class materials for teachers, while saving students money?

There is a great deal of grass-roots support growing in the higher education community for a way to offer high quality materials to students. While the start-ups are in some ways sprinting ahead, they are, at core, businesses first. Just as both Flat World and Boundless needed to shift gears away from “free” when this proved untenable, there is no promise of where pricing may need to go in the future.

Some college and university libraries see a role for themselves here, at very least in directing students and faculty to relevant content. In some cases, they have been able to play a role in gaining attention for the issue on their campuses, and to incentivize faculty to consider alternatives to expensive textbooks. Still, despite recent development of scholarly communications services at many libraries, most do not yet have expertise in textbook development, or an effective means to develop and distribute a textbook that will be used beyond its author’s campus. One recent survey suggests that while many librarians use OERs to help students and faculty “find available content for learning, teaching and training,” they are not necessarily doing this in order to explicitly
reduce costs for students. 60.8% reported not measuring impact and over half were unsure if their students saved money from using OERs.\textsuperscript{31}

University presses have so far been conspicuously missing from this debate. Some press directors simply feel that “textbooks” are not their core competency. The existing competition for major survey courses like Principles of Economics, Introduction to Psychology, or even Music Appreciation tends to dissuade the smaller presses, who cannot compete with the investment needed to develop the books and related materials, and to actively promote them to professors. Others have identified niches to successfully publish in this space, including Yale’s program in World Languages and Princeton University Press’ list in economics and finance.

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Given the current grassroots enthusiasm of students, faculty and library staff, and given the early successes of the commercial start ups, could a closer alignment of interests among publishers, libraries, scholars and students lead the world of scholarly publishing into the domain once reserved for the major commercial presses?\textsuperscript{32}

What if..... collaboration among university presses, university libraries, campus-based instructional design groups, and faculty could produce the best of class textbooks? The presses have needed expertise in developing collections, editing manuscripts, and managing distribution channels; libraries have a strong position on campus to support faculty and students and could identify useful materials, whether created on campus or elsewhere. To be sure that any new materials developed would be useful to the wider community, perhaps editorial boards comprised of experts across multiple institutions could be empanelled, by discipline and by topic. While it would be ideal to have the initial creation of open textbooks supported by some start-up funding, ongoing revenue streams would be necessary to support ongoing editorial and technical updates, and several of the commercial ventures suggest ways this could be done. With community support for some core, customizable materials, could the academic community, the community of scholars and teachers, agree to support, update, and share back with the community? Could university-based solutions integrate high-quality teaching materials with existing LMS systems like Blackboard, as a means to build in course assessments without having to design this from scratch?


\textsuperscript{32} At the same time, however, many commercial publishers have also begun to experiment with open content as well. Pearson created opened BlueSky as a service to search and re-use open educational content, but for now this is a service only available to its paying professors and students. MacMillan has reportedly financed a similar experiment. But both of these initiatives appear to be positioned as extra value for those who are already paying customers of the company.
WHAT WE NEED TO KNOW NOW...

Before imaging the textbook of tomorrow, there are some pragmatic questions to answer today. As libraries and publishers, not to mention the funders and taxpayers who are underwriting these efforts, consider ways to create and support online open textbooks, there are some basic questions they will want to consider:

- **What do professors want to use?** This is still the main question driving course adoptions. Free, low, or high-priced, the course instructors are still the ones making the final call on the materials they will require for their students. How good are the OER materials out there today? Where are the gaps? And, what would it take to fill them?

- **What is important to instructors, in terms of improving student outcomes?** The HE publishers devote significant resources to developing online assessments, teaching tools, and other means of gauging students’ progress and skills acquisition. Many student and library discussions of OERs may not be taking into account the complexity of developing these “ancillary” materials.

- **What does it really cost to develop the content, the tools?** Once the actual costs of developing new, or curating existing, content are factored in, as are the costs of the ancillary materials that turn out to be quite centrally important, what does it really cost to develop material for a major course?

- **To ask the question a different way: what drives the cost of current textbooks, really?** And are these things “must haves”? Which costly bells and whistles are really needed, and which are just there, driving up the costs of production?

- **How will the content be updated?** While open access advocates are often quick to point to the unrelenting cycle of revisions that higher education publishers have accelerated in recent years updating teaching materials is not a trivial pursuit. Course materials need to change, both because knowledge advances, and because methods of teaching evolve. Sorting out what will fuel the needed updates – a steady revenue stream? a community of devoted teachers and writers? – needs to be a core concern for any textbook initiative, open or not.

- **How will people find and use the materials?** Creating new OERs or textbooks is all well and good, but how are students and faculty finding them today? While the larger commercial platforms have the benefit of scale, how will people beyond the instructor’s own class come to find out about a new Open textbook or collection of OERs? While mandating deposit into an accepted repository or platform is a good start, this pales in comparison to the ongoing communications juggernaut that the professional publishers deploy. Whether or not new open initiatives see themselves as competing with the incumbents, the point here is that just getting the word out, for maximum impact, will take time and effort.

- **What business models will support this?** To fund the ongoing editorial work, the user interface that will allow students and teachers to find and effectively use this material, will require some ongoing support. Existing models have already chosen to charge for value added services including print copies, access to test banks and so forth. Determining which tasks are central to the success of the enterprise and which tasks can reliably be done by which partners, or by an engaged and experienced community of editors, authors, and designers, will determine the ongoing cost base. Only then will we really know how low textbooks can be priced for students.
CONCLUSION

The only certain thing is that what we think of as today’s textbooks are unlikely to look the same 10 or even five years from now.

Will the models solidify around the “low price corporate” versions of places like Flat World and Boundless? Will they be embedded in open-ish platforms like Coursera? Or, will the higher education community develop and support course materials? What is certain is that the “winner” will need to deliver a product that students can afford, that teachers find pleasant and efficient to use, and that has a revenue stream to support ongoing development. With state, federal and private funding invested in determining how to remedy an uneven marketplace and deliver high quality materials to students at reasonable cost, there may well be roles here for new players: the university presses who have close ties to authors, mission-based goals tied to scholarship and education, and basic business skills lacking in many of the early OER experiments; and for the academic libraries who are strong campus advocates for the teachers and especially the students whose plight they witness first-hand. It may not be easy or obvious for universities, academic libraries, societies and university presses to follow the examples of OpenStax and its commercial counterparts, but for those interested in this new frontier, the time is now.