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COURSE CORRECTION

How Digital Textbooks are Off Track and How to Set Them Straight

COURSE CORRECTION

How Digital Textbooks Are Off Track,

And How to Set Them Straight

Nicole Allen
The Student PIRGs
August 2008

ACKNOWLEDGMENTS

The author would like to acknowledge the OSPIRG and IllinoisPIRG students and staff who assisted with research for this report, particularly Nicole Pexton and Anthony Stephens; Jeff Cohen from CampusBooks, Bruce Lundy from the University of Oregon Duck Store; Dr. Robert Beezer, Dr. Cable Green and Dr. Judy Baker; and Dave Rosenfeld from The Student PIRGs, Chris Lindstrom from USPIRG, and Emily Rusch from CALPIRG.

Special thanks to the Portland State University faculty members who allowed us class time to conduct this survey.

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The Student Public Interest Research Groups (Student PIRGs) provide an independent voice on behalf of the public interest. Investigating problems, crafting solutions, educating the public and offering students meaningful opportunities for civic participation.

The Make Textbooks Affordable Campaign is a joint project of the Arizona Students Association, California State Student Association, CALPIRG, ConnPIRG, CoPIRG Student Chapters, INPIRG, Maryland PIRG, MASSPIRG, MoPIRG, NJPIRG Student Chapters, Ohio PIRG, OSPIRG, WashPIRG, and WISPIRG.

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Portland, OR 97214
503-231-4181 x322
www.maketextbooksaffordable.org

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EXECUTIVE SUMMARY

Textbooks are an essential but increasingly expensive part of obtaining a college degree. With students spending between $700 and $1,000 per year and prices rising faster than inflation, the need for a solution is increasingly urgent.

Digital textbooks are a promising way to lower costs for students. The digital format has the potential to cut production costs, increase options for students, and open up the market to more competition.

Digital textbooks are now beginning to gain a more prominent position in the marketplace, making it a critical time to ensure that they are on the right track. We are concerned, however, that digital textbooks are on the wrong track.

The Student PIRGs conducted this study to determine how digital textbooks can live up to their potential as a solution. Through a survey of 504 students from Oregon and Illinois and 50 commonly assigned textbook titles, we confirm three fundamental criteria – affordability, printing options, and accessibility. We found that publishers' digital "e-textbooks" fail to meet these criteria, and that the emerging genre digital "open textbooks" are a perfect match. The key findings of the report are:

1.Digital textbooks must meet three criteria – affordable, printable and accessible.

First, digital textbooks must be more affordable than traditional books.

In order to be a solution to high costs, digital textbooks must cost less than traditional books. That means digital textbooks must be priced lower than the *net* cost of buying a textbook - the purchase price minus the amount the student can expect to receive for selling it back to the bookstore.

Second, digital textbooks must be straightforward and inexpensive to print.

Printing makes digital textbooks practical for students with different reading and learning styles. Though no one format is right for everyone, students seem to have a general preference for printed books over computers.

- Student comfort reading on a computer screen varied greatly among the students we surveyed. 33% were comfortable, 22% were uncomfortable, and 45% were in the middle.
- 75% said they would prefer a printed textbook to a digital textbook.
- 60% said they would buy a low-cost print copy even if a digital book were free.

Third, digital textbooks must be accessible.

Once students buy digital textbooks, they should be able to access them online, store them for use offline, and keep a copy for future use Anything less would make digital books impractical for large numbers of students.

- 45% of the students we surveyed said limited computer access would make it at least somewhat difficult to use a digital textbook.
- 71% said they have kept at least one textbook for future reference.

2. Digital textbooks done wrong: e-textbooks fail to meet the criteria

The first type of digital text we reviewed was e-textbooks, the digital book format offered by the major publishers through CourseSmart. We found that they fall short on each of the three criteria we found digital textbooks must meet.

E-textbooks are too expensive

- The e-textbooks we surveyed cost on average ***exactly the same*** as a new hard copy of the same title bought and sold back to the bookstore.
- The e-textbooks we surveyed cost on average ***twice*** the cost of a used hard copy of the same title bought and sold back to the bookstore.
- The e-textbooks we surveyed cost on average 39% ***more*** than a used hard copy of the same title bought and sold back online.

Printing is costly and difficult

- Printing was limited to 10 pages per session for each of the e-textbooks we surveyed.
- Buying and printing half of an e-textbook was ***three times*** the cost of buying a used hard copy and selling it back to the bookstore, for the books we surveyed.

E-textbooks are difficult to access

- Students must choose between using the book online or using it offline – they cannot do both.
- Most (75%) of the e-textbooks we surveyed expired after 180 days, so students do not have the option to access their books in the future.

