REPORT OF AD-HOC SENATE COMMITTEE ON TEXTBOOKS

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1. INTRODUCTION - THE HIGH COSTS AND OTHER LIMITATIONS OF TRADITIONAL TEXTBOOKS

A fundamental issue in academic publishing in general, and textbooks in particular, is that while technology should be driving costs down and increasing access and flexibility, we have seen little such progress. Instead, textbook prices have been rising much faster than inflation (240% over twenty years, in contrast with 186% for higher education in general and 72% overall, according to statistics compiled by the student PIRGs), with electronic access and flexibility developing slowly and costing a premium.

Students have been particularly sensitive to issues around cost, about which many faculty are not aware. Textbooks typically cost a student between $700-1000 per year, representing a significant fraction of total costs, especially to costs seen by students on financial aid. The textbook market suffers from structural defects such as a relative lack of competition because of consolidation, with only three major companies currently, and the fact that professors make textbook decisions while students are the ones who bear their cost. Plus, textbook publishers engage in practices such as bundling supplementary materials which might not be used or coming out with new editions roughly every four years, which most professors feel are justified less than half of the time. Changing editions effectively kills the used textbook market. Options such as digital textbooks are rarely less expensive, and in surveys of students roughly three-quarters of them would prefer print to digital formats.

Faculty, in addition to being sensitive to the needs of their students, also have a number of complaints about the current situation. Faculty must navigate multiple websites to find options and must order a desk copy in order to see the full content. It is often difficult to find a textbook which closely follows one's own particular order and approach, and customizable textbooks are only coarsely so (with the ability to reorder chapters, up to a point, but not for example to expand or cut back specific sections of text). Add to these serious concerns minor irritants such as unknowledgeable representatives and the shady desk-copy buy-back market, and faculty understandably prefer to keep their distance from the textbook market.

Some developments promise to change this landscape considerably. Open textbooks, and open educational resources more generally, have the potential to decrease cost and increase choice, quality and flexibility. An open textbook is one with an open license and easy low-cost access to print and digital copies. Such textbooks have been developed and used at institutions ranging from CalTech and Brown to the University of Puget Sound and Saint Mary's in fields such as economics, computer science and mathematics. Our own Marian Friestad has used an open textbook in one of her physics courses. With an open license, faculty can tailor an open textbook to their own needs, even adding or removing entire sections. Students of course appreciate the low cost and the easy on-line access.

Offering educational resources in an open format has become a priority for some universities. Most prominently, MIT has developed "Open Courseware" with videotaped lectures, interactive demonstrations, homework problems and other materials available in a highly accessible format at no or low cost. Colleges and universities around the world, including in developing countries, have based their own courses on these materials. Efforts such as iTunes U have allowed a wide variety of campuses to follow suit and post material reflecting the strengths of their institutions.

In addition to "open" strategies, there are a number of other ways in which faculty can address these issues: committing to textbook editions for longer periods of time, banking homework and test questions and other resources so that faculty can more easily make their courses textbook-independent, and even making sure to get their textbook order forms in on time. While open textbooks are an intriguing and exciting new option, these approaches should not be overlooked.

Finally, we note that a move towards development of open materials along with a sustained dialogue about these issues within our community could help address problems we are encountering across the academic publishing landscape. We comment on these further issues at the end of this report.

2. Six recommendations

We start with the obvious but fundamentally important point: quality of educational content is by far the primary concern in choosing textbooks and other educational resources. Indeed, one of the authors of this report plans to continue to use a thin, very expensive textbook which clearly in his view has the most extensive and well-crafted collection of problems.

Our main, overarching recommendation is simply that faculty be aware of the issue of cost and the opportunities which are afforded by different options being developed. Taking the time to shop for high-quality low (or no) cost options can mean significant savings for students. Many faculty have addressed the cost and flexibility issues on their own in clever ways, as we share below. By encouraging discussion as a campus community, we hope that such solutions be reached much more broadly. Below we recommend specific actions to follow up on these suggestions as an

institution. But because all of the main decisions will be made at the level of departments and individual faculty, we choose to make these recommendations in broad terms so that they can more easily be tailored.

