The Investigation into the Rising Cost of Textbooks

A Background Study of the Context of Michigan Initiatives with an Eye Toward Launching a Library-based College Textbook Publishing Program

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1) Introduction

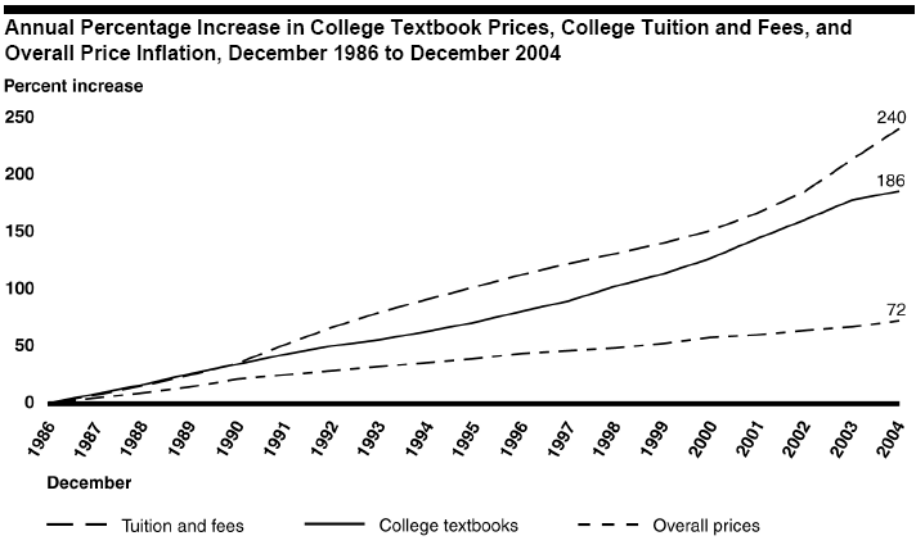
In this report we investigate the facts concerning the rapidly rising cost of college textbooks. The lack of textbook affordability has drawn increased nationwide attention over the last decade. To identify the reason and context behind the escalating prices of college textbooks, a number of review boards have been established at federal, state, and campus levels, proposing a variety of new and more creative methods of textbook development and distribution. The University of Michigan is not an exception. This study report aims first to help us better understand the overall context of today's textbook problem and then to tackle the questions of what choices we have today and what other alternatives, such as open textbooks, we should further consider in order to increase productivity and efficiency of teaching for faculty as well as to provide low-cost instructional materials for students, making education and resources more affordable. This is a preliminary study to be followed by an in-depth analysis that explores the potential of putting Michigan ideas into practice, including launching a library-based college textbook publishing program as a new approach to textbook affordability.

2) Facts Concerning the Rising Cost of College Textbooks

2.1 The Nationwide Trend and the Case of Michigan

Concern over the price of textbooks has risen to the level of national outcry, drawing increasing attention and action from public interest groups, state and federal legislatures, faculty, students, bookstores, publishers, and university leadership. According to the US Government Accountability Office, college textbook prices have increased at twice the rate of inflation over the last two decades (GAO 2005).

Figure 1. Changes in textbook prices 1986-2004



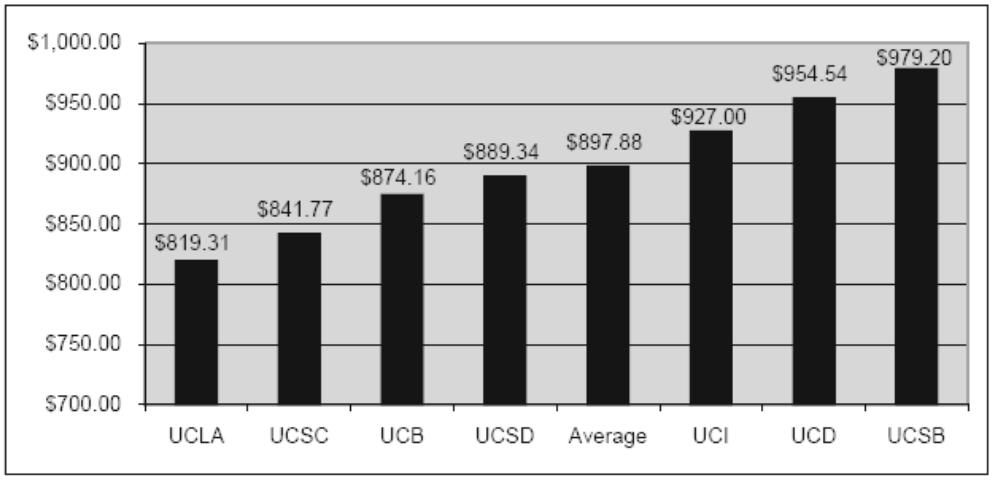
Source: GAO (2005)

As Figure 1 shows, between December of 1986 and December of 2004, textbook prices have increased at twice the rate of inflation, increasing by 186 percent, whereas tuition and fees increased by 240 percent and overall price inflation grew by 72 percent (*ibid.*). While increases in textbook prices have followed close behind tuition increases, the estimated cost of textbooks and supplies for the average four-year undergraduate student was $898 for the academic year 2003-2004, or about 26 percent of the cost of tuition and fees at four-year public institutions.[1] Continuing these rapid increases, during the 2006-2007 academic year the average four-year undergraduate student spent $942 on textbooks and supplies according to the College Board (Bell and Badolato 2008). Today, students and their families are estimated to spend as much as $6 billion on college textbooks and supplies (National Association

[1] More specifically, first-time, full-time students spent a total of $898 at four-year public colleges and $886 at two-year public colleges on books and supplies in 2003-2004. The College Board also provides similar data; sample average undergraduate budgets for 2003-2004 put annual expenditures on books and supplies at $817 at four-year public colleges and $745 at two-year public colleges (College Board 2003). As of this writing, the most recent data show that, as the College Board reported, for the 2007-2008 academic year an average student spent an estimated $805 to $1,229 on college books and supplies. http://abcnews.go.com/OnCampus/story?id=6510643&page=1 (accessed January 26, 2010) and http://www.govtrack.us/congress/billtext.xpd?bill=s111-1714&version=is&nid=t0%3Ais%3A22 (accessed January 26, 2010).

of College Stores 2005; Koch 2006). While other estimates of annual expenses on textbooks vary by the year and the type of institution attended (see Figure 2), it is reasonable to conclude that per-student expenditures on textbooks can easily reach $1,000 annually.[2]

Figure 2. Average amount spent on textbooks by schools surveyed by CALPIRG for 2003-2004



Source: Fairchild (2004)

To better understand the state of soaring textbook prices in the local context, an overview of the case of Michigan should be useful. At the University of Michigan (Ann Arbor) campus, for the 2002-2003 academic year the average undergraduate student spent $740 on books each year and the average professional-level or graduate student spent around $860 each year, according to estimates by the Office of Financial Aid at the University of Michigan.[3] More recently, for Winter 2007 the average total textbook cost per course was $126, according to the report presented by the Textbook Task Force at the University of Michigan Provost Office (2007). The Task Force studied 21 high-enrollment courses (those with 600+ students enrolled), each including between 636 students (Engineering 101) and 1,795 students (Psychology 111). In each course students are assigned, and in most cases are required, to purchase one or two new or used textbooks, making the average cost $126 for a single course with the range of $45-$224. What is striking is that simply multiplying the total number of undergraduate students at this institution as of Winter 2007 (26,083) by the average total cost of textbooks ($126) generates approximately $3.3 million if each student took a single course in Winter 2007. Imagine how much one undergraduate Michigan student would have to spend on textbooks while taking several courses per semester for four years. Given that most students take 4-5 courses per semester, the estimated total costs of textbooks would reach approximately $15 million. It is apparent

[2] James Koch (2006) points out that students at California public universities spent an average of $898 on textbooks in the 2004-2005 academic year, and if textbook prices have continued to rise at six percent per year, then this expenditure would have risen to $1,009 in the 2006-2007 academic year.
[3] Doug Wernert, "Students Seek Out Best Book Deals," *The Michigan Daily*, 6 January 2005. Available at http://www.michigandaily.com/content/students-seek-out-best-book-deals (accessed February 2, 2009).

that the cost of college textbooks imposes a significant financial burden on Michigan students and their families and, by extension, on the University of Michigan financial aid department.

At Michigan, for over a decade, textbook prices have been a priority among campus issues for candidates to address during Michigan Student Assembly presidential campaigns.[4] In the spring of 1998, Michigan Student Assembly presidential candidates had already expressed concerns about the high prices students pay for textbooks. One candidate stated that "(t)he textbook issue is something that needs to be explored. Is there anything that can be done about it or is it out of our hands? It will be interesting to see what happens with this issue because it is a big issue that affects all students on this campus" (Cohen-Vrignaud and Wright 1998). It is interesting to note that despite Michigan's earlier concern about the textbook cost and its financial impact, a similar nationwide outcry, primarily from the Student PIRGs (Public Interest Research Groups), was not realized with lobbying activities until the mid-2000s.[5] University of Michigan students have expressed their concerns over the rising costs of college textbooks for over a decade now even though there is no PIRG chapter in Michigan as of this writing. Independent of PIRGs' initiatives, Michigan students, led by the Michigan Student Assembly, have continued to engage the textbook issue.

2.2 Factors Contributing to Changes in Textbook Prices

While there are many factors that affect textbook pricing, the price of textbooks has increased in recent years for two major reasons (GAO 2005). First, the revision cycle of three to four years common to many books, regardless of whether or not the previous edition needed updating, contributes to the changes in textbook prices. The reason is that short revision cycles, or more frequent revisions, limit students' ability to reduce their costs by purchasing used textbooks and selling their textbooks back to bookstores at the end of the term. The California PIRG, which is taking on the publishing industry on behalf of students, claims that the most widely purchased textbooks on college campuses had new editions published within three to four years and that they cost, on average, approximately 50 percent more than used copies of the previous edition (Fairchild 2004; Bell and Badolato 2008). Even though faculty indicate new editions are justified only half the time or less, the publishers continue to update them frequently and students have to buy new books (*op. cit.*).[6]

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[4] The Michigan Student Assembly has played a significant role in addressing as well as tackling the question of rising textbook prices. Gerard Cohen-Vrignaud and Kristin Wright, "Dueling Platforms," *The Michigan Daily*, March 13 1998. Available at http://www.pub.umich.edu/daily/1998/mar/03-13-98/news/news24.html (accessed March 13, 2009).

[5] For a brief history of the Student PIRGs' campaigns to reduce college textbook costs, see the website of the Make Textbooks Affordable Project, available at http://www.maketextbooksaffordable.org/ (accessed March 13, 2009). This project was launched in 2003 and one of its primary missions is to engage in the campaign for more affordable alternatives to traditional textbooks, asking faculty members around the nation to share students' concerns about the high cost of college textbooks by signing "The Open Textbooks Statement to Make Textbooks Affordable." In this statement faculty members state their intent to include open textbooks in their search for the most appropriate course materials, and they declare their preference to adopt an open textbook in place of an expensive, commercial textbook, if the open textbook is the best option. Seven University of Michigan faculty members signed this statement. For the full text of the open textbooks statement of intent, see Appendix A. I also discuss open textbooks as one of the feasible alternatives to conventional expensive textbooks in detail in section 3 below.