3. Digital textbooks done right: open textbooks meet all of the criteria

Open textbooks are textbooks distributed free digitally under an open license. The key feature of an open license is that it permits users to make copies of the textbook and translate it into different formats. So, open textbooks *start* as digital but can *become* a variety of formats. We found that open textbooks accomplish what e-textbooks do not: low prices, printing options and accessibility.

Open textbooks are affordable.

Open textbooks are free digitally, and students can purchase other formats at a low cost.

Open textbooks are easy to print.

Students can print digital textbooks anytime, anywhere and in a variety of formats. They can print individual pages at home, order a print-on-demand bound copy, or anything in between.

Open textbooks are accessible.

Students can access open textbooks anytime, from any computer, without the book expiring.

Conclusions

Digital textbooks are a promising solution to lower costs, but they need to be done the right way. This study finds that digital textbooks need meet three main criteria in order to maximize their potential: they must be affordable, printable, and accessible. The two major players in the digital textbook market – e-textbooks and open textbooks – are examples of digital textbooks done the wrong way and digital textbooks done the right way.

Publishers should meet the criteria

Right now, publishers are on a crash course with e-textbooks. They are expensive and impractical for a large portion of the student population. Publishers should take a lesson from open textbooks and adjust their course toward meeting the criteria established in this report.

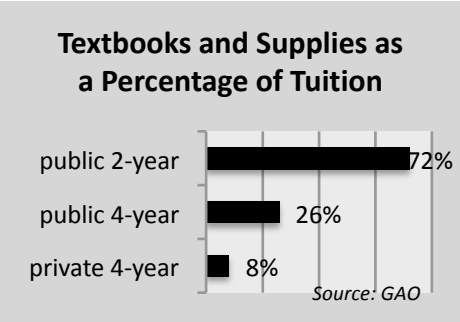
Institutions and faculty should help bring more open textbooks on the market

Open textbooks are the right way to take advantage of the benefits of digital textbooks, so faculty and institutions should do everything they can to bring more open textbooks onto the market. For faculty, this means giving preference to open textbooks whenever pedagogically appropriate. For institutions, this means providing incentives to faculty authors and pooling resources to develop a viable infrastructure to support open textbooks.

INTRODUCTION

Textbook costs – an issue of college affordability and access

The cost of college textbooks has become a significant issue of college affordability and access. The Advisory Committee for Student Financial Assistance, which advises the U.S. Department of Education and both Congressional education committees on college affordability issues, recently concluded that students spend between $700 and $1,000 a year on textbooks.[1] A previous study by the Government Accountability Office found that textbooks and supplies comprise 26% of tuition for an average four-year public university student and 72% of tuition for a community college student.[2] Facing such high ancillary costs, some students are forced with the difficult decision to take on additional loan or credit card debt, to undercut their own education by forgoing the purchase of textbooks, or even to drop out because of cost. Although textbook prices are only a component of skyrocketing college costs, they have become a significant tipping-point expense for low and middle-income students.



Textbook publishers continue to drive prices skyward

Over the last five years, the Student Public Interest Research Groups (Student PIRGs) have documented the tactics that textbook publishers use to drive up costs.[3] First, publishers undermine the used book market with frequent and unnecessary new editions and consumable formats. Second, publishers bundle textbooks with often-useless CDs, workbooks, and online supplements that drive up prices and make books hard to sell back used. Third, publishers conceal prices when marketing textbooks to the faculty who make purchasing decisions on behalf of students.

The unusual nature of the college textbooks market allows textbook publishers to engage in market abuses that would not be tolerated in a normal market. The root of this problem lies in two market dynamics that together give publishers an anticompetitive advantage in the pricing of textbooks. First, the publishing industry has undergone a massive wave of consolidation, with just three companies controlling the vast majority of the market. Second, the textbook market lacks traditional market mechanisms that regulate price, increasing the power of the supplier (publishers) and reducing the power of the consumer (students). Unlike most other products, textbook sales do not depend on the price the students are willing to pay. Instead, third party (faculty) makes the purchasing decisions on behalf of students. Inarguably, faculty must control textbook selection, since they know what will best educate their students. Nevertheless, students are left with little choice but to pay whatever price the publisher sets.

Recently, the US Congress took a significant step toward correcting this imbalance in the textbook market by passing the Higher Education Opportunity Act (HR 4137). Included in the bill is a publisher price disclosure mandate[4] that will help shift the dynamics of the market to be more equitable to

students. The bill requires publishers to provide price information when marketing to professors, so they may consider textbook costs on behalf of students. Though professors consider many important factors when selecting the best textbook for a class, transparency will ensure that publishers are held accountable for their pricing. Passing this legislation is not the complete solution to the larger issue, but it opens the door to more price competition and more affordable options.

Digital textbooks – a promising solution

The rapid digitization of industry is generating new products and new business models that offer enormous benefits to consumers. If the textbook industry recognizes the benefits of digital technology to reduce costs and to fuel innovation, textbooks could become significantly more affordable and accessible.