2.1. **Encourage use of open textbooks.** Open textbooks are online textbooks offered for no or low cost, often with licensing that allows for free re-use and open source materials to allow for customization by different users. The use of open textbooks significantly reduces costs for students, while also offering the convenience of accessing the text online or printing out part or all of the textbook. For those open textbooks with open licensing, faculty could also arrange with the UO Duck Store to have printed and bound copies available for students to purchase.

Open textbooks typically do not have the same production values (glossy photos, detailed figures, boxes of text in the margin) that standard textbooks have, since they are usually produced using either LaTeX or Microsoft Word. For some fields such as human physiology or art history where high-quality pictures are needed, this would make their adoption undesirable at this time. But in fields such as economics, mathematics, computer science and physics, polished production values are less significant.

As one would expect, the material in open textbooks range in quality - an author's noble publishing behavior does not make their writing any better - but there are already some very successful texts. For example, Introduction to Economic Analysis written by R. Preston McAfee (available at `http://www.introecon.com/`) has been used successfully at universities such as CalTech (the author's institution), Harvard, Toronto, NYU, Simon Fraser and Claremont McKenna. Open textbooks frequently lack the supplementary materials (test and homework banks, lecture slides, etc.) that some well-developed textbooks have, though those are being developed, for example by both Flat World Knowledge (see below) and the student PIRG groups, who have made the promotion of open textbooks one of their main campaigns.

Open textbooks not only address the issue of textbook costs, but are a much more flexible instructional tool than standard textbooks. Thus they have the potential to significantly improve instruction since, with some happy exceptions, faculty generally feel that the text they are using does not get it quite right. If a textbook has an open license, a faculty member can add (or remove) problems, sections or whole chapters of material they wish to (not) cover. One can rearrange sections, and edit the text so that it still reads coherently. In the end, any faculty using open textbooks would essentially be able to develop their own textbook made to fit with their syllabus, not the other way around. Standard textbook publishers have seen this development and are now working on making their own texts more customizable, but cannot replicate the flexibility which comes with an open license. Currently, there are relatively few open textbooks, meaning that faculty do not have much material to draw from in trying to piece together a custom book. But if open textbook development were encouraged on our campus and others (see below), such tailoring could become widely practiced.

There are now two main sites which collect and catalog open textbooks and other low or no cost options (which might have restrictive licenses and copyrights, if for no other reason than that the author did not know enough to change from the default of a full copyright). One site, `www.textbookrevolution.org`, uses a Wiki model. Run by student volunteers, it relies on the broader community to point to new texts, changes in the status of older texts, and so forth. It seems fairly complete, but the listings at the moment are only alphabetical rather than by course within a subject. It also has yet to track significant variants on an open text. The second

main site, `www.flatworldknowledge.com`, is a new commercial site for a company which is fully launching in January 2009. The company's mission includes providing materials at low cost, making profit only from providing print copies and supplementary materials. They have already signed up some significant contributions, including Preston McAfee's economics textbook. With their leadership team and high profile (including mention in the New York Times), they should be a significant player in the textbook and educational resources market.

Many faculty members may not be aware of existing open textbooks, or may have preconceived notions regarding the quality of these books. In order to help faculty have the information needed to evaluate open textbooks for their classes, we recommend that

- Over the course of the 2009/2010 academic year, presentations be made on campus regarding the use of open textbooks.
- Faculty and graduate students be made more aware of existing open textbooks by distributing an informational pamphlet.
- Our subcommittee can be contacted should faculty or graduate students have questions regarding finding or using open textbooks for their classes.

2.2. **Encourage reuse of textbooks (used textbooks and rental programs).** When an academic department or individual faculty member agrees to adopt a particular edition of a textbook for all sections of a course and to commit to that adoption for two or three years, students in that class can have the benefit of years of lower prices and more money back from buyback.

The campus bookstore, having a commitment for a long period of using the same book, can buy back copies from students at half of the new price, for a longer period each term, knowing that the books can be sold to students for the next term. The used price is 75% of the new price, so students who buy it used and then sell it back pay only 25% of the new cost in the end, a huge savings at a time when many textbooks cost over $100 new. This keeps the money flowing back to our students, rather than the bookstore having to buy and ship in copies from publishers or used book wholesalers.