[6] According to CALPIRG, 76 percent of faculty report that the new editions they use are justified "never" to "half the

The second contribution to the significant rise in textbook cost is a more recent trend, i.e. enhanced offerings of additional instructional materials such as software and workbooks bundled into textbooks. According to CALPIRG, in a certain instance a textbook was available both bundled and unbundled (only the textbook), and the bundled version was more than twice as expensive as the unbundled version of the same textbook. Publishers say they have increased investments in the development of supplements, particularly web-based tutorials and self-assessment tools, to meet the increased demands from instructors who hope to enhance student learning (GAO 2005). However, 65 percent of faculty report that they "rarely" or "never" use the bundled materials in their courses (Fairchild 2004). Above all, the increasing practice of packaging textbooks and supplements effectively limits the students' ability to purchase less expensive used books.

2.3 Other Factors Affecting the High Cost of College Textbooks

Over the last several years, a large body of work has been done to examine why the textbook prices have been rising so rapidly, and most studies shed light on unusual, uncommon characteristics of textbook markets (e.g. Koch 2006; Lewis 2009; University of Wisconsin System). Koch (2006), for instance, addresses the question of how textbook markets differ from most other markets by looking at both supply and demand sides of the market. He argues that the textbook market is remarkable in that the primary individuals who choose college textbooks, faculty, are not the people that pay for those textbooks, namely students. The textbook markets are often described as analogous to the market for prescription drugs, where prices have also risen rapidly, and where doctors prescribe expensive drugs while it is the patients who actually pay for them. In the words of Preston McAfee, an economics professor at California Institute of Technology, "both textbook publishers and drug makers benefit from the problem of 'moral hazards'—that is, the doctor who prescribes medication and the professor who requires a textbook don't have to bear the cost and thus usually don't think twice about it."[7] In these unusual markets, the separation of textbook choice and textbook payment profoundly influences pricing—just like the separation of prescription and consumption in a comparable situation in medicine—thereby forcing students to pay for faculty's assignment of textbooks as a long-standing academic custom.

Thus, what makes students' textbook purchases even less responsive to price increases than any other commodities is that many faculty members choose and assign their textbooks with little regard to the cost of the textbooks. A Connecticut Board of Governors for High Education study (2006) revealed that only 58 percent of that state's faculty were aware of the cost of the textbooks they selected for their courses.[8] In the summer of 2009, the Scholarly Publishing Office of the University of Michigan Library administered a survey of Michigan faculty probing concerns over rising textbook

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time," and 40 percent of faculty report that the new editions are "rarely" to "never" justified (2004).

[7] Noam Cohen, "Don't Buy That Textbook, Download It Free," *New York Times*, September 12, 2008. Available at http://www.nytimes.com/2008/09/15/technology/15link.html (accessed March 13, 2009).

[8] Board of Governors for High Education, Department of Higher Education, State of Connecticut (2006), cited in Koch (2006).

expenses and our survey results show that 66% of Michigan faculty reported being aware of textbook prices before assigning their books.[9]

At any rate, it is important to note that the unusual separation existing between those who choose the textbooks and those who eventually pay for them contributes to the rising costs of textbooks and a lack of concern over how to increase affordability of college textbooks.

[9] To find out more about survey results, see SPO Textbook Study Report available at http://www.lib.umich.edu/files/SPOTextbookStudy.pdf

3) A Search for Solutions: Federal, State, and Campus Level Initiatives

3.1 Federal and State Governments' Endeavors: Making New Laws as a First Step

The fact that textbooks now cost approximately $1,000 annually is a tremendous financial burden for many students and their families. At the same time, escalating educational costs (tuition and textbooks) have a negative impact on federal and state government spending as financial aid providers. As a result, both federal and state governments have taken action aiming to contain soaring textbook prices and to improve affordability. The proposed solutions to lower student textbook costs include a variety of federal and state government policies and programs, including advocacy and legislative pressure on textbook publishers requiring transparent pricing, unbundling of supplemental material, and less frequent textbook revising.[10]

A significant first step was taken in November 2007 by presenting to the House of Representatives a bipartisan bill, College Opportunity and Affordability Act, a part of which is "designed to rein in skyrocketing book prices."[11] This bill requires "publishers to provide more pricing information to professors." In addition, this proposal requires "publishers to 'unbundle' the increasingly common and expensive packages of textbooks, CD-ROMs, workbooks, and Web tools" so students are able to purchase whatever part they need without being required to buy the parts they don't need. This bill was passed by the House in February 2008 as Higher Education Opportunity Act, H.R. 4137 [110th], and became Public Law 110-315 after Senate's approval in July 2008 followed by the Presidential signature in August 2008.12 The effectiveness of Public Law 110-315 will not be known until sometime after the federal law takes effect in 2010.

More recent legislative activities include the newly proposed bill H.R. 1464: Learning Opportunity with Creation of Open Source Textbooks (Low Cost) Act of 2009. This bill was presented to the House of Representatives on March 12, 2009, requiring federal agencies to collaborate in the development of freely-available open source educational materials in college-level physics, chemistry, and math, and for other fields. In particular, the bill requires each federal agency that expends more than $10 million in a fiscal year on scientific education and outreach to use at least 2 percent of such funds for collaboration on the development and implementation of open source materials as an educational outreach effort. It also directs such agencies, under the joint guidance of the Director of the National Science Foundation (NSF) and the Secretary of Energy (DOE), to

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[10] In prior to legislative activities, some states conduced background studies, including Minnesota and six SREB states (Arkansas, Florida, Louisiana, Tennessee, Virginia and West Virginia). See The Minnesota Office of Higher Education (2007). *Strategies for Reducing Students' Textbook Costs.* St. Paul, MN, available at http://www.ohe.state.mn.us/pdf/textbookCostsReport.pdf (accessed January 26, 2010); Jeffrey Grove (2009). "Focus on Rising College Textbook Prices." Southern Regional Education Board, Atlanta, GA, available at http://publications.sreb.org/2009/09S04_Focus_textbook_prices.pdf (accessed January 27, 2010).

[11] For more information on new laws, see Kim Clark,"Four Reasons Textbook Costs Will Drop," *U.S. News & World Report*, July 21, 2008, available at http://www.usnews.com/articles/education/2008/07/21/four-reasons-textbook-costs-will-drop.html?s_cid=related-links:TOP (accessed January 23, 2010).

[12] The relevant section concerning textbook costs is Section 112 of HR 4137 (Higher Education Opportunity Act). For a Congressional Research Service summary of the bill, see Appendix B and available at http://www.govtrack.us/congress/bill.xpd?bill=h110-4137&tab=summary (accessed March 13, 2009).

collaborate with each other or with any federally supported laboratory or university-based research program to develop, implement, and establish procedures for checking the veracity, accuracy, and educational effectiveness of open source materials.[13]

Much more recently, Senate Richard Durbin [D-IL] introduced S. 1714: Open College Textbook Act of 2009 in September 2009. According to Senate Durbin, "(T)he Open College Textbook Act will create a grant program for the creation of freely-available, online open college textbooks." It is expected that making high-quality open textbooks freely available to the general public would significantly lower college textbook costs. Durbin further notes that "this investment will improve learning in our college classrooms and help bring down the cost of college for students."[14] More importantly, requiring textbooks funded under the program to also use an open license, which the bill defines as "an irrevocable intellectual property license that grants the public the right to access, customize, and distribute a copyrighted material." Wiley (2009) considers the Durbin Bill as an important step for the open education movement as "it will bring a real sense of urgency of impact into the discourse, and provide the OER community with good data and metrics to talk with confidence about the amount of money students are saving thanks to open textbooks."[15]

In addition to federal legislative activities trying to ease the strain on college students' wallets caused by textbook prices, various states including California, Connecticut, Illinois, Maryland, Missouri, Oklahoma, Oregon, and Washington have taken similar actions. Many states have already proposed and passed similar bills that require changes in order to contain rising costs of college textbooks and to allow students easier access to affordable alternatives.[16] In 2007 alone, more than 85 bills in 27 states dealt with textbook affordability. By the end of 2007, 10 states had enacted 15 laws or resolutions to reduce textbook costs. As Table 1 shows, these legislative efforts take a variety of approaches.

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[13] The full text of H.R.1464 is available at http://www.govtrack.us/congress/billtext.xpd?bill=h111-1464 (accessed January 20, 2010).
[14] Senate Durbin's remarks as he introduced the bill are available at http://www.govtrack.us/congress/record.xpd?id=111-s20090924-47#sMonofilemx003Ammx002Fmmx002Fmmx002Fmhomemx002Fmgovtrackmx002Fmdatamx002Fmusmx002Fm111mx002Fmcrmx002Fms20090924-47.xmlElementm30m0m0m (accessed January 24, 2010). A full text of S. 1714 is available at http://www.govtrack.us/congress/billtext.xpd?bill=s111-1714 (accessed January 24, 2010).
[15] David Wiley, "Durbin Open Textbook Bill Finally Introduced!" David Wiley's blog, *Iterating toward Openness,* September 30, 2009. Available at http://opencontent.org/blog/archives/1103 (accessed January 24, 2010).
[16] For discussion about state actions, see Bell and Badolato (2008), Kingsbury (2008), and Clark (2008).

Table 1. Number of Submitted Textbook Bills by Topic, 2005-2007

Topic of Textbook Bills Submitted	Year		
	2005	2006	2007
Tax-exemption for course materials	12	13	13
Faculty to select less expensive option and financial incentive when selecting a textbook	5	5	17
Publishers encouraged to unbundle materials	4	7	16
Universities making book-lists available to students and/or competition	4	4	8
Focus on buyback and/or rental programs	2	4	8
Creation of review boards to investigate cost of textbooks	2	6	5
Online book library	N/A	1	N/A
TOTAL	29	40	67

Note: This table is compiled from information provided by CSU (2007) and available at http://www.nacs.org/news/statebills.asp

Some legislation requires bookstores and publishers to offer both bundled and unbundled course materials, publishers to provide summaries of changes in updated text editions, and faculty to consider cheaper options or submit their course material lists by a deadline so students have the opportunity to shop around for the best price (Bell and Badolato 2008). Other legislation exempts textbook purchases from sales tax; requires publishers to provide faculty with a complete list of all different text versions and supplemental material or a printed summary of substantive content differences in new editions; requires bookstores to spell out how new text editions differ from previous editions; actively promotes rental and buy-back programs; and encourages using technology to create and distribute textbooks and instructional materials in more affordable ways, such as electronic textbooks (e-textbooks cost approximately 50 percent of the retail price of a new hard copy textbook) (*Ibid.*).

In January 2009, the California State Senate introduced a new bill SB 48: College Textbooks and Electronic Versions which would express the intent of the Legislature to enact legislation relating

to the affordability of college textbooks and the promotion and use of online textbooks. The bill was amended in March and August 2009 and it would require that "publishers of textbooks offered for sale at a public postsecondary institution of education make the textbooks available in an electronic format by January 1, 2020." The bill would also require that "electronic versions of textbooks include the same content as the printed versions and would allow the electronic versions to be copy-protected. The bill would prohibit charging a higher amount for an electronic version than is charged for the printed version."[17] Although the year of 2020 seems still a long way off and it may not be always the case that e-textbooks are less expensive than print printed versions, it is likely that the transition to e-textbooks may occur rapidly and the overwhelming majority of textbooks will be available electronically long before this California State bill goes into effect.

