The Evolution of Affordable Content Efforts in the Higher Education Environment: Programs, Case Studies, and Examples

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This book was produced using Pressbooks.com, and PDF rendering was done by PrinceXML.

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Reviews

The following are reviews for *The Evolution of Affordable Content Efforts in the Higher Education Environment: Programs, Case Studies, and Examples.*

An undergraduate student in the United States can expect to spend more than $1,200 each year on textbooks and other course resources. High textbook costs create a true access challenge for students.

At The University of Texas at Arlington, we have chosen to pair the values of access and success. In so doing, we recognize that attention to factors that stress students' ability to gain access to higher education must be part of a comprehensive student success strategy. This urgent work should not be done in a vacuum but rather with insights from colleagues engaged in similar work. Shane Nackerud and Kristi Jensen in *The Evolution of Affordable Content Efforts in Higher Education: Programs, Case Studies, and Examples* offer best practices and sage advice from those practitioners deeply engaged in enhancing textbook affordability at their institutions.

For those of us responding to faculty concerns about adoption of OER, practical strategies are valuable. For example, faculty may cite the loss of ancillaries as a barrier to OER adoption. Miller, Duffy and Gjestvang describe a consortial effort to use collaborative authoring to create multiple test banks.

Cullen, Stewart, and Stringer offer readers the benefits and challenges of replacing a first-year science textbook with readings from an online database already licensed for students at a university, avoiding any textbook costs for students.

Parks brings the important discussion of universal design into the conversation on open content. The author makes important points about how current strategies to provide access to textbook content to students with learning differences, requiring students to self-identify and prove unique needs, fall far short of the ambitions of universal design. The OER movement offers an opportunity for unfettered access for students across learning needs and types. The shared case studies in mathematics offer inspiration for those wanting to broaden access.

The twenty-six case studies in *The Evolution of Affordable Content Efforts in Higher Education* offer excellent resources for college and university educators, including librarians, faculty, and administrators, seeking practical insights and inspiration to enhance affordable content for their students. I highly recommend the text.

Rebecca Bichel
Dean of Libraries
University of Texas at Arlington

Commensurate with the disproportionate rise in the cost of educational materials over the past decade, a growing number of colleges and universities across the country have identified textbook affordability as an increasingly real barrier confronting students at their institutions. Until now, no work has offered a collection of first-hand accounts from those who, at the birth of a movement, with no map for reference, have forged paths in the landscape of textbook affordability.

An unprecedented anthology in its subject matter, *The Evolution of Affordable Content Efforts in Higher Education: Programs, Case Studies, and Examples* shares honest accounts from the field on a diversity of topics, including: the value of establishing a cross-representative campus team of textbook affordability champions; strategies for generating faculty buy-in for OER; using, gathering, and analyzing data as critical components of an affordability initiative; the importance of embedding Universal Design techniques and steps for creating

accessible content into faculty guides for authoring and remixing OER; leveraging existing technology and services of the library; ancillary creation camps, and beyond.

Although the *what* and the *why* revealed throughout this collection serve as justification for instituting a textbook affordability initiative, these pieces of information do not alone coalesce into a clear picture of what's needed for a successful program. If Open pioneer Lawrence Lessig is correct in saying "creation always involves building upon something else," then it's the detailed account of *how*, genuinely and generously shared in nearly every chapter, that is the key to catalyzing radical transformation of the affordable educational material movement and landscape. New, established, and veteran content affordability programs alike: this open collection is a map for reference.

Maran Wolston
Philosophy Faculty
Minneapolis Community and Technical College
LeadMN 2018 Instructor of the Year

Having monitored two different OER-oriented discussion lists since their inception, the majority of academic librarians are seeking advice on how to accomplish the following to advance textbook affordability at their institution:

- Best practices for starting an affordable textbook initiative at a college or university;
- Strategies to encourage faculty to adopt OER and alternative learning materials;
- Identifying OER and alternate learning content for curricular areas.

Given the diversity of our institutions, there is no one-size-fits-all approach, although there are some commonalities, such as designing a faculty incentive into the project. *The Evolution of Affordable Content Efforts in Higher Education: Programs, Case Studies, and Examples* addresses these high-demand questions by delivering on what its title promises – examples.

With its wide-ranging collection of case studies, this volume succeeds in truly offering ideas and solutions for academic librarians across the spectrum of institutions, though it is most likely to appeal to those who are just now considering an affordable learning initiative or are still new to this growing area of library advocacy. There is a mix of voices, some from outside the academic library, reflecting a range of experience with OER, newcomers and experts alike, offering value for those in the early stage of their institutional effort as well as those grappling with complex issues, such as coping with publisher initiatives to co-opt or hamper affordability initiatives.

While it will undoubtedly be a go-to resource for academic librarians seeking advice and answers to their "How do I…" and "Who has already…" questions, where this volume will make its mark is in advancing the progress of global affordable content efforts and initiatives by encouraging more librarians to take a leadership role for textbook affordability at their institution. What should encourage all affordable and effective learning advocates is this volume's scope as a reflection of tremendous progress and great hope for a promising future.

Steven Bell
Associate University Librarian for Research and Instructional Services
Temple University

Acknowledgements

The development of *The Evolution of Affordable Content Efforts in the Higher Education Environment: Programs, Case Studies, and Examples* was made possible due to the efforts and help of a lot of people.

On Kristi's behalf, thank you to the University of Minnesota Libraries for a three month professional development leave in 2017-2018. Without this designated time to focus, the book would not have been possible in such a timely matter. Thanks to Claire Stewart for her support, the professional development leave review committee for their work to review the pool of applicants and make recommendations, and Wendy Pradt Lougee for making the decision to support my leave and the creation of the book.

We'd also like to thank Emma Molls, and the U of M Libraries Publishing Services unit, for helping guide us through the publishing process with patience and expertise (and helping us to finally release this book!).

Thanks to Sue Everson, our amazing copy editor, for her phenomenal work in reviewing all the chapters and improving their consistency and readability, and doing so quickly and happily. We hope to work with you again.

Many thanks to our initial reviewers, Rebecca Bichel, Maran Wolston, and Steven Bell for being the first readers of the book and offering their insights concerning affordable content and where this book fits in with that effort. Thank you your willingness to help us prepare this book for wider distribution.

And finally, most importantly, thanks to all the authors of the chapters of *The Evolution of Affordable Content Efforts in the Higher Education Environment*. We greatly appreciate you taking the time to share your expertise and the details of your programs and efforts. You are the pioneers of affordable content, and we sincerely hope others learn from your excellent examples. From the bottom of our hearts, thank you for your contributions to this book and for your efforts to support student success and improve the lives of students everywhere.

Kristi and Shane

The Evolution of Affordable Content Efforts in the Higher Education Environment

Chapter 1 - Introduction to The Evolution of Affordable Content Efforts in the Higher Education Environment

by Kristi Jensen and Shane Nackerud (bios)

Increasing Costs of Higher Education and Textbooks

The escalating costs of higher education and increasing student debt have been well documented over the past decade. Since 2008, state financial support for higher education has continued to decrease across the United States,[1] resulting in a steady increase in tuition and fees.[2] Financial aid has failed to keep up with these increases,[3] producing more financial pressure for students and their families. In August, 2010, the Wall