Some campus bookstores have started textbook rental programs, and a key component of these is a long commitment by the department or individual faculty member to use the same book. In these programs, the bookstore charges a certain percentage of the books new cost to rent the book, which the student returns at the end of the term (or he/she must buy it). Then, in successive terms, the rental price may drop for that book, so the student gets a better and better deal as the book gets older.

While such programs would have the most impact for large, introductory courses, the savings for students in smaller courses would still be worthwhile if a department or individual faculty is able to make such a commitment.

2.3. **Encourage use of lecture notes and supplemental materials found online.** Many instructors post their lecture notes online, usually on their own home pages. The quality and quantity vary from short notes that the instructor used in addition to a textbook to complete texts including homework problems that could easily serve as stand-alone textbook. In fact, in some cases those notes have been (or soon will be) published as a textbook, and the author has posted a preliminary version online.

The wide range of quality and quantity is not necessarily a disadvantage: it provides the instructor with flexibility in choosing materials from multiple sources. Some instructors post videos of their own lectures online, which the students can watch on their own. Others post java-applets for demonstrations online, or slide shows on one particular subject suitable for one lecture.

There are several strategies for finding such lecture notes: typing "lecture notes on [favorite subject]" in one's search engine will typically produce a long list. There are some sites with large collections of lecture notes in more or less diverse areas. For example, MIT has a website with a large collection of free online course materials (`http://ocw.mit.edu`).

There are, as far as we are aware, no websites yet that review online lecture notes (as opposed to those reviewing open-source textbooks). Thus, whether given lecture notes are suitable for a given course is, at this point in time, for the instructors to judge for themselves. Of course, one may always discuss the quality of notes with colleagues. One can also contact the author and ask for their experience with the lecture notes. Generally speaking, it would be useful if there were a website where instructors and students can review online lecture notes.

Another difference between lecture notes and online textbooks is that in the latter case the author presumably has taken appropriate actions to ensure no copyrights are violated. Lecture notes may contain copyrighted figures, illustrations, and quotes. Lecture notes on the above-mentioned MIT open-source courseware website are posted with copyright-violating materials removed. With notes posted on home pages it is presumably less likely the author has asked permission to publish all materials, and so one should write to the author and inquire explicitly about copyright.

Printing and binding lecture notes would generally be possible, done by the Duck Store. Copyright issues for our use at the UO is another reason for directly contacting the author. Authors of particularly good lecture notes might be willing to make their source available, transforming their lecture notes into an open textbook.

All in all, online lecture notes are most likely the cheapest solution available, but the instructor has to expend more effort to judge the quality and suitability of the notes.

2.4. **Provide better venues for faculty to share teaching materials, in particular question banks.** Online textbooks are part of a larger class of online educational course resources. Such materials include traditional textbook supplements of the sorts often included by commercial vendors in an instructor's kit – sample lecture notes, test banks, homework banks, sample syllabi, etc. They have increasingly included online simulations, games, supplementary reading lists of web resources, data sources for student statistical analysis projects, and a host of other items. In many cases such materials are useful only in the context of the course for which they were created, but even video recordings of class lectures made primarily to allow review within the course can in some cases be useful to students in a future instance of the course.

Experience at the UO has been that only a few faculty members use multimedia resources provided by commercial textbook vendors as part of their textbook adoption. Concerns are often expressed that such materials, perhaps packaged as blackboard "course cartridges", are insufficiently flexible for integration into a course the way the UO instructor wants to teach it. An instructor may also be legitimately concerned about becoming too dependent on intellectual property owned by a particular textbook vendor, since such dependence could make it difficult to adopt new and better textbooks. Similarly, some local investments in developing multimedia

content have had limited impact because they were tied to a specific course and to the needs of a specific instructor teaching the course rather than created with a broader audience in mind.

However, some types of resource are very heavily used, for example multiple-choice test banks. Similarly important resources in some disciplines are banks of homework exercises, either with or without sample solutions. Such test and exercise banks can be problematic when tied closely to a particular commercial textbook, since they reduce the instructor's flexibility in choosing different books or in moving to an open source text. Indeed, some UO faculty have developed their own personal homework banks, using those problems rather than those from a textbook so that students could use older editions of a textbook or use a different book entirely.

The UO can take several steps to make greater use of open educational resources easier. Among them:

- Departments can use their departmental Blackboard sites to share educational materials among faculty in the department. This approach is already in use in several large departments, and can be valuable even in simply making instances of syllabi easily available so that instructors in more advanced courses know what materials were covered in recent instances of prerequisite courses.
- Departments can set up template blackboard sites for large introductory courses and make them available to all of the instructors who teach that course. Such sites not only provide a natural and secure place to store online resources, but they solve an institutional memory problem when one instructor takes over a course from another and may have very little knowledge of how the course was taught previously.
- The library can invest in locating and identifying existing open testbanks – and other open educational resources – for introductory subjects that could be used independent of a particular textbook. Individual instructors could then evaluate the materials and decide whether to use them in conjunction with a textbook or with readings and lecture notes that might not have their own testbanks.
- The library should also restore its site license for the Respondus testbank management system. This tool was popular among a number of faculty who maintained their own test banks independent of textbooks, but was cut in 2008 for budgetary reasons.
- Faculty should also consider depositing examples of open educational resources they develop into Scholars Bank, where they would have long-term preservation and greater visibility to other potential users.
- Finally, the same process that the university sets up to encourage and fund creation of complete open textbooks (as proposed in our next recommendation) can be used to foster the creation of reusable pieces of courses.

2.5. **Encourage production of open textbooks.** Our first recommendation was to encourage use of open textbooks, whenever they are comparable to or better than the alternatives. Following up on that recommendation represents little cost to the university. But open textbooks will only be widely adopted when there are a large number of high-quality options. Moreover, as mentioned above, faculty are only likely to customize and expand texts - yielding considerable educational benefits - when there are a wealth of materials available to draw from. Thus, we also recommend that the University be ready to support the development of new open textbooks.

Historically, textbook writers have used their own time - beyond teaching, research and service - to develop their books, and then they have reaped the financial rewards through working with

a publisher. So far, open textbook writers have also produced texts on their own time, and then simply given away their copyright altruistically. But the open textbook format affords a number of different economic models. Just as for shareware software, payment could be voluntary on an individual basis. Or, bookstores can charge beyond printing costs and send money to an author. Or, money can be collected by the university directly or through a fee (for example, Rob Beezer from the University of Puget Sound was happily surprised to receive a check from Saint Mary's College after they used his linear algebra textbook).

One model which we found particularly attractive (but yet to be implemented, to our knowledge) was having faculty forgo most if not all royalties but instead get support from their university in the production phase. Such support could include buy-outs from teaching, support for graduate students to help with the project, librarian research time, help with figures from a publications expert, or copy-editing, among others. A university could try to recoup its investment through the mechanisms (added printing costs, fees) outlined above.

Such a system could make sound financial sense. For example Math 111 had a total of 1858 students from F07-U08, including re-takes, purchasing 1739 books. The Duckstore bought back 1224 of those books. The situation is slightly complicated by the fact that there were different texts depending on whether students were planning to take Math 112, one of which costed $137 new and the other $66. But from Duck Store sale numbers we can deduce that the total cost to students as measured by total spent on books minus money regained by selling back to the bookstore was between $70,000 and $115,000. In a year where the edition is new, the cost would be the latter, since buying used books would not be an option. In a year where the edition is about to change, the cost would be between $150,000 and $186,000, since selling the book back at half the price would not be an option. This considerable student savings could be harnessed for textbook production. Adding a $20 surcharge to an open textbook for the course, yielding a text which would cost the students roughly $40, would mean conservatively at least $30,000 per year which could go directly into textbook development. Over a five or seven year period, this might pay off the development "start-up" for producing such a text. Indeed, one could argue that some surcharge be added to all textbook purchases to go directly into an open textbook development fund, which would then save students considerable money in the long term.

These numbers become even more encouraging if it seems likely that costs could be recouped through charges on other campuses or that development could be shared with other campuses. The sharing could be either through some coordination of different texts to be developed at different places, or through working together on a text, which might be feasible for example with other OUS institutions. If we add in the benefits to and possible revenue from students across the country and around the world (for example, California community college students pay more on textbooks than they do on tuition, so high-quality open textbooks are almost certain to be adopted there), the cost-benefit analysis is not even close. Moreover, having these materials openly available, in particular for 100-level courses, could help high-school teachers, students, parents and others understand exactly what is demanded in basic university coursework. Indeed, developing such open texts would advance University's mission in a deep, multifaceted way.

Coming back to educational quality, our foremost concern, such texts could also bring in a wider array of faculty viewpoints, in particular from research faculty. Because textbook development is generally done at the expense of research time, lower-level textbook development tends to be dominated by faculty who do not have active research programs while authorship of upper-division textbooks tends to be split between these communities. But by having a buy-out of

teaching time and some graduate student support, a research faculty member could consider a modest individual textbook project. Anecdotally, there are quite a few UO faculty who have some great ideas for texts which they would write if they only had the time. If we can develop even a few of these ideas which would not have been otherwise, we would be taking a significant leadership role in higher education.

The questions of exactly which development and economic models are used, the final viability analyses, and the evaluation of which textbook development ideas (if any) are most worthy are beyond the charge of our committee, to be passed along to a group which would presumably work closely with the Provost's office and the Undergraduate Council.

2.6. **Negotiate with publishers.** In some cases, faculty have successfully negotiated lower textbook prices on behalf of their students. The best-known case of this is that of the UCLA mathematics department, which negotiated a lower price for the calculus text which they used. As a large department serving thousands of students, they had some bargaining power.

While many are rightly skeptical of our ability to successfully bargain with publishers, it has been done and in some cases is necessary. Perhaps with the leverage afforded by our adoption of these other recommendations, and in particular competition from open textbooks, such negotiation will become easier.

3. Plans for immediate action

The recommendations above are broad and fairly comprehensive. We now narrow our focus and address the questions of how we can raise awareness of these ideas in our colleagues and what should be done in the short term campus-wide. We propose that our ad-hoc committee on textbooks continue to meet and to report to the Senate, and that we take the following actions.

- Send letters to department chairs and other faculty, and be available for follow-up discussions. Appendix 2 contains a draft of such a letter. While recognizing that departments always have the first and last say about their teaching materials, we can be persistent in asking that they actively consider these issues.
- Publicize the issue, including through having events such as outside speakers. Rob Beezer, who developed a linear algebra textbook, has already informally agreed to visit in Fall 2009. We can view this challenge not only as a "business opportunity" but as a "teaching moment."
- Help promote even mundane actions such as having faculty choose textbooks early in the process, so that used textbooks can retain their value. In some cases, just filling out a form on time can save students, collectively, thousands if not tens of thousands of dollars.

Moreover, we plan to work with the Provost's office to help form a second working group. While our committee is, in short, looking to "save students money now," this group will be charged with the longer-term issue of developing open educational resources and evaluating their feasibility from both an educational and business perspective.

4. The larger picture of issues in academic publishing.

A number of our recommendations would be significantly enhanced by cooperation between campuses. For example, a commitment by faculty to help develop a better interface to the site `textbookrevolution.org`, including summaries and reviews, would make it significantly easier

to find and compare open textbooks. But such a commitment is well beyond what we as a single campus can provide. Perhaps the most significant area for cooperation between campuses is in the economics of open textbooks. While we could marshall existing revenue streams (namely, the purchase of textbooks) to underwrite the development of a book for a course with five-hundred or a thousand students, the economics is different for a class of thirty. But if campuses agreed to collect fees for such texts which go back to the producing institution, then the economics is once again promising. Alternately, if there were good pedagogical reasons, we could develop some texts in conjunction with other campuses and also split the development costs. Our seventh recommendation, and first "off-campus" recommendation, is to try to work with other institutions to develop agreements around the licensing, economics, and possible collaborative development of open textbooks.

Reaching out to and being a leader among a wider group of campuses could have an impact well beyond this problem of textbooks. In many contexts, we are producing academic content and then paying too much to the publishing industry to access finished content, relative to the value that the industry adds. In the language of business, we have become dissatisfied with our vendors. In the language of revolutionaries, it is time to break our chains. Consider the following areas of concern.

- Textbooks.
- Serials: Journal price inflation has been over 8%, and now for-profit titles cost 3-5 times as much per page or per citation than not-for-profit titles. A typical university library could save on the order of a million dollars per year if we relied predominantly on not-for-profit publishers. The for-profits also typically demand that authors give up many more of their rights.
- Monographs: The gold standard for tenure in the humanities is production of a book, but this market tends to lose money and thus can be cut back in tough economic times. Should campuses tenure fewer professors in the humanities in a recession?
- Homework software: Over the past thee years, one commercial homework-checking software package went from $9/student/term to $25. There are free alternatives in some fields, but smaller departments do not have the resources to set up reliable servers.
- Publishing data sets: Sharing large data sets is fundamental in emerging science, with the human genome as a wildly successful example. Protocols for storage and access, economic models, and copright/liability issues need to be worked out. Our professional societies are one natural source of faculty voices, but if we work together across fields we can ensure these good solutions across the board.
- Course packets: Assembling course packets is a big waste of time for faculty in the humanities. A one-stop shopping site where scanning, copyright clearance, compensation for the copyright holder, and assembly for bookstore printing are all done for a faculty member would be ideal, especially if there were an Amazon-stye interface. But if we wait for publishers to put such a system together, experience points to the likelihood of paying too much.
- Meta-data and searching: Efficient searching will be an ongoing great challenge. Systems such as those based on meta-data (for example, keywords) will become more a part of our daily lives. Good tools produced by universities could drive healthy competition with commercial products.

One basic dynamic is that unsustainable models persist because there are risks to change, especially if going it alone. Who wants to be the first campus to break ties with long-running journals or to give up on the book in-print as their currency for tenure? Economies of scale are also an issue, with individual faculty, departments and even entire campuses not having enough production or buying power to drive significant change. Finally, what was a more all-in-the-family relationship between academics and publishing has become not only more market-oriented but oligarchical, with profit concerns driving practices such as bundling of textbooks and of journal titles rather than innovation. We have been slow to adapt to this change.

These issues have been on various people's minds for at least two decades, and we should celebrate significant progress from high-quality low-cost open journals to MIT and its Open Courseware to the success of the ArXiv to single authors who have made their research and teaching freely available to the pleasure of wide audiences. But these kinds of practices have yet to become widely spread enough to fundamentally change the dynamics. Two big reasons are awareness and lack of incentives and frameworks to encourage these activities.

We ask that faculty take a moment to reflect on this and do your own assessment of the importance of academic control and sustainable publishing to academics. Consider your own practices in publishing, refereeing, editing and teaching and ask yourself what your "access footprint" is. Finally, what we can do as a campus is to start reaching out to other campuses, both their faculty senates and their administrations, to at least have a serious discussion of these issues and possible coordinate actions. To formalize this, we could even initiate a "Coalition on Academic Publishing," to collect best practices, inform faculty senates, and meet to discuss these issues. The meetings could naturally be joint with librarian groups such as ARL or SPARC, to take advantage of an established venue and the considerable knowledge of our librarian colleagues, who have been grappling with many of these issues for years.

Appendix A. Letter to department chairs and other faculty colleagues

Dear colleague,
A fundamental issue in academic publishing in general, and textbooks in particular, is that while technology should be driving costs down and increasing access and flexibility, we have seen little such progress. Instead, textbook prices have been rising much faster than inflation with electronic access and flexibility developing slowly and costing a premium.

Students have been particularly sensitive to issues around cost, about which many faculty are not aware. Textbooks typically cost a student between \$700-1000 per year, representing a significant fraction of total costs, especially to costs seen by students on financial aid. Because faculty make the textbook decisions while the students bear the cost, it is primarily faculty who have the ability to ameliorate textbook expense for students.

We ask you and your faculty to consider the following actions.

First, please look at the sites `textbookrevolution.org`, `flatworldknowledge.com`, MIT Open Courseware `http://ocw.mit.edu` and Connexions (`cnx.org`) to see if there are any textbooks for courses you teach which are of equal or better quality than what you currently use.

Secondly, consider whether you could commit to any of your textbooks for two or three years to ensure a healthy used book market.

Third, consider if there are any natural opportunities for production of open textbooks or other course materials in your department. Possibilities to look for include the following.

- Faculty course notes of high quality which could be worked up into a textbook.
- Faculty who have been teaching a course a number of times successfully, despite having difficulty settling on a text which fits their approach.
- Courses with such large enrollments that it would be feasible to recover a significant amount of development costs from sales on our campus alone.

The University will be forming a working group to evaluate the educational and business viability of such projects.

Please contact our committee if you have any questions about these steps or about the textbook market in general.

Sincerely,