While all these endeavors have been under way from coast to coast, the state of Michigan has been somewhat behind in enacting textbook bills. Michigan has failed to enact laws or resolutions to reduce textbook costs, although attempts were made in 1999, 2000, 2001, 2004, and 2006. In those years, Michigan legislators proposed bills to eliminate the sales tax on textbooks required for courses at postsecondary institutions (Michigan House Bill 5568, January 2006). Also, a different bill was introduced in order to provide an income tax credit for the full cost of college textbooks, credit available only after the taxpayer or taxpayer's dependents pass the courses for which the books were bought (Michigan House Bill 6356, August 2006).[18] In addition to tax-exempt or tax-credit proposals, in 2005 the Michigan legislature presented a resolution, first urging state school faculty to coordinate textbook selection to pressure publishers to make books more affordable, and also urging state institutions to explore group textbook purchasing (Michigan Senate Resolution 24, April 2005).[19] Unfortunately, since the state's struggling economy and unbalanced budget made politicians reluctant to support tax credits or exemptions, none of these bills or resolutions has been approved in Michigan as of this writing, although legislators in many other states have been at the forefront of legal solutions for curbing the rising costs of college textbooks.

3.2 Campus Efforts at the University of Michigan

While the Michigan legislature has been unsuccessful in making state laws to curb textbook prices and/or to increase textbook affordability, there has been a series of campaigns and activities around campuses in Michigan in seeking a variety of ways to lower textbook prices.[20] Since 2001 the Association of Michigan Universities has been lobbying the state legislature to pass a tax-exempt law

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[17] A full text of SR 48 (amended) is available at http://info.sen.ca.gov/pub/09-10/bill/sen/sb_0001-0050/sb_48_bill_20090323_amended_sen_v98.pdf (accessed January 24, 2010).

[18] Summaries of state legislative activity are available at http://www.nacs.org/news/statebills.asp, and Michigan legislation can be found at http://www.legislature.mi.gov/ (both accessed March 13, 2009).
The report of the California State University Textbook Affordability Taskforce (2007) lists all 50 states' legislative activities concerning textbook affordability for 2005, 2006, and 2007.

[19] See footnote 16.

[20] Editorial, *The Michigan Daily*, February 21, 2001. Available at http://www.michigandaily.com/content/cutting-textbook-costs (accessed March 13, 2009).

as abolishing the sales tax on textbooks will ease the financial constraints of many students, although the Michigan legislature has ceased even making any efforts to formulate textbook-related bills for the last two years.[21]

Since 2004, the Michigan Student Assembly and University of Michigan officials have been actively working to find more affordable, alternative ways for students to get the textbooks, coursepacks, and other materials needed for their classes. The increased concerns about rising textbook costs addressed by UM student leaders and University officials eventually resulted in the establishment of the UM Textbook Task Force in fall 2006. One of their proposed solutions is to require faculty to release book lists a certain number of days before beginning of the term. This is because timely textbook adoptions enable students to sell their used textbooks during buyback at local bookstores at the end of each term and then to purchase relatively inexpensive used textbooks either at local bookstores or online in the next term.

Increasingly, the timeliness of textbook adoptions has been a central focus of review boards at various campuses (e.g. California State University 2007; University of Michigan 2007; University of Wisconsin System 2007), partly because state legislatures have taken aim at the textbook problem from the same angle. Several states, for instance, Arkansas, Minnesota, and Texas, passed legislation requiring college faculty to submit textbook adoption information early enough to allow local bookstores and students to find used books, comparison-shop for the best prices, and avoid additional shipping fees.[22]

While the Michigan legislature has not introduced this type of bill (in contrast to the aforementioned tax exempt/credit bills), the University President Sue Coleman strongly stated that "I do not think that legislators need to be involved here. …(t)rying to create laws to control prices is not productive… (t)he best way to make textbooks affordable for students is to require professors to release book lists early" Nelson (2007).[23] In this regard, it is not surprising that the issue of textbook adoptions has become a primary focus of the UM Textbook Task Force report, which recommends that the University establish required dates by which textbook lists should be posted to allow students to take advantage of the used book market and seek cost savings in other ways.[24]

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[21] *Ibid.* See also, Nelson (2007).

[22] One of the most recent state legislative activities regarding textbook adoption is the case of Minnesota. The newly proposed textbook bill, if passed in February 2010, requires all eight of Mississippi's public institutions to establish textbook adoption deadlines that are no later than the beginning of the registration period for succeeding semesters and are at least 40 days prior to the end of the preceding semester. A new, and controversial, aspect of the bill is that it strongly encourages the same course material to be adopted for all sections of a course as well as a minimum textbook adoption period of two years for most upper-division courses; therefore, implementation may be a challenge. For more information, see http://media.www.reflector-online.com/media/storage/paper938/news/2010/01/29/News/Msu-Officials.Textbook.Plan.Likely.To.Pass-3860629.shtml (accessed January 24, 2010).

[23] For a similar discussion emphasizing the role of University rather than state of Michigan, see Royce (2007).

[24] According to the UM Textbook Task Force, data on textbook adoption rates on 39 campuses reveals that the University is way behind 50 percent, which ranks UM 38th out of 39. This indicates faculty have not been encouraged to make textbook selections early and most do not make decision until it is too late to support a used book market. The full text of the Textbook Task Force report prepared by the UM Provost's Office (2007) is available at http://www.provost.umich.edu/reports/Textbook_Task_Force_Final_Report.pdf (accessed March 13, 2009).

To accelerate textbook adoption rates and to encourage other cost-saving practices, the UM Textbook Task Force further recommends that: (1) the University should develop, test, and implement an online textbook tool that, a) allows faculty to enter and share their textbook lists with students and book sellers, b) allows students to find other students who want to buy or sell textbooks being reused in a subsequent term; and (2) the University should provide a structure for rolling out, publicizing, and managing the various new systems and processes by naming the Office of the Registrar as the business owners and appointing a Faculty/Student Textbook Steering Committee to rally faculty support, advise the Office of the Registrar as it administers the textbook listing process, and monitor changes in practice and their impact on textbook costs.

After a recommendation from the University's Textbook Task Force encouraging faculty, particularly those in large courses where common textbooks are used, to select their books early, thereby fostering a used market that is beneficial to students and local booksellers, campus efforts have resulted in building an online system called Textbooks Tool, described as a "significant work" and a "win-win" by Brenda Gunderson, chair of the Task Force (Gnagey 2008; Swanson 2008a, 2008b). This new online tool, comprised by CTools[25] and UBook, which launched on October 6, 2008, helps faculty communicate their textbook selections early to both students and booksellers. Beginning in Winter Term 2009, faculty and instructors create textbook lists through Wolverine Access Faculty Center/M-Pathways and distribute the lists to the bookstore of their choice, while students can access the lists in their CTools My Workspace while choosing classes.[26]

In the words of UM's senior vice provost Lester Monts, "faculty benefit by finding out early if there are problems stocking a particular title, if there is a new edition, or if a title is out of print."[27] On top of that, a major advantage of this Textbooks Tool is to give students early notice so they can shop around and save money on their books. Before that, students often received their textbook requirements on the first day of class, making it too late for them to obtain cheaper copies via the Internet. Therefore, this online program is indeed one of the cost-saving solutions to increase textbook affordability here at the University of Michigan. Yet, the University does not require professors to use the system, although the University Task Force recommended that professors make their booklists available to students at least six weeks before the start of the term, especially for courses that use a

[25] CTools is the University of Michigan's implementation of the Sakai CLE (Collaboration and Learning Environment). Sakai was and continues to be developed in an open-source project with other members of the Sakai Foundation. The Sakai Foundation is made up of over 100 schools, institutions, and commercial affiliates. For more information about Sakai, visit sakaiproject.org. CTools has evolved from the earlier applications CTNG (CourseTools Next Generation), UM.WorkTools, and the original UM.CourseTools. Information on how to use CTools is available at https://heprod.dsc.umich.edu/htmldoc/eng/dftie/lsaa/htm/sr_fb_textbooks.htm and https://ctools.umich.edu/portal (both accessed March 13, 2009).

[26] Textbook information entered in Wolverine Access is shared with local bookstores. https://heprod.dsc.umich.edu/htmldoc/eng/dftie/lsaa/htm/images/CU_TB_TextbooksOnline_Oct2008.pdf (accessed March 13, 2009).

[27] UM News Service, "U-M's Ubook, Other Tools Help Students Buy and Sell Used Textbooks," news release, December 23, 2008, available at http://www.ns.umich.edu/htdocs/releases/story.php?id=6911 (accessed March 13, 2009).

particularly expensive book.[28] Unfortunately, as of this writing there are no plans to make the use of Textbooks Tool in creating reading lists and ordering textbooks through the Wolverine Access Faculty Center mandatory for professors. However, as for the usage of CTools, here is a positive indicator: the average scale score of UM faculty (n=1,504) is 4.39 (from 1: strongly disagree to 5: strongly agree) to the survey question of whether CTools is valuable for course-related activities (Lonn et al. 2008). Furthermore, according to the most recent focus group study, "CTools is the preferred portal for faculty and their students, and faculty are familiar with how to post content within a course site. Some faculty do use personal or departmental web space for some materials and course activities, but CTool is by far the most common" (Bradley et al. 2009: 4). These positive findings are encouraging.

In addition to a new CTools feature, as part of the Textbooks Tool, UM has introduced a university-sponsored textbook exchange website called UBook designed for students to buy and sell books among themselves. This also became available in the fall 2008 for Michigan students to start finding books for Winter Term 2009. Those making the transactions also benefits from early adoption, as students are able to buy with confidence from their peers.[29] UM junior Cameron Cropek said, "It will simplify the textbook buying and selling process a lot, and bring it down to a local level. …(i)n the past, I have sold my old textbooks online, and the transactions are difficult. They send you a check in the mail, you have to pay for shipping, and it is hard to tell if the buyer is even legitimate."[30]

Because the new textbook data entry system has been introduced so recently, "(i)t is too early to tell how successful the (early adoption) program will be," according to Lester Monts, UM's senior vice provost.[31] However, it is worth noting here that MAIS, Michigan Administrative Information Service, considers the results concerning the new textbook system as "successes" as of this writing — for Winter 2009, the new textbook web tool has been adopted by faculty and students alike, thereby approximately 3,000 textbooks were entered on the system; put differently, 62 percent of classes with enrollment greater than 100 students had textbooks or course pack information entered prior to the textbook calendar date, 29 October 2008 that had been set for Winter 2009.[32] Regarding the usage of a newly introduced university-sponsored textbook exchange website UBook, it is reported that for

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[28] For Winter 2009 textbook information was considered most useful if entered by October 29. https://heprod.dsc.umich.edu/htmldoc/eng/dftie/lsaa/htm/images/CU_TB_TextbooksOnline_Oct2008.pdf (accessed March 13, 2009).
Also see Textbook Calendar on the Office of the Registrar's website for dates, available at http://www.umich.edu/~regoff/calendar/ (accessed March 13, 2009).

[29] It should be noted that financial transactions do not take place in UBook; rather students complete transactions via person-to-person emails. Information on UBook is available at http://www.umich.edu/~umctdocs/Textbooks.html (accessed March 13, 2009).

[30] UM News Service, *op. cit.*

[31] *Ibid.*

[32] *MAIS Announcement,* March 2, 2009. Available at http://www.mais.umich.edu/project_infocenter/announcement_what.php?guid=20090302143003 (accessed January 25, 2010). Not all departments are expected to reach 100 percent as some classes do not use course packs or textbooks. Data calculation that generated this average is available at http://www.mais.umich.edu/project_infocenter/executive_report/winter_2008/online_textbooks_100_or_more.php (accessed January 25, 2010).

Winter 2009 students posted 4,417 textbooks for sale on UBook. This result is also regarded as a success by MAIS.[33]

UM has taken a step forward by integrating online measures into its course management system in an attempt to address student concerns about rising textbook expenses.[34] Indeed, this online system constitutes a significant development of infrastructure.[35] Yet, the extent to which conventional and new UM-developed infrastructure can be utilized will depend on what other low-price options are available and feasible. This explains why many universities, including the University of Michigan led by the University Library, have studied possibilities of, and adopted, other more affordable alternatives to conventional expensive print textbooks by altering textbook formats and/or using technology to create and distribute instructional materials in new ways.[36] Such technological innovations include low-cost electronic textbooks, no-cost online textbooks, open educational resources (OER), open courseware (OCW)[37], and print-on-demand (POD) services.[38] Without a doubt, the more faculty members discover and take advantage of these options, the more students will benefit; accordingly, to identify how and where future UM efforts should be directed, a further discussion on digital textbooks should be helpful. This is what I now address.

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[33] *MAIS Announcement, op.cit.*

[34] Another reason for the University to encourage these practices is to help the University comply with the aforementioned recently passed Higher Education Opportunity Act of 2008 (Public Law 110-315). This federal legislation, which will become effective on July 1, 2010, requires institutions to list textbooks (with ISBN and price) in their online systems. UM News Service, *op. cit.*

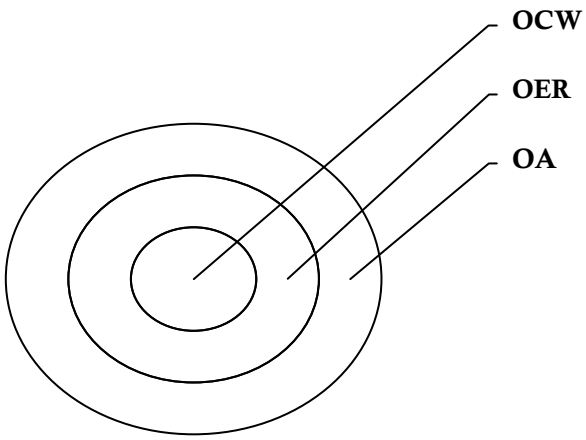
[35] As for the development and the use of University infrastructure, the University Library reserve program to offer textbooks and other course materials is already well established and an excellent way to provide students with free access to necessary or supplemental materials. Although library reserve programs are not new, today's strength of the UM Library Reserves is that both faculty and students are able to access electronic course reserves from CTools. For more information, http://www.lib.umich.edu/reserves/ (accessed March 13, 2009).

[36] Publishers can produce low-price options by altering either the format or content of a textbook. Format alternatives, known as no-frills textbooks, include paperbacks, limited color texts, spiral-bound versions, and loose-leaf hole-punched versions. No-frills textbooks are cheaper than regular textbooks, usually by 25-50 percent. Content alternatives, known as custom textbooks, are created when a publisher combines specific chapters from one or multiple texts and other forms of educational content into a single custom text. Drawbacks of these alternatives are that they have little or no resale value. For more details, see Koch (2006) and US Department of Education (2007).

[37] OCW is a subset of OER and both OCW and OER are subsets of open access contents. See Figure 3.

[38] Despite its importance, a discussion of POD is beyond a scope of this report. Here I simply note that Espresso Book Machine (EBM) was purchased by the UM library in the fall of 2008. This machine can produce a perfect-bound paperback book in 5-7 minutes. With the use of EMB, we could distribute book production to point of need, which in many contexts would be cheaper and more convenient than the current system. Eventually, the University Library hopes to partner with people from the University community to experiment with printing new works like textbooks. For the demonstration of UM library's Espresso Book Machine, see http://www.ns.umich.edu/podcast/video.php?id=405 (accessed March 13, 2009). As for POD, I also would like to mention that since February 2009 the University of Michigan Library has begun to participate in MyCopy, a pilot project offering low-cost Print on Demand (POD) copies of Springer ebooks the Library has previously purchased. The MyCopy titles are English language with a copyright year of 2005 or later and a maximum of 832 pages. Titles include monographs, textbooks, reference works, and handbooks in a wide range of subjects. For library patrons, to purchase a print copy of an ebook costs $24.95 including shipping.

Figure 3. The Relationship among Open Access (OA), Open Educational Resources (OER), and Open Coursewares (OCW)

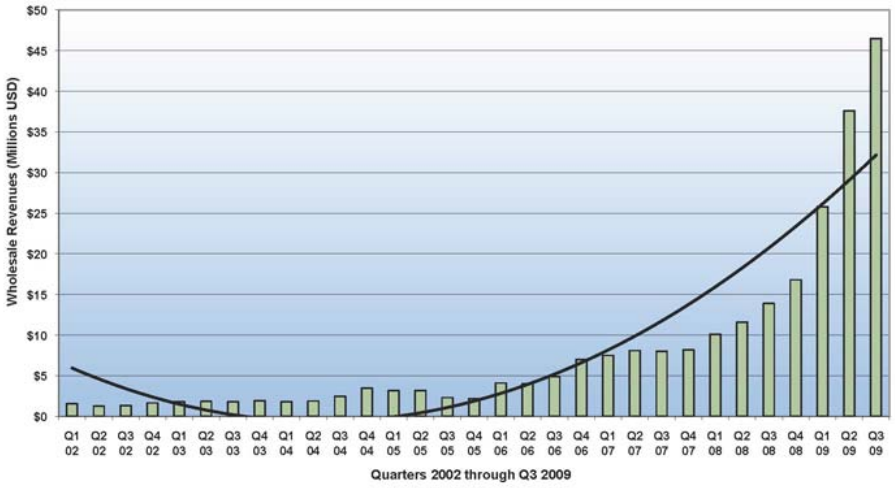


4) Digital Educational Resources

4.1 The Evolution of the E-book Market

Electronic textbooks, also known as e-textbooks, are one alternative to high-priced traditional textbooks. Generally, e-books are the replication of traditional books in digital format made available through authenticated, online access. While e-books have been available for a while now, for instance through Project Gutenberg (the first producer of free electronic books, since 2002), the number of e-books (both in supply and demand) has been dramatically increased during the last several years. According to the e-book sales statistics reported by the International Digital Publishing Forum (IDPF), publishers sold 1,692,964 e-book units and $11,875,783 in revenues for 2005 (IDPF 2005). It is also reported 5,242 e-books published during this time.[39] Just as expected by the US Department of Education noted in 2007 that "new (e-book) titles are added regularly (2007: 21),"[40] a number of e-books continues to grow today. According to the recent data from the Association of American Publishers (AAP), in the first three quarters of 2009 (through September), U.S. e-book content sales have more than doubled from a year ago (see Figure 4). Because AAP data represents only a subset of trade e-book publishers, and it excludes major markets like education, libraries, and professional electronic sales, some argue that it is reasonable to project overall e-book revenue will top $500 million in the U.S. in 2010.[41]

Figure 4. US Trade Wholesale Electronic Book Sales



Source: IDPF (2009)

[39] A total of 18 publishers contributed to the four quarterly 2005 IDPF reports including DigitalPulp Publishing; Elib AB; Ellora's Cave Publishers; E-Reads; Fictionwise, Inc.; Hard Shell Word Factory; Harlequin Enterprises Ltd.; HarperCollins; Houghton Mifflin Company; John Wiley & Sons, Inc.; McGraw-Hill; Pearson Education; Random House; RosettaBooks LLC; Simon & Schuster; Stonehouse Press; Time Warner Book Group and Zondervan.

[40] These publishers include McGraw-Hill Higher Education, Pearson's SafariX Textbooks Online, Springer and Thomson Learning's iChapters.com. For a discussion on the UK supply model for the paper textbook and electronic textbook chapter, see Taylor (2001).

[41] Sarah Rotman Epps and James McQuivey, "Ten Predictions For The E-Reader/E-Book Market In 2010," December 1, 2009, *paidContent.org*, available at http://paidcontent.org/article/419-ten-predictions-for-the-e-book-market-in-2010/ (accessed January 27, 2010).

Perhaps with the introduction of e-book readers like Amazon's Kindle and Barnes&Noble's Nook, the pace of e-book adoptions is more likely to accelerate as the Kindle store offers over 250,000 electronic books with more titles being available all of the time, and thanks to a partnership with Google, Barns&Noble also gives its users access to over 500,000 public domain books—another feature that is currently not available on the Kindle. As of this writing, Apple Inc. is reportedly in talks with Hearst Corp., McGraw-Hill Cos. and Hachette Book Group about putting their publications, including textbooks, on its tablet computer.[42] Overall, the e-book market is expected to heat up.

4.2. Online Textbook Initiatives for Research, Teaching, and Learning

In general, e-books cost approximately 50 percent of the retail price of conventional print books. These savings arise because publishers do not incur printing or production costs. Other benefits include easier updating, and the ability for readers to make electronic notes in some texts, as well as search, print, and bookmark. For these advantages, e-books have become increasingly popular not just in the US but other foreign countries like Japan. But more importantly, it is not just the number of e-book publications and its market that are growing. Rather, according to the 2007 Springer survey results, the end user awareness and usage of e-books among researchers and librarians are also on rise as e-books began to form a growing part of the collections at research and academic libraries (The Springer Team 2008). "(S)urvey respondents (at six institutions) overwhelmingly said that e-books are useful and that they would like to incorporate e-books into their information experience more frequently" (*Ibid.*, 2).[43]

While adoption of e-books continued to increase, the transition to e-books has been expected to happen faster for research and teaching-related activities, rather than leisure purposes (*Ibid.*). Perhaps, this partly explains why there are a number of different types of nonprofit and commercial initiatives operating in the market for online college-level textbooks today. For instance, a couple of new publishers have started offering free digital textbooks to students. Freeload Press was created in 2004 to help reduce educational expenses for students. Textbooks are available online at no charge to students because the books are subsidized by academically appropriate advertisements placed at the beginning and end of each chapter. Students can print directly from the website or order paperback alternatives that range in price from $9 to $35. Professors at over 1,000 institutions are using Freeload Press (US Department of Education 2007).

More recently, Flat World Knowledge, a publisher founded in 2007, launched a new service in January 2009, providing free e-textbooks online, particularly in the field of business and economics.

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[42] Spencer E. Ante and Greg Bensinger, "Apple Said to Talk to McGraw-Hill, Hearst About Tablet Content" BusinessWeek. January 25, 2010, available at http://www.businessweek.com/news/2010-01-25/apple-said-to-talk-to-mcgraw-hill-hearst-about-tablet-content.html (accessed January 27, 2010).

[43] Institutions participating in the Springer 2007 survey included the following: University of Illinois at Urbana-Champaign (US); University of Florida (US); University of Library of Turku (Finland); Center for Mathematics and Computer Science Amsterdam (The Netherlands); University of Muenster (Germany)l and Victoria University (Australia).

Flat World is publishing their textbooks online, entirely open and free as the books are licensed under a Creative Commons license. According to the press release from Flat World Knowledge, it is estimated that approximately 40,000 college students at more than 400 colleges/universities (in over 500 course adoptions) have saved $3 million by utilizing Flat World Knowledge open source textbooks in Fall 2009 semester.[44] As of today, Flat World Knowledge has partnered with a number of universities/professors including Professor Preston McAfee, California Institute of Technology, who has been a pioneer in putting out textbooks online for free.[45] The New York Times quotes Professor Preston McAfee, "(i)f I had finished my own book, I would have finished a couple years ago. It would have taken five years. It would have spent five years in print and sold 2,000 copies. Instead, I posted it on the Web site and there have been 2.8 million page views of my textbook."[46]

It should be noted that like other publishers, Flat World organizes peer-review for the books it publishes and provides copy editing and design services. But how do they make money if students get a free online book? This is one of the most common questions addressed by many including Kevin Smith from Duke University Library who describes this groundbreaking business model of open source textbooks from two different "control" points—that of the author and that of the adopting instructor.[47] First, textbook authors have an opportunity to earn royalties on every dollar that is spent on their book due to strong royalties (50% of students currently opt to purchase a book that has been adopted for their course at $29.95 for a print-on-demand copy), but at the same time, authors are able to continually update and correct the text. In addition, textbook authors also get to decide if, and when, to move to new editions. Therefore, as Smith (2009) describes, "these authors have a level of continuing control over their work that is unprecedented in the print world." Second, open source textbooks published by Flat World Knowledge also gives a certain level of control to those who adopt a Flat World textbook because adopting faculty can also customize any part of the text.[48]

As many colleges and universities are increasingly embracing new and more creative methods of textbook development and distribution in order to rein in runaway costs, the new digital textbooks, which can often be presented online free of charge or in hard copies for as little as one-fifth the cost of traditional books, have become an increasingly popular and most affordable option. As a

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[44] Flat World Knowledge Press Release, August 20, 2010, available at http://www.flatworldknowledge.com/sites/all/files/38000_students_save_3_mm_0.pdf (accessed January 27. 2010).
[45] In March 2009 Flat World Knowledge released a new edition of McAfee's textbook *Introduction to Economic Analysis* to sell (downloadable) print version of his textbook anywhere from $29.95. More information on Flat World Knowledge is available at http://www.flatworldknowledge.com/ (accessed January 27, 2010).
[46] Noam Cohen, "Don't Buy That Textbook, Download It Free," *op. cit.*; Park (2008); Seidel (2009).
[47] Kevin Smith (2009). "The Textbook is Getting Flat" *Scholarly Communications@Duke,* December 23, 2009, http://library.duke.edu/blogs/scholcomm/2009/12/23/the-textbook-world-is-getting-flat/ (accessed January 27, 2010).
[48] In addition to open source textbook publishers like Flat World Knowledge, there are also other online textbook initiatives by conventional publishers. For instance, CourseSmart (http://www.coursesmart.com) is a partnership of major commercial higher education textbook publishers that provides an online marketplace for digital textbooks. The site provides a common platform for distributing e-textbooks controlled by Pearson; Wiley; Cengage Learning; McGraw Hill Education; Bedford, Freeman & Worth Publishing Group; and Jones and Bartlett Publishers. The site currently offers almost 6,000 titles, in 851 course areas, and across 109 disciplines. Yet, CourseSmart has been criticized by open textbook advocates for the restrictive digital rights management terms it imposes on the textbooks it offers, including printing restrictions, time-based licenses, and other use restrictions.

result, some universities are working to establish the infrastructure and policies needed to accommodate the widespread use of digital materials. Today, several institutions have considered and decided to digitally license content and provide e-textbooks.

For instance, as mentioned in footnote 37, since February 2009 the University of Michigan Library has begun to participate in MyCopy, a pilot project offering low-cost POD copies of Springer e-books the Library has previously purchased. The MyCopy titles are English language with a copyright year of 2005 or later and a maximum of 832 pages. Titles include monographs, textbooks, reference works, and handbooks in a wide range of subjects. For library patrons, to purchase a print copy of an e-book costs $24.95 including shipping.

Other university-based digital distribution initiatives include the Wiley e-textbook pilot at the University of Texas at Austin launched in January 2009.[49] Through this program, the UT has licensed the books to test how functional e-textbooks are for faculty and 1,300 students enrolled in six different classes. Additionally, for students that prefer a book in a print format, the campus store will print any textbook at a cost of 1.5 cents per page. As the UT is providing the content via an institutional licensing model and therefore the content will only be free initially. In other words, currently Texas is paying $25 to $45 per book and negotiated roughly a 50% discount on full price of the textbooks. If the program proves successful, UT students could pay $25-45 a book in licensing fees. Overall, according to UT's financial aid website, students could potentially save over 75% by going digital.

California State University's Digital Marketplace Initiative has a broader focus on creating an online digital infrastructure to provide teaching and learning services. A primary goal of the initiative is to obtain and to provide digital instructional materials and other resources from a variety of sources, including MERLOT (Multimedia Educational Resource for Learning and Online Teaching), in an easy-to-use format. [50] One benefit is the reduction of costs to students, partially through the use and development of OER, which are free and allow faculty members to collaborate in developing and refining resources in their area of expertise. In addition to affordability, the Digital Marketplace is developed to improve acceesability and choice of academic content.[51]

In all, the issue of textbook affordability is central to the increasing popularity and availability of open content in higher education. Therefore, to better understand the present and future context of campus initiatives directed at raising awareness of more affordable or open access textbooks and expanding the usage of digital materials for research, teaching, and learning activities, a further

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[49] Edward Nawotka, "Wiley Tests e-Texts in Texas" *Publishers Weekly,* January 19, 2009, available at http://www.publishersweekly.com/article/CA6630346.html. See also, http://thecite.blogspot.com/2009/02/wiley-e-textbook-pilot-at-university-of.html

[50] The CSU already manages an alliance of higher education institutions in the MERLOT Consortium (e.g. California Community Colleges, State University of New York System, Minnesota State Universities and Colleges, University of North Carolina System, Oklahoma Board of Regents, Tennessee Board of Regents, and 8 other state systems). Many of the institutions who are partners in MERLOT are expected to adopt and use Digital Marketplace. http://www.calstate.edu/ats/digital_marketplace/documents/CSU_Presidents_Briefing_Package.doc (accessed January 25, 2010).

[51] The news release regarding Digital Marketplace Initiative is available at http://www.calstate.edu/ats/digital_marketplace/ (accessed January 25, 2010).

discussion on open access textbooks, and more broadly, open source instructional digital materials, will be provided in the following section.

4.3 What are Open Access Textbooks?: From OER to OCW

Open Educational Resources (OER) are digital learning resources shared at no charge over the Internet, primarily by faculty engaged in course development and collaborative teaching and research. OER can be used and adapted for non-commercial purposes by teachers, educational institutions, and students (US Department of Education 2007). These resources rely on open source applications, which are software programs that can be freely shared or distributed. OER has become increasingly popular among faculty, students, and institutions both within the US and internationally.

An emerging development in OER is open textbooks, textbooks that are available with nonrestrictive licenses.[52] Kanter and Baker define an open textbook as "a body of educational content made openly available via the Internet, by mail, or in a bookstore with a copyright license that permits reproduction and distribution by the user (2008: 2)." Covering a wide range of disciplines, open textbooks are available to download and print in various file formats from several websites and OER repositories. Open textbooks can range from public-domain books to existing textbooks to textbooks created specifically for OER. Open textbooks should not only help solve the problem of the high cost of textbooks in the US, but also help overcome book shortages and other obstacles to access to textbooks in developing countries around the world, providing the capacity to better meet teaching and learning needs everywhere.[53]

Nicole Allen, director of the aforementioned Make Textbooks Affordable Campaign, the non-profit student advocacy network actively engaged in pushing for open textbooks, says that "open textbooks can change the way textbooks are used, produced, and sold (Shkolnikova 2008)." Allen further notes that it is critical to keep asking a greater number of faculty members to consider using and writing open textbooks. Besides cost savings, adopting an open textbook has a number of other advantages over adopting a traditional textbook. Table 2 nicely summarizes and compares the capabilities of open and traditional textbooks.

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[52] For definitions of an open textbook, see also Appendix A of this article and the Connexions page "What are Open Textbooks?" available at http://cnx.org/content/m15226/latest/ (accessed March 13, 2009).

[53] Connexions, an "OER pioneer" at Rice University, which I will discuss later, launched a partnership with the Shuttleworth Foundation's open education project Siyavula, in November 2008. Related information is available in the Connexions news release, http://cnx.org/news/rice-african-partnership-is-open-education-blockbuster (accessed March 13, 2009). Also, the Global Text Project, a joint project of the Terry College of Business of the University of Georgia and the Daniels College of Business of the University of Denver, aims to create a free library of 1,000 electronic texts for students in developing world. The library will cover the range of topics typically encountered in a university's undergraduate programs. The global academic community and global corporations will be engaged in creating and sponsoring this library. Information available at the Global Text Project FAQs, http://globaltext.terry.uga.edu/news_faqs?q=node/14 (accessed March 13, 2009).

Table 2. Characteristics of Open and Traditional Textbooks

Open Textbook	Traditional Textbook
Dynamic	Static
Customizable	Non-customizable
Open content, post-publication peer review	Closed content, pre-publication peer review
Personalized for local conditions	Standardized content
Targeted in-depth material	Generic material
Timely	Dated
Integrate research findings into curriculum quickly	Unlikely so
Addresses multiple learning styles	Assumes a uniform learning style
Low-cost or Free	Costly

Note: This table is compiled from information provided by Henry (2004) and available at http://cnx.org/content/m15226/latest/

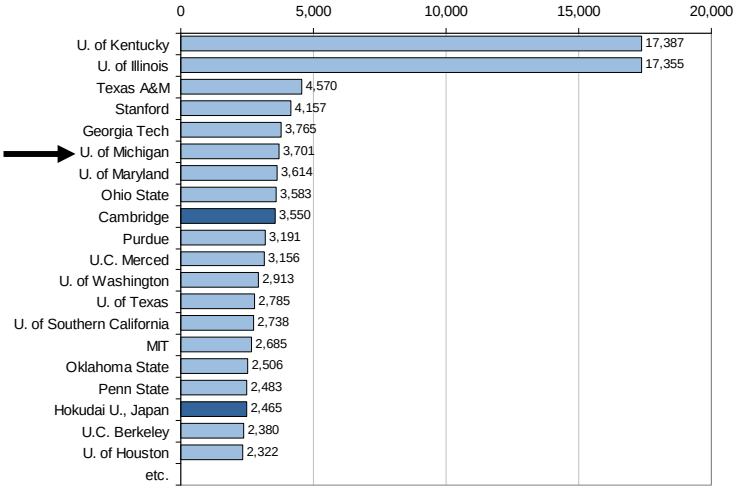
A widely known OER project is Rice University's Connexions founded in 1999. The Connexions repository provides an effective means for educational professionals and others to develop, modify, share, and disseminate instructional materials and open textbooks under the Creative Commons Attribution license (Baker et al. 2009). Connexions repository is a globally accessible and permanent collection of openly available educational content. Use of content posted to Connexions is free for instructors or students to view, to repurpose, or to download as a PDF, including entire textbooks. This OER project began with only 200 modules, but by the end of 2007 the repository contained 4,500 modules.[54] There are approximately 552,000 unique visitors from 194 countries in January 2007, 96 percent from outside Rice University.[55] The mission of Connexions is to provide and maintain a commons where individuals and communities worldwide can create and freely share knowledge, and the objects are to: (1) Provide a content commons of free, interconnected educational materials, (2) Facilitate access to the commons and foster its growth, (3) Facilitate content reuse, (4) Foster community participation in the commons, (5) Ensure sustainability of this resource into the future (Baraniuk 2008; Henry 2004). Connexions' website explains its principal goal: "Most textbooks are a mass of information in linear format: one topic follows after another. However, our brains are not linear – we learn by making connections between new concepts and things we already know. Connexions mimics this by breaking down content into smaller chunks, called modules, that can be linked together and arranged in different ways. This lets students see the relationships both within and between topics and helps demonstrate that knowledge is naturally interconnected, not isolated into

[54] "Connexions – Project History," http://cnx.org/aboutus/history (accessed January 22, 2010).
[55] http://cnx.org/help/faq (accessed March 13, 2009).

separate classes or books."[56] Joel Thierstein (2009) notes that Connexions' materials are available in many languages, including English, Chinese, Spanish, Japanese, Vietnamese, Italian, French, Portuguese, and Thai. He further points out that through a partnership with innovative publisher QOOP, Connexions is part of an exciting new distribution system that allows for print-on-demand and will accelerate the delivery of educational materials into classrooms worldwide.

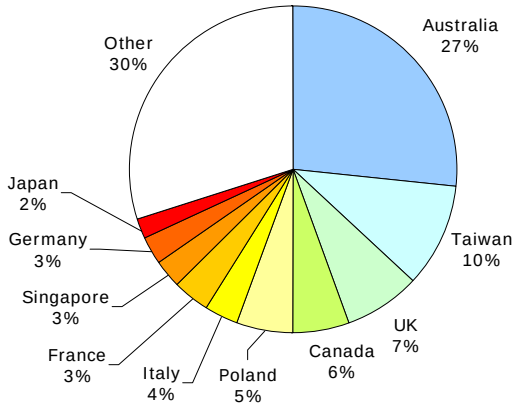
Connexions receives 50 percent of the traffic originating from outside the US. To have an overall idea of the diversity of visitors to Connexions from within and outside the US, see figures 5 and 6.

Figure 5. Views Rice University Connexions receives from colleges and universities



Source: Henry (2004)

Figure 6. Connexions worldwide access, 2004



Source: Henry (2004)

[56] Connexions – Philosophy, *http://cnx.org/aboutus/* (accessed March 13, 2009).

Another well-known OER initiative is OpenCourseWare (OCW), started by the Massachusetts Institute of Technology (MIT) in the fall of 2002. The OCW website launched as a pilot program with the help of $11 million from the William and Flora Hewlett and the Andrew W. Mellon foundations (and $1 million from MIT). It contains free lecture notes, syllabi, reading lists, course calendars, exam and quiz questions (and some answers), labs, and some video lectures for undergraduate and graduate courses available online at no cost, accessible to anyone. And its the primary goal is to provide the content that supports and education (Kirkpatrick 2006; Lerman and Miyagawa 2002; Lerman et al. 2008).[57] MIT faculty are not required to post materials, but the participation rate has been extremely high, 75 percent as of November 2005 (Lerman et al. 2008). At its launch, the site contained 50 courses and, currently, there are over 2,000 courses posted. Today, over 100 institutions have partnered with MIT OCW.[58]

Regarding OCW, it is also relevant here to mention OCW Consortium (OCWC), "a collaboration of more than 200 higher education institutions and associated organizations from around the world creating a broad and deep body of open educational content using a shared model," launched in 2003.[59] The mission of the OCWC is "to advance education and empower people worldwide through opencourseware"; in other words, the OCWC is to advance formal and informal learning through the worldwide sharing and use of free, open, high-quality education materials organized as courses (Bays 2009). In general, by participating the OCWC members benefit from gaining "a public repository of [their own] curriculum materials and making them accessible worldwide," which will "encourage faculty to share pedagogical ideas, curriculum materials, and tools and to discover common interests and concerns. Many institutions have reported that their participation in the OCWC has accelerated the use of learning management systems as faculty better grasp the potential of digital curriculum materials."[60]

Another significant OER project is MERLOT (Multimedia Educational Resource for Learning and Online Teaching), a web-based resource development by California State University (CSU) implemented in 1997.[61] MERLOT is a no-fee digital library and interactive ("user-centered,

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[57] It should be noted that the MIT OCW materials are open source, but the content management system (CMS) used to maintain the site is not. Because the site grew too large for programmers to handle the hand-coded HTML with Deamweaver software, they were forced to use a CMS that would work with their large-scale goals for the OCW program (Kirkpatrick 2006: 55).

[58] http://ocw.mit.edu/OcwWeb/web/about/history/index.htm (accessed March 13, 2009).

[59] http://www.ocwconsortium.org/ (accessed March 13, 2009). Also, Bays 2009, slide 6.
Today, OCWC includes worldwide member and affiliate institutions, including Open University in the UK, a leading edge provider of OCW through OpenLearn. The University of Michigan is an affiliate member of OCWC. In general, "[i]nstitutional members commit to publishing, under the institution's name, materials from at least 10 courses in a format that meets the agreed-upon definition of an opencourseware," while "[af]filiate members either publish courses in an area other than higher ed. (e.g. corporate training or K-12) or engage in activities that further Consortium goals (e.g. software development, translation, distribution or regional support)." (Bays 2009, slide 12).

[60] Open Course Ware Consortium: Proposal for UMB's participation, v.12/15/06, p. 2, available at http://ocw.umb.edu/about/test-course/sample-syllabus (accessed March 13, 2009).

[61] In 1997, the California State University Center for Distributed Learning (CSU-CDL at www.cdl.edu) developed and provided free access to MERLOT (www.merlot.org). In 1998, a State Higher Education Executives Organization/American Productivity and Quality Center (SHEEO/APQC) benchmarking study on faculty development and instructional technology selected the CSU-CDL as one of six best practices centers in North America.

searchable collection of peer reviewed") collection of 20,000+ online digital course materials in 14 different types that have been created to meet students' different learning styles. MERLOT is a leading edge, catalogued by registered members and a set of faculty development support services. MERLOT's vision is to be a premiere online community where faculty, staff, and students from around the world share their learning materials and pedagogy. The system infrastructure allows faculty collaboration on teaching and learning materials. Editorial boards in 19 different disciplines have been selected to carry out a peer review process to ensure high quality content.[62]

In evaluating the lessons learnt from MERLOT, Carey and Hanley (2008) argue that open content is of growing importance in extending access and quality for higher education and in increasing teaching materials' affordability. New open content online educational materials are now frequently made available through repositories, such as MERLOT, of varying scopes appearing at the international, national, regional, state, and discipline levels. However, they further argue, educational resources and materials can be more effective and more frequently reused when faculty have the motivation, time, and expertise to incorporate effective learning designs that meet the needs of their students.

In this regard, as the standpoint of this study is that more attention to alternatives to traditional textbooks are necessary to increase textbook affordability, it is all the more important to raise awareness of UM faculty and University officials of how open academic content (OER, OCW, Open Textbooks) helps not only to increase productivity and efficiency of teaching but also to provide low-cost instructional materials to students, making education and resources more affordable.[63]

Finally, I would like to mention a more recent project called the Community College Open Textbook Project (CCOT Project). This project is a pilot study that is both relevant to current UM initiatives and suggestive of future possibilities for the development and use of open textbooks. The CCOT Project was launched in March 2008, with funding from the William and Flora Hewlett Foundation, as "a one-year feasibility study in partnership with the Foothill-De Anza Community College District, the Monterey Institute for Technology and Education, Rice University's Connexions, University of California College Prep, Flat World Knowledge, California State University System's California Digital Marketplace, the Institute for the Study of Knowledge Management in Education

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Visitations to the CSU-CDL by higher education institutions participating in the benchmarking students resulted in interest in collaborating with the CSU on the MERLOT project. The University of Georgia System, Oklahoma State Regents for Higher Education, University of North Carolina System, and the California State University System created an informal consortium representing almost one hundred campuses serving over 900,000 students and over 47,000 faculty. SHEEO was the coordinator for the cooperative of the four state systems. In 1999, the four systems recognized the significant benefits of a cooperative initiative to expand the MERLOT collections, conduct peer reviews of the digital learning materials, and add student learning assignments. The CSU maintained its leadership of and responsibilities for the operation and improvement of processes and tools.

[62] More information on MERLOT is available at http://www.merlot.org/merlot/index.htm (accessed March 13, 2009). Also see Carey and Hanley (2008).

[63] The UM Community of Practice for MERLOT was founded in 2006 here at Michigan aiming to make MERLOT more relevant on campus as well as to institutionalize Michigan's support for MERLOT. In the 2006-2007 academic year board members included Victor Wong (Provost Office), several faculty members, and one librarian. For more information, see Wong et al. (2007).

(ISKME), the High Tech Center Training Unit, and the Student PIRGS" (Baker 2009: 31). The goals of the CCOT Project are stated "to centralize critical open textbook information for use by community college professors and other interested parties and to document sustainable workflow approaches for producing, maintaining, and disseminating open textbooks" (CCOT 2009: 1). To meet this goal, the one-year feasibility study is currently under way in order to examine a sustainable workflow for the development and use of open textbooks. A pilot of one approach, the CCOT Project has worked closely with Connexions staff to make the open textbook *Collaborative Statistics*, by Barbara Illowsky and Susan Dean, available for students in introductory statistics courses to view online or to download for free" (Baker 2009: 31). In the fall 2008 and Winter/Spring 2009 sessions combined, the CCOT Project estimates that *Collaborative Statistics* has been adopted for use in at least 43 course sections at 8 colleges and one high school in Ontario, Canada (CCOT 2009).

4.4 Michigan's Engagement in OER Development

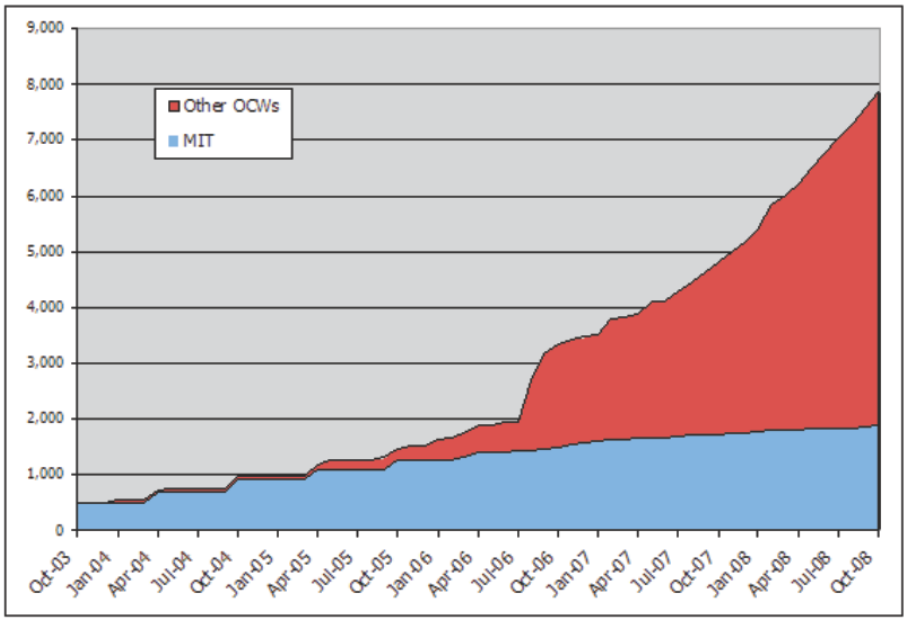
As Table 3 shows, an increasing number of universities and colleges are pursuing new and creative means to develop and use more affordable teaching and learning materials through OER. Furthermore, OCW contents are rapidly increasing (see Figure 7).

Table 3. List of University-based open courseware resources

Name of University	Name of OCW
California State University	MERLOT
Carnegie Mellon University	OpenLearningInitiative
Columbia University	Columbia Interactive
Indiana University	Open.IU (in process)
Johns Hopkins University	JHSPH OCW
MIT	MITOpenCourseWare
The Open University (UK)	OpenLearn
Rice University	Connexions
Stanford University	Open Stanford on iTunes U
Tufts University	Tufts OpenCourseWare
University of Massachusetts, Boston	UMassBoston OpenCourseWare
UC Berkeley	Webcast.Berkeley
UC Irvine	UC Irvine OpenCourseWare
The University of Michigan	Open.Michigan
The University of Notre Dame	Notre Dame OCW
The University of Utah	UofU OCW
The University of Washington	UW OnlineLearning
Utah State University	Utah State OpenCourseWare
Yale University	Open Yale

Note: To compile this table, the author visited a great number of Web sites, starting with the site of OCW Consortium, http://www.ocwconsortium.org/

Figure 7. Increases in number of OCWs



Source: Fons et al. (2008)

At present, the University of Michigan's Open.Michigan project is taking a particularly unique approach to Open Educational Resources. While it aims to develop a curriculum-based Open Educational Resources initiative that will make University of Michigan course materials available to learners beyond the University, Open.Michigan also realizes that OER does not just mean publishing course materials. Moreover, Open.Michigan is a space for communication and collaboration. Its website serves as an introduction to the projects and the partners that form the basis of our open community, but it is also a virtual forum where collaborators from across the University and the larger OER community can learn more about what's happening within the open community at the University of Michigan, connect with other projects and people, and share best practices and other resources. At the same time, Open.Michigan envisions "an environment beyond a collection of courses." It builds "a space where the interplay and visualization of curricular paths, learning modules, and discrete pieces of educational content expand a user's ability to comprehend material, adapt it to their individual needs, and contribute it back to the global community." Its "[c]urrent efforts focus on developing a repository of course materials and identifying discrete educational content objects."[64] Most recently, Open.Michigan has launched a model called dScribe, a model proposing a cost-minimizing system that "leverages the existing faculty-student relationship to gather, vet and publish course material on U-M's Open.Education website."[65] dScribe is an opportunity to mobilize student activity in the teaching and learning process and generate "a powerful new

[64] https://open.umich.edu/education/ (accessed March 13, 2009).
[65] https://open.umich.edu/wiki/index.php5/Main_Page (accessed March 13, 2009).

participatory paradigm in higher education."[66] According to Fons et al. (2008), the dScribe model reduces even OER publishing costs, scales up throughout the university. This is a portable, adaptable process that "could offer institutions worldwide a set of tools to sustain a grassroots OER initiative."[67]

[66] https://open.umich.edu/projects/oer.php#dscribe (accessed March 13, 2009).
[67] https://open.umich.edu/wiki/index.php5/Main_Page (accessed March 13, 2009).

5) Summary

In this report we have investigated the facts concerning the rapidly rising cost of college textbooks. The issue of the lack of textbook affordability has drawn increased nationwide attention over the last decade. A number of review boards have been established at federal, state, and campus levels, proposing a variety of new and more creative methods of textbook development and distribution. The University of Michigan was not an exception.

This article aimed to help us better understand an overall context of today's textbook problem, and then to tackle the questions of what choices we have today and what other alternatives, such as open textbooks, we should further consider in order to increase productivity and efficiency of teaching for faculty as well as to provide low-cost instructional materials for students, making education and resources more accessible and affordable.

We should note that this was a preliminary study in preparation for my in-depth analysis that will explore the potential for turning Michigan ideas into practice, including launching a library-based college textbook publishing program as a new approach to textbook affordability.

So, what else can Michigan do? The answers await our full analysis based on this background work. As Table 3 showed, an increasing number of universities and colleges are pursuing a new and creative means to the development and use of more affordable teaching and learning materials through OCW. Future research is needed to evaluate the strengths and weaknesses of OCW projects at different universities, including Michigan's ongoing effort. In addition, a follow-up study will be required to specifically identify UM faculty and student needs by conducting a survey and interviews.[68]

[68] In December 2009, the University of Michigan Library completed a year-long study of the opportunities to help alleviate an increasingly significant financial burden on students and their families with a special focus on the possible uses of digital publishing and networked resources. This study consists of two major components: 1) A formal exploratory business feasibility analysis to determine the costs and benefits (both financial and social) of three textbook-related initiatives, carried out with the assistance of an outside consultant; 2) An in-depth survey, followed by extensive interviews, to better understand Michigan faculty attitudes and motives in the selection of textbooks and their willingness to consider adopting, contributing to and authoring alternatives to mainstream commercial textbooks.
In tandem with the business feasibility study, Scholarly Publishing Office has undertaken a study aiming to explore the potential for and viability of a library-based textbook publishing program to assist in lowering the costs of textbooks for our students. As part of the Michigan case study, the Scholarly Publishing Office invited all faculty of the College of Literature, Science, and the Arts (LS&A) to take a survey in order to help us identify which factors most influence the selection of instructional materials and to better understand faculty views about rising textbook costs, more affordable alternatives to traditional textbooks, and the potential role that the University Library might play in textbook publishing. To follow up the textbook survey, we conducted extensive interviews with Michigan faculty members. The report is now available to download at: http://www.lib.umich.edu/files/SPOTextbookStudy.pdf

References

Baker, Judy. 2009. "It Takes a Consortium to Support Open Textbooks." *EDUCAUSE Review* 44 (1): 30-32.

Baker, Judy, Joel Thierstein, Kathi Fletcher, Manpreet Kaur, and Jonathan Emmons. 2009. "Open Textbook Proof-of-Concept via Connexions" *International Review of Research in Open and Distance Learning*, 10 (5): ISSN 1492-3831. Available at http://www.irrodl.org/index.php/irrodl/article/view/633/1390 (accessed January 30, 2010).

Baraniuk, Richard. 2008. "Challenges and Opportunities for the Open Education Movement: A Connexions Case Study." In Toru Iiyoshi and M.S. Vijay Kumar, eds., *Opening Up Education: The Collective Advancement of Education Through Open Technology, Open Content, and Open Knowledge*, 229-246. Cambridge, MA: MIT Press.

Bays, Terri. 2009. "Open Sharing, Global Benefits." Presentation at Connexions Conference, 5-6 February 2009, Rice University, Houston, Texas. Available at http://www.ocwconsortium.org/docs/RiceIntro2009.ppt (accessed March 4, 2009).

Bell, Julie Davis, and Vincent Badolato. 2008. "Textbook Turmoil: Is Containing the Cost of College Textbooks a Role for State Legislatures?" *State Legislatures* February, 26-29.

Board of Governors for High Education, Department of Higher Education, State of Connecticut. 2006. *A Report to the Joint Standing Committee of the General Assembly Having Cognizance on Matters Rrelating to Higher Education and Employment Advancement Regarding Special Act No.04-3, An Act Concerning Student Textbook Purchasing Policies and Public Act 05-3, Section 70, Textbook Summit.* Hartford, CT: Board of Governors for Higher Education.

Bradley, Doreen, Susan Hollar, and Karen Reiman-Sendi. 2009. *Focus Group Study: Preferred Environment for Provision of Course Content.* Ann Arbor, MI. Available at http://www.lib.umich.edu/staff/reports/fgs_pepcc_12009.pdf (accessed March 13, 2009).

The California State University. 2007. *Report of the CSU Textbook Affordability Taskforce: Improving Access and Reducing Costs of Textbook Content*. Available at http://www.calstate.edu/ats/textbook_affordability/documents/Textbook_Taskforce_Report.pdf (accessed January 31, 2009).

Carey, Tom, and Gerard Hanley. 2008. "Extending the Impact of Open Educational Resources through Alignment with Pedagogical Content Knowledge and Institutional Strategy: Lessons Learned from the MERLOT Community Experience." In Toru Iiyoshi and M.S. Vijay Kumar, eds., *Opening Up Education: The Collective Advancement of Education Through Open Technology, Open Content, and Open Knowledge*, 181-196. Cambridge, MA: MIT Press.

CCOT (Community College Open Textbook) Project. 2009. "Open Textbook Proof of Concept." Presentation at Connexions Conference, 5-6 February 2009, Rice University, Houston, Texas. Available at http://www.collegeopentextbooks.org/Collaborative%20Statistics%20CNX%20Conf%20handout%20Feb5.pdf (accessed March 4, 2009).

Clark, Kim. 2009. "Four Reasons Textbook Costs Will Drop." *U.S. News & World Report*, 21 July. Available at http://www.usnews.com/articles/education/2008/07/21/four-reasons-textbook-costs-will-drop.html?s_cid=related-links:TOP (accessed January 27, 2009).

The College Board. 2003. *Trends in College Pricing.* Available at http://www.collegeboard.com/prod_downloads/press/cost03/cb_trends_pricing_2003.pdf (accessed January 30, 2009).

Cohen-Vrignaud, Gerard and Kristin Wright. "Dueling Platforms" *The Michigan Daily*, 13 March 1998. Available at http://www.pub.umich.edu/daily/1998/mar/03-13-98/news/news24.html (accessed January 29, 2009).

Editorial, *The Michigan Daily*, February 21, 2001. Available at http://www.michigandaily.com/content/cutting-textbook-costs (accessed February 23, 2009).

Fairchild, Merriah. 2004. "Rip-off 101: How the Current Practices of Textbook Industry Drive Up the Cost of College Textbooks." CALPIRG Higher Education Project. Available at http://www.maketextbooksaffordable.org/ripoff101.pdf (accessed January 30, 2009).

Fons, Garin, Pieter Kleymeer, Ted Hanss, and Joseph Hardin. 2008. *dScribe: The University of Michigan's Student-centric Open Educational Resource Publication Model*, Ann Arbor: MI. Available at https://open.umich.edu/wiki/images/4/4a/DScribe_presentation.pdf (accessed March 13, 2009).

Gnagey, Laurel Thomas. 2008. "Online Tool Helps Support Early Textbook Adoption," *The University Record Online,* September 29. Available at http://www.ur.umich.edu/0809/Dec08_08/10.php (accessed March 13, 2009).

Government Accountability Office (GAO). 2005. *College Textbooks: Enhanced Offerings Appear to Drive Recent Price Increases.* Washington, D.C. Available at http://www.gao.gov/new.items/d05806.pdf (accessed January 30, 2009).

Henry, Geneva. 2004. "Connexions: An Alternative Approach to Publishing.," Paper presented at ECDL 2004 European Conference on Digital Library, University of Bath, United Kingdom. Available at http://cnx.org/aboutus/publications/Connexions-alt-pub-color.pdf (accessed February 4, 2009).

International Digital Publishing Forum. 2009 *Document Library: Industry Statistics.* Available at http://www.idpf.org/doc_library/industrystats.htm (accessed January 27, 2010).

International Digital Publishing Forum. 2005. "Publishers Report Continued Increases in eBooks Revenues for 2005" *Document Library: Industry Statistics.* Available at http://www.idpf.org/doc_library/statistics/2005.htm (accessed March 13, 2009).

Kanter, Martha, and Judy Baker. 2008. "Sustainability Models for Community College Open Textbooks." Available at http://cosl.usu.edu/events/opened2008/full_papers/Sustainability_Models_baker_thierstein_kanter_forte.doc. (accessed March 4, 2009).

Kingsbury, Kathleen. 2008. "Coming This Fall: Free Textbooks," *Time Magazine,* 16 July. Available at http://www.time.com/time/nation/article/0,8599,1823395,00.html (accessed January 16, 2009).

Kirkpatrick, Karie. 2006. "OpenCourseWare: An 'MIT Thing'?" *Searcher: The Magazine for Database Professionals* 14, no. 10 (November/December): 53-58. Available at http://dlist.sir.arizona.edu/1873/01/OpenCourseWare.pdf (accessed March 13, 2009).

Koch, James. 2006. *An Economic Analysis of Textbook Pricing and Textbook Markets.* ACSFA College Textbook Cost Study Plan Proposal, report prepared for the Advisory Committee on Student Financial Assistance.

Lerman, Steven, and Shigeru Miyagawa. 2002. "OpenCourseWare: A Case Study in Institutional Decision Making" *Academe*, 88 (5): 23-27.

Lerman, Steven, Shigeru Miyagawa, and Ann Marfulies. 2008. "OpenCourseWare: Building a Culture of Sharing." In Toru Iiyoshi and M.S. Vijay Kumar, eds., *Opening Up Education: The Collective Advancement of Education Through Open Technology, Open Content, and Open Knowledge*, 213-228. Cambridge, MA: MIT Press.

Lewis, David W. 2009. "How to Make Good Affordable Textbooks." Available at http://hdl.handle.net/1805/1881 (accessed December 16, 2009).

Lonn, S., S. D. Teasley and A. Krumm. 2008. *Selected Results from the 2008 CTools Survery: Ann Arbor Campus Instructors and Students.* Ann Arbor, MI. Available at https://ctools.umich.edu.access.contest/public/surveys/a2_08/a2208.html (accessed March 12, 2009).

The Minnesota Office of Higher Education. 2007. *Strategies for Reducing Students' Textbook Costs.* St. Paul, MN. Available at http://www.ohe.state.mn.us/pdf/textbookCostsReport.pdf (accessed January 26, 2010).

National Association of College Stores. 2005. Available at http://www.nacs.org (accessed January 21, 2009).

Nelson, Gabe. 2007. "Around Country, New Laws on Books," *The Michigan Daily*, September 6. Available at http://www.michigandaily.com/content/around-country-new-laws-books (accessed February 22, 2009).

Nawotka, Edward. 2009. "Wiley Tests e-Texts in Texas" *Publishers Weekly,* January 19, 2009. Available at http://www.publishersweekly.com/article/CA6630346.html.

Park, Jane. 2008. "Back to School: Open Textbooks Gaining in Popularity." Creative Commons weblog, 16 September, available at http://creativecommons.org/weblog/entry/9470 (accessed February 3, 2009).

Rice University. 2006. "Connexions: Sharing Knowledge and Building Communities." Connexions White Paper. Available at http://cnx.org/aboutus/publications/ConnexionsWhitePaper.pdf (accessed February 4, 2009).

Royce, Sarah. 2007. "Textbook Solutions: Universities, Not State, Must Act to Address Textbook Issue," *The Michigan Daily*, March 26, 2007. Available at http://www.michigandaily.com/content/textbook-solutions (accessed February 18, 2009).

Seidel, Kim. 2009. "Online Textbooks Deliver Timely, Real-World Content." *EDUCAUSE Review* 44 (1): 28-30.

The Springer Team. 2008. *eBooks: The End User Perspective.* White Paper. Available at http://www.springer.com/cda/content/document/cda_downloaddocument/eBooks++the+End+User+Experience?SGWID=0-0-45-608298-0 (accessed March 13, 2009).

State Public Interest Research Groups. 2005. *Rip-Off 101:How the Publishing Industry's Practices Needlessly Drive Up Textbook Costs.* Available at http://www.maketextbooksaffordable.org/ripoff_2005.pdf (accessed January 18, 2009).

Swanson, Kyle. 2008a. "Textbook Website Launches, But Professors Don't Have to Use It," *The Michigan Daily*, 30 October. Available at http://www.michigandaily.com/content/2008-10-31/ubook-launches-professors-not-required-participate (accessed February 23, 2009).

Swanson, Kyle. 2008b. "Private Websites Rush to Fill Gap in Used Textbook Market," *The Michigan Daily*, September 8. Available at http://www.michigandaily.com/content/private-websites-rush-fill-gap-used-textbook-market (accessed February 23, 2009).

Taylor, David. 2001. "Never Mind the Textbooks—Here's the Chapters." *Learned Publishing* 14 (2): 107-112.

Thierstein, Joel. 2009. "Education in the Digital Age." *EDUCAUSE Review* 44 (1): 33-34.

UM News Service. 2008. "U-M's Ubook, Other Tools Help Students Buy and Sell Used Textbooks." News release, 23 December 2008, available at http://www.ns.umich.edu/htdocs/releases/story.php?id=6911 (accessed February 6, 2009).

University of Michigan Office of the Provost. 2007. *Textbook Task Force Report: Research and Recommendations Concerning the Costs of Textbooks.* Ann Arbor, MI: UM Office of the Provost. Available at http://www.provost.umich.edu/reports/Textbook_Task_Force_Final_Report.pdf (accessed January 30, 2009).

University of Wisconsin System. 2007. *Textbook Costs in Higher Education.* Madison, WI.

US Department of Education. 2007. *Turn the Page: Making College Textbooks More Affordable.* Report presented to Advisory Committee on Student Financial Assistance, a Federal advisory committee chartered by Congress, Washington D.C. Available at http://www.ed.gov/about/bdscomm/list/acsfa/turnthepage.pdf (accessed January 30, 2009).

Shkolnikova, Svetlana. 2008. "Online 'Open Textbooks' Save Students Case" *USA Today*. July 9, 2008. Available at http://www.usatoday.com/news/education/2008-07-09-open-textbooks_N.htm#us|PageReturn (accessed February 19, 2009).

Wernert, Doug. "Students Seek Out Best Book Deals" *The Michigan Daily*, 6 January 2005. Available at http://www.michigandaily.com/content/students-seek-out-best-book-deals (accessed January 30, 2009).

Wong, Victor, Nancy Kerner, Ted Hanss and Brenda Gunderson. 2007. "The U is Flat**:** Cross-Disciplinary Support for Critical Evaluation and Effective Use of Web-Based Learning Resources" Presented at MERLOT 7th International Conference, New Orleans, Louisiana, 7-10 August 2007. Available at http://conference.merlot.org/2007/Thursday/Victor_Wong.ppt (accessed March 13, 2009).

Appendix A: Full Text of the Open Textbooks Faculty Statement of Intent from the Affordable Textbooks Campaign[69]

Preamble

The cost of college textbooks has become a major affordability issue for low and middle income students, adding to the potential that these students will either drop out, take on additional loan debt to pay for textbooks, or undercut their own learning by forgoing the purchase of textbooks.

Textbook publishers have not responded adequately to these concerns, but have continued to exacerbate this problem by raising prices and employing practices such as unnecessarily issuing new editions of textbooks.

Faculty and students both share a concern about textbook affordability and its impact on student success.

We must address this problem without undermining the academic freedom of faculty to choose course content.

Open Textbooks Statement of Intent

As faculty members, we affirm that it is our prerogative and responsibility to select course materials that are pedagogically most appropriate for our classes. We also affirm that it is consistent with this principle to seek affordable and accessible course materials for our classes whenever possible. This includes "open textbooks," which are textbooks offered online to students at no cost.

Open textbooks and other open educational resources present an affordable, comparable and flexible alternative to commercial course materials:

- Open textbooks are available online at no cost to students, and they can be printed for a low cost in various formats. This ensures all students have equal access to the content, while still preserving the option to use a conventional textbook format.
- Open textbooks that are of comparable quality to commercial textbooks are already available. An example of an open textbook is Caltech Professor R. Preston McAfee's Introduction to Economic Analysis, which has been adopted at NYU and Harvard.
- Open textbooks are flexible. Instructors are free to use a particular edition indefinitely or customize content if desired.

[69] Source: http://www.maketextbooksaffordable.org/statement.asp?id2=37614 (accessed March 13, 2009).

Therefore, we the undersigned declare our intent to:

- Seek and consider open textbooks and other open educational resources when choosing course materials.
- Give preference to a low or no cost educational resource such as an open textbook over an expensive, commercial textbook if it best fits the needs of a class.
- Encourage institutions to develop support for the use of open textbooks and other open educational resources.

Appendix B: Congressional Research Service Summary of Public Law 110-315, Higher Education Opportunity Act

Section 112

Requires publishers informing teachers or those selecting course materials at IHEs about available textbooks or supplements to include written information concerning: (1) the price the publisher would charge for such items to the bookstore associated with such institution and, if available, the price the publisher charges the public; (2) the copyright dates of the three previous editions of such textbooks; (3) substantial revisions to such items; and (4) whether such items are available in other formats, including paperback and unbound, and the price the publisher would charge the bookstore and, if available, the price the publisher charges the public, for items in those formats.

Requires a publisher that sells a textbook and any accompanying supplement as a single bundled item also to sell them as separately priced and unbundled items.

Directs IHEs to include on their Internet course schedules the International Standard Book Number (ISBN) and retail price for each required or recommended textbook or supplement for listed courses. Requires an institution to: (1) use the author, title, publisher, and copyright date if the ISBN is unavailable; and (2) indicate that the required information has yet to be determined if its disclosure for a course is impractical.

Requires IHEs to provide college bookstores, upon request, with: (1) their course schedules for the subsequent academic period; (2) the information this Act requires to be placed on Internet course schedules regarding each textbook or supplement required or recommended for each course; and (3) the number of students enrolled, and the maximum enrollment, in each course.

Encourages IHEs to inform students of ways to save money on course materials.

Directs the Comptroller General to report to Congress on the implementation of these requirements by IHEs, college bookstores, and publishers.