- Digital textbooks could eliminate a significant portion of textbook production costs. Delivering textbooks digitally, rather than as traditional books, would strip out any printing, shipping and overstock expenses. Students could still be given the option to print or purchase a hard copy of the digital textbook locally at a lower cost.

- Digital textbooks could give the consumer control over textbook prices by giving them control over the textbook format. Right now, students typically have two textbook options – new or used traditional books. In contrast, students could have many format options created from a digital textbook file – PDF, printed out, bound, etc. Students could decide to spend a little or spend a lot, but each student would have more control over the price they pay.

- Digital textbooks could level the playing field for new publishers to compete in the market. Currently, the industry is dominated by only three publishers who squeeze out competition. Digital textbooks would lower several barriers to entry, including capital investment in printing facilities and supply chain development. Furthermore, entrepreneurs could take advantage of niche markets to gain a foothold. The oligopic nature of the textbooks market is one of the reasons textbook prices are out of control, and more competition would inevitably force prices down.

Some digital textbook trends are good, others are not

The skyrocketing cost of textbooks, coupled with developments in educational technology, has sparked a growing interest in digital textbooks among stakeholders. Some of the developments are very promising. The California State University system is creating a digital marketplace[5] where instructors can evaluate and assemble course materials from a variety of free and commercial sources. Rice University created a digital repository[6] of free, public domain educational materials that are easy to mix and match for printing or downloading as a textbook. Individual professors are writing and adopting open textbooks that are free to students digitally and can be easily printed and bound.[7] Even the commercial sector is innovating new business models that utilize the advantages of digital books. Freeload Press subsidizes free online books with ads, and startup Flat World Knowledge sells products students would want to purchase – like low cost printed copies or study aids – and gives the books away for free online.[8]

Other developments are less promising. In January of 2008, a consortium of all six textbook publishers[9] launched the online digital "e-textbook" marketplace CourseSmart. For years, these publishers have been trying to get their e-textbook sales off the ground; product lines like Pearson's SafariX and Cengage's iChapters all had shallow market penetration. Each of the individual publishers' e-textbook brands is now being merged into CourseSmart, which currently boasts over 4,000 digital titles. Though e-textbooks are digital, the way they are formatted and sold is virtually the same as their printed counterparts. To fit into the conventional publishing business model, e-textbooks must be designed to thwart file sharing, printing and reselling access codes. As a result, e-textbooks do not deliver of the potential benefits that digital textbooks can offer for students.

The purpose of this study

We have known for a long time that digital textbooks can be a solution to high textbook costs. Now that digital textbooks are beginning to gain a more prominent position in the textbooks marketplace, it is critical to ensure they are on the right track. They will only live up to this potential if they meet students' needs as consumers and learners. The Student PIRGs conducted this study to establish the criteria digital textbooks must meet, and to evaluate the options currently on the market.

REPORT FINDINGS

During the summer of 2008, the Student Public Interest Research Groups conducted a study to establish the criteria for digital textbooks and assess the digital textbooks currently available. The study included a student survey completed by 504 students in Oregon and Illinois, and an analysis of e-textbook prices based upon 50 commonly assigned textbooks.

We found that digital textbooks should meet three main criteria to be viable for students – they must be affordable, printable and accessible. We assessed two types of digital textbooks through the lens of these criteria: e-textbooks and open textbooks. E-textbooks came up short on each of the criteria. Open textbooks, on the other hand, met all the criteria.

1. DIGITAL TEXTBOOKS MUST MEET THREE CRITERIA - AFFORDABLE, PRINTABLE, AND ACCESSIBLE

Digital textbooks should meet three criteria to live up to their potential as a solution to high textbook cots: they must affordable, straightforward to print, and easily accessible for students.

First, digital textbooks must be more affordable than traditional books

In order to be a solution to high costs, digital textbooks must cost less than traditional books. That means digital textbooks must be priced lower than the *net* cost of buying a textbook - the purchase price minus the amount the student can expect to receive for selling it back to the bookstore.

Second, digital textbooks must be straightforward and inexpensive to print

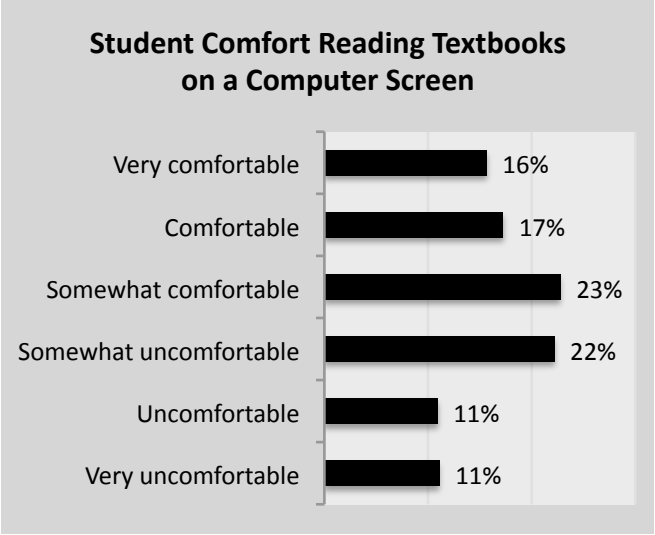
Students should have the option to print digital textbooks without excessive restrictions or costs. That includes printing part or the entire book on a personal or school printer, and the ability to utilize print-on-demand services to produce low-cost bound copies.

Printing makes digital textbooks practical for students with different reading and learning styles. Some students will only want to read on paper, some will only need the computer screen, and most will probably be somewhere in between. The sensible solution is to leave it up to each student to decide where, when and how much of the book to print.

Though no format is right for everyone, students do seem to have a general preference for printed textbooks. This is not surprising. Even if today's students are comfortable with computers, they still grew up reading traditional books. As more regular books and K-12 textbooks become digital, this might begin to shift. For now, though, students need to have the option to print out digital textbooks.

Our survey of student attitudes toward digital textbooks confirms that straightforward printing options are essential to digital textbooks:

- About a third (33%) of the students we surveyed said they are comfortable reading textbooks on a computer screen, about a fifth (22%) say they are uncomfortable, and about half (45%) are somewhere in the middle. [10]
- Three-quarters (75%) of the students we surveyed said that they would prefer a paper textbook to an electronic textbook, assuming cost was not a factor.
- Even if students could use a digital textbook for free, more than half (60%) said they would likely or definitely purchase a reasonably priced ($30-$40) printed copy.



Third, digital textbooks must be accessible

Students should be able to access digital textbooks online, store them for use offline, and keep a copy for future use. First, it is fair. Once a student buys a textbook, it should be theirs to keep and access wherever and whenever they want. Second, anything less than complete access would make digital books impractical for large numbers of students with limited access to computers and/or the internet.

Digital textbooks are only viable if students can access them easily. Students need to access their textbooks from many different locations with various hardware and internet connection speeds. Students study in eclectic locations like the library, friends' houses and cafes. Students also bring their books to class so they can follow along and take notes. Students will need the flexibility to access books online, offline and on any computer.

The findings of our student survey confirm that accessibility is imperative for the success of digital textbooks:

- Almost three-quarters (71%) of the students we surveyed say they have chosen to keep at least one textbook for future reference.
- Nearly half (45%) of the students we surveyed said that computer access would make it at least somewhat difficult to study from a digital textbook.
- A clear majority (86%) of students we surveyed said they bring their textbooks to class more than half the time.

2. Digital Textbooks Done Wrong: E-textbooks Fail to Meet the Criteria

The first type of digital textbook we reviewed is e-textbooks – the digital textbooks offered by the major publishers through the online marketplace CourseSmart. All of the major publishers use CourseSmart as their delivery mechanism, and all e-textbooks on CourseSmart have the same terms of service.

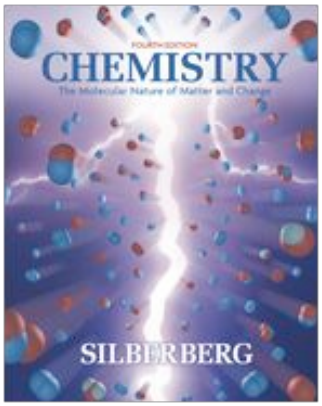
We found that e-textbooks fall short of each criteria. First, they are priced too high to yield any significant savings for students. Second, printing is difficult and costly. Third, e-textbooks are difficult to access and expire after a set period of time.

E-textbooks are too expensive

E-textbooks are not a better deal than traditional textbooks. Publishers claim that e-textbooks are a low-cost option, but it turns out they are anything but low cost.

- The e-textbooks we surveyed cost on average ***exactly the same*** as a new hard copy and ***twice*** the cost of a used hard copy of the same title bought and sold back to the bookstore.[11]
- The e-textbooks we surveyed cost on average 39% ***more*** than a used hard copy bought and sold back online.[12]

Chemistry*, 4th edition* — ***McGraw-Hill***



new: $143.13, **estimated net cost:** $71.57
used: $107.35, **estimated net cost:** $35.78
e-textbook: $88.17

Buying the e-textbook saves students $54.96 (38%) on a new book and $19.18 (18%) on a used book at the bookstore.

Unfortunately, students cannot sell back the e-textbook to recoup any of the initial expense. Students who bought the hard copy would typically be able to sell it back to the bookstore for $71.57, spending $16.61 less overall on a new book and $52.39 less on a used book.

It is unacceptable for a digital textbook to cost *more* than a traditional textbook, so e-textbooks fail to meet the most important criteria for digital textbooks – affordability.

E-textbooks are difficult and costly to print

Printing e-textbooks is impractical for students. Excessive restrictions make printing so difficult and cost-ineffective that most students will probably resin to reading on a computer screen.

First, publishers limit the number of pages students can print. If students exceed the limits, they are out of luck.

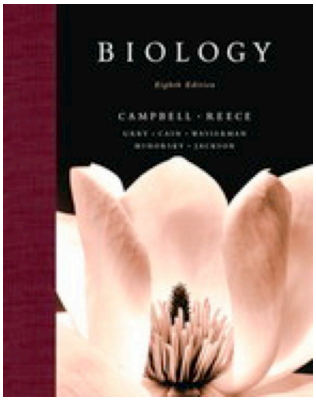
- E-textbook printing on CourseSmart is limited to 10 pages per session and a total of 150% of the number of pages in the book.

Second, printing a substantial portion of the e-textbook ends up costing more than purchasing a printed copy.[13] Printing restrictions force students to use inefficient and expensive printing methods, when they could otherwise take advantage of bulk or print-on-demand services. For the e-textbooks that we surveyed:

- The cost of buying an e-textbook and printing all of the pages was ***twice*** the cost of buying a new hard copy and selling it back to the bookstore (and was exactly the same a the retail price of a new hard copy).

- Buying an e-textbook and printing half of the pages was ***three times*** the cost of buying a used hard copy and selling it back to the bookstore (and was exactly the same as the retail price of a used hard copy).

Biology**, 8th edition* — ***Pearson



e-textbook: $86.50
e-textbook + print all: $211.87
e-textbook + print half: $149.19
e-textbook + print 1/4: $117.84

New price: $173.00, **net:** $86.50
Used price: $129.75, **net:** $43.25

Buying the e-textbook initially saves students $86.50 (50%) on a new book and $43.25 (33%) on a used book.

However, students may end up paying the price if they want to read on paper or do homework offline. Buying the e-textbook and printing the whole book would end up costing $211.87***, $125.37 (145%) more*** than the net cost of a new book and $38.87 more than the retail price.

E-textbooks fail to offer students reasonable printing options. Only a portion of students feel comfortable reading digital books, so e-textbooks do not meet the learning needs of the majority of students.

E-textbooks are difficult to access

Access to e-textbooks is heavily regulated and unfair for students.

First, e-textbook access is limited to either online or offline on a single computer. Students must choose between two mutually exclusive e-textbook formats:

Online Version: Students can log in to use the textbook on any computer with internet access, but they cannot download a copy to use offline.

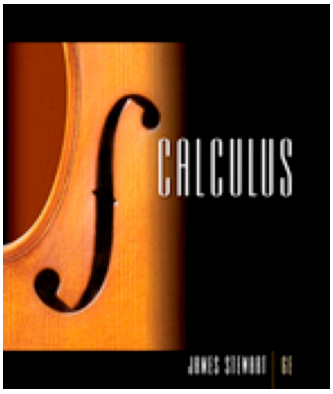
Downloadable Version: Students download the textbook to a single computer for use offline, but they cannot access it online or from any other computer.

Forcing students to choose one of these options will interfere with many students' study habits. Access to their course book is limited to locations with reliable internet access, or to students who can afford their own laptop.

Second, e-textbooks have an expiration date, after which students cannot access them. The only way to access an e-textbook again is to buy another copy.

- The most common subscription period for e-textbooks is 180 days (75% of the books we surveyed), which covers the typical semester-long class.

Calculus**, 6th edition* — ***Cengage Learning



New price: $207.95
Used price: $155.96
e-textbook: $103.99
2 e-textbooks: $207.98

Buying the e-textbook saves students $103.94 (50%) on a new book, so it may seem like a good deal.

Unfortunately, this textbook expires after 180 days, even though many courses extend over two semesters. Semesters are typically 120 days, so students would have to buy two subscriptions for a total of $207.98!

E-textbooks fail to meet the criteria of accessibility. Rather than using the inherent flexibility of the digital format to improve access, publishers chose to further restrict access. As a result, e-textbooks are not even an option for a large number of students with limited computer/internet access.

3. Digital Textbooks Done Right: Open Textbooks Meet All of the Criteria

Open Textbook:

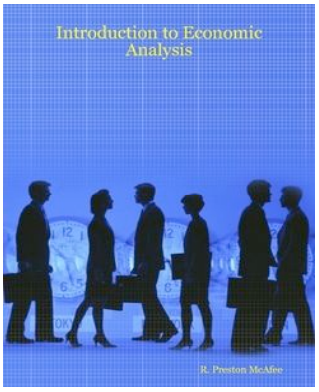
Introduction to Economic Analysis

R. Preston McAfee

Online: Free
Print copy: $11.10

Used at: Harvard, Caltech, NYU, dozens of other schools

www.introecon.com



The second type of digital book we reviewed is open textbooks. We found that open textbooks accomplish what e-textbooks do not: low prices, printing options, and accessibility.

Open textbooks are textbooks that are distributed for free digitally under an open license. The key element of an open license is that it permits users to make copies of the textbook and to translate it into different formats. Open textbooks *start* as digital textbooks, but can ultimately become printed pages, a hardbound book, or even audio files. Some open textbooks have licenses that allow users to customize a copy of the book by adding or rearranging material.

Open textbooks are affordable

Open textbooks are free digitally and affordable to print, so they beat traditional textbook prices by a large margin. Students always have the option to use the book for free online, and they can choose to print or purchase a hard copy of the book. In other words, students can select the format that fits their learning style and budget.

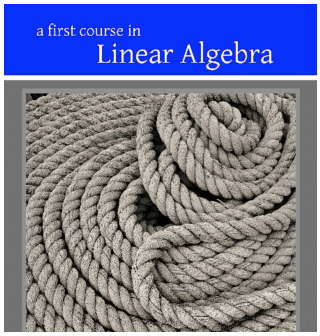
Open textbooks are easy and inexpensive to print

Open textbooks are easy and inexpensive to print in a variety of different formats. The open license allows students to reproduce the textbook in any format at any time.

Students have virtually endless options to purchase or create the format that best suits their learning style and budget. Students can print them at home or at school, order a copy through a copy shop, or even buy a professionally bound copy through a print-on-demand publisher.

A First Course in Linear Algebra — ***Open Textbook***

by Dr. Robert Beezer — *http://linear.ups.edu*



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Download PDF to print: Free
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Spiral bound through Lulu.com: $16.35
Softcover book through Lulu.com: $24.50

This open textbook is a perfect example of printing options. Students can print as many pages as they want, from online and offline. Students who prefer printed copies have two formats already set up through the print-on-demand service Lulu.com.

Open textbooks are accessible

Open textbooks are accessible anytime, anywhere and from any computer. They take advantage of the inherent flexibility of the digital format to improve accessibility and convenience to students.

Open textbooks give students each important element of accessibility – online, offline on any computer, and future access. Open textbooks are typically based on a website, so students can always access the book online. Students can also download the open textbook to any computer for use offline. Once a student downloads a copy of an open textbook, it is theirs to keep for future access.

Collaborative Statistics ***Open Textbook***

by Barbara Illowsky and Susan Dean *http://cnx.org/content/col10522/*

Read online: Just log on to http://cnx.org/content/col10522/
Read offline: Download a PDF or ZIP file from the website
Read on paper: Choose the page, section or chapter and click print
Read in a book: Order a printed copy through QOOP for $31.95

Collaborative Statistics is an open textbook used in several California community colleges. Like other open textbooks, it offers students options for accessing the book. Students can read it anywhere online and download it to any computer. If students want to take a chapter to class, printing is easy. Students who prefer to have a book can easily order a hard copy.

CONCLUSIONS

Digital textbooks are a promising solution to lower costs, but they need to be done the right way. This study finds that digital textbooks need meet three main criteria to maximize their potential – they must be affordable, printable, and accessible. The two major players in the digital textbook market – e-textbooks and open textbooks – are examples of digital textbooks done the wrong way and digital textbooks done the right way.

Open textbooks are the way to let digital textbooks live up to their potential as a solution to overwhelming textbook costs. They meet the needs of students as learners, while protecting their interest as consumers. We have known for a long time that digital textbooks could be a powerful solution, and this report finds that open textbooks are the best course to take.

Therefore, we draw the conclusion that the next step to make textbooks affordable should be to shift the market toward high-quality open textbooks. A few things must happen - and happen quickly - to make this possible. First, publishers need to take a lesson from open textbooks and begin transitioning their models to meet the criteria. Second, faculty need to give preference to open textbooks over expensive textbooks whenever possible. Third, policymakers and institutions need to work together to create an environment that leads to the most open textbook adoptions possible.

Publishers should adjust their course to meet the criteria.

Publishers need to devise ways to get back on track with digital textbooks. As the producers of textbook content, publishers have the responsibility to develop textbooks that meet the needs of students. Publishers should start immediately by addressing the shortcomings of e-textbooks identified by this report – affordability, printing options, and accessibility.

Publishers will likely need to adjust their business models to meet these criteria. Part of the problem is that publishers are attempting to sell digital textbooks through their traditional sales model. The result is the heavily restricted and costly e-textbook format, which fails to be a viable option for a large number of students. Rather than designing the digital book to fit the model, publishers should consider redesigning the model to fit digital books.

A few publishers are already pioneering new business models. Most notably, the startup company Flat World Knowledge is publishing commercially produced open textbooks. The textbooks are developed through the same process that traditional publishers use – author royalties, peer reviews, etc. – but the similarities end there. Flat World's open textbooks are free online, so students do not pay to access the book. Instead, Flat World plans to profit by selling print books, audio books, enhanced downloads and study aids. In other words, Flat World gives away the book for free and sells products that students are likely to purchase. In theory, this model should work, since students tend to want print books. We will find out when Flat World debuts with its first eight books in January of 2009. Their success could provide an example for other publishers to follow.

Ideally publishers will shift to open textbooks, but we know that this change will not happen overnight. However, if publishers start by meeting the three criteria established in this report, they will at least get on the right track.

Faculty members should give preference to open textbooks

Faculty members are in a unique position to help more high-quality open textbooks enter the marketplace. First, they are in charge of selecting textbooks. That means they can increase the market share of open textbooks by adopting them. Second, their textbook assignments directly determine publisher sales. If they create "demand" for open textbooks, publishers will respond with supply.

Therefore, faculty members can instigate the shift toward open textbooks by giving preference to adopting them whenever possible. Of course, the top priority of faculty members will always be to select the textbook that is most appropriate for their students, and that should not change. However, it is still consistent with that principle to give preference to open textbooks whenever they best meet the needs of a class.

Open Licensing

Creative Commons developed an open licensing system designed specifically for copyright holders of digital intellectual property. CC licenses give authors a choice to keep some rights and grant others to the public – in other words, a "some rights reserved" copyright.

As of the release of this report, over 1,500 professors from across the country have signed a statement of intent to give preference to open textbooks whenever pedagogically appropriate.[14]

Open textbooks that are of comparable quality to expensive, traditional textbooks are already on the market. One example of an open textbook is *Introduction to Economic Analysis* by R. Preston McAfee. It has already been adopted by faculty at Harvard, NYU, Caltech, and a number of other schools. Students have the option to use it for free online, or order a hard copy for around $15. Instructors can choose to use the book as-is, or customize a version of the book by adding, removing or editing the content.

Colleges should provide support for open textbooks

Institutions can bring more open textbooks onto the market by developing support for faculty who use and author open textbooks. Faculty should always maintain control of which textbooks are selected for a class, but institutions play an important role in creating an environment to foster more open textbook use.

First, institutions can fund and organize open textbook authors. On the campus level, this includes compensating their faculty members for time spent writing or customizing open textbooks. On the national level, this includes pooling resources with other institutions for open textbook development and quality assurance. There are already some promising initiatives. In July of 2007, a group of community colleges led by the Foothill-De Anza Community College District in California organized the Community College Consortium for Open Educational Resources (CCCOER). Rice University's Connexions project worked closely with CCCOER to launch an online version of *Collaborative Statistics*

in August 2008. Connexions has plans to offer additional open textbooks for many high enrollment community college courses.

Second, institutions can establish the appropriate infrastructure for open textbooks. That includes support for identifying and customizing open textbooks, and methods for delivering the digital and printed books to students. California State University's Digital Marketplace is a perfect example of institutional infrastructure. The marketplace will be an internet-based platform containing both open and traditional textbooks. It is designed as a resource for faculty to search, review and customize textbooks.

METHODOLOGY

The author of this report, along with student volunteers, conducted two separate areas of research: a student survey and a comparison between different purchasing methods of the same textbook.

Student Survey

First, we surveyed 504 students from Portland State University (303) and the City Colleges of Chicago (201) during July of 2008. Students were asked by PIRG staff or volunteers to complete the surveys during the first five minutes of class time. All students in each class were surveyed.

Classes were selected by level and stratified by discipline to produce a sample most representative of the typical student population. All classes were introductory and lower-level courses, and not classes designed for a specific major. While the classes we were able to survey depended completely on which instructors were willing to dedicate class time, we ensured that a minimum of 10% of the surveys came from courses in each of the following categories: Mathematics/Applied Science, Natural Science, Social Science, Business and Humanities. We chose to survey students by class to eliminate self-selection bias and non-response bias.

We recognize the difficulty of selecting a truly random sample of students. We felt confident only drawing samples from Portland State (PSU) and the City Colleges of Chicago (CCC). The two student populations differ in geographic location and type of institution. We ran the same calculations on the data from each separate population and found no statistically significant difference between the two.[15]

Questions we asked students:

Do you typically bring your textbooks to class with you?

Do you ever choose to keep textbooks for future reference?

Would you be comfortable reading a textbook on a computer screen, rather than a book?

Would you consider using your textbooks on an eReader, like Amazon's Kindle?

Would computer access make it difficult for you to study from a digital textbook?

If cost were not a factor, would you prefer a printed textbook or a digital textbook?

If you could get a textbook for free online, would you still buy a reasonably priced ($30-$40) printed copy?

Calculation

We calculated a simple mean for all of the answers, and cited it as a percentage of the total number of students who answered the question.

Textbook Price Comparison

Second, we surveyed the cost of different purchasing options for 50 commonly assigned textbook titles. The sample was intended to represent the typical textbook students will buy, not necessarily the average textbook. We identified the 50 textbooks by obtaining the list of most commonly assigned titles from college bookstores. We only considered titles assigned for introductory (100-200 level courses), since we figured those books would be the most "typical." Furthermore, we only considered titles that had been adopted at least two semesters at each school. That way, we knew the bookstore at one point was buying back the book. After making a list of the remaining schools, we selected the first 50 we found on CourseSmart.

For each title, we collected the following data:

(mean price of the 50 books in parentheses)

- Title, Author(s), Publisher, Copyright Year, Publication Date, # of Pages
- Length of e-textbook subscription
- Print ISBN-10, Print ISBN-13, e-text ISBN-10, e-text ISBN-13
- e-textbook price on CourseSmart ($73.19)
- Retail price for a new book ($145.39)
- Retail price for a used book ($109.04)
- Average used price online, including shipping ($83.50)
- Bookstore buyback price ($72.69)
- Online buyback price ($33.90)

Details on data collection and calculation:

Title information, subscription length and e-textbook price were all collected from the e-textbook listings on CourseSmart. We identified the listing by running a search for the ISBN provided by the bookstore.

The retail prices for new and used books were based on publisher net prices, with standard bookstore markup applied. After consulting with several bookstore managers, we were advised to use the publisher list price as the retail price of a new book, and 75% of the list price as the retail price of a used book. The bookstore buyback price was calculated using the industry standard of 50% of retail price.[16]

The average online used and buyback prices were calculated using a snapshot of all of the listings for our 50 textbooks found on the textbook price comparison website CampusBooks.com. CampusBooks provided us with 967 used book listings from 21 retailers, and 295 buyback values from 7 retailers. We calculated the average price for each book at each retailer, and then averaged the retailers' average prices for each book. We chose this methodology over a straight average because the process for

listing books varied from retailer to retailer For example, Amazon Marketplace has many listings at different prices, and Textbooks.com has only one listing because they sell all copies at the same price. The "snapshot" for used and new prices was taken on July 3, 2008, and the "snapshot" for buyback prices was taken on July 18, 2008. It must be noted that any estimated of the average online prices for books has a certain amount of inherent error. We spot-checked some of the used textbook listings and found that the same copy of a book listed by several different retailers, and we found cases where an older edition of a book was listed under the new books ISBN.

END NOTES

[1] Advisory Committee on Student Financial Assistance. 2007. *Turn the Page: Making College Textbooks More Affordable.* http://www.ed.gov/about/bdscomm/list/acsfa/turnthepage.pdf

[2] Government Accountability Office (GAO). 2005. *College Textbooks Enhanced Offerings Appear to Drive Recent Price Increases.* GAO-05-806. http://www.gao.gov/new.items/d05806.pdf.

[3] All PIRG reports can be downloaded from http://www.maketextbooksaffordable.org/newsroom.asp?id2=14221

[4] For more information, see The Student PIRGs' analysis of the textbook affordability provisions. http://www.maketextbooksaffordable.org/HR4137_PIRG_Analysis.pdf

[5] For more information on the CSU Digital Marketplace, visit http://www.calstate.edu/ats/digital_marketplace/

[6] For more information on Rice's Connexions, visit http://cnx.org

[7] For more information on open textbooks, visit http://www.maketextbooksaffordable.org/statement.asp?id2=37633

[8] See http://www.freeloadpress.com and http://www.flatworldknowledge.com

[9] Pearson, Wiley, Cengage Learning, McGraw-Hill, Bedford Freeman & Worth, Jones & Bartlett.

[10] We also asked students about eReader, like Amazon's Kindle. The majority of students (53%) said they did not know enough to answer the question, so we were not confident enough to include this as one of the findings.

[11] Calculated from the average cost of the CourseSmart e-textbooks we surveyed (50% of retail), the standard used book price at a bookstore (75% of retail), and the standard buyback price at the bookstore (50% of retail). Standard bookstore used book and buyback prices cited in GAO 2005, page 5 and confirmed by bookstore managers we spoke with.

[12] Calculated from the average net price of a used book online (36% of retail) and the average cost of an e-textbook (50% of retail). The net price of a used book online is the average price (60% of retail) minus the average buyback price (24% of retail).

[13] The average cost of printing was calculated using the number of pages in the e-textbook and a cost of $.09 per page. We obtained the number of pages from the publisher's description of the e-textbook on www.coursesmart.com. We used $.09 because it is the standard charge per page at FedEx-Kinko's (www.fedexkinkos.com) standard charge per page. Some students may have access to less expensive printing through a library or on-campus printer, so these costs could be lower for some students. We chose Kinko's as the standard, because it is the leading national chain.

[14] To view the Open Textbooks Statement of Intent, visit www.maketextbooksaffordable.org/statement

[15] We used a 95% margin of error.

[16] GAO 2005, page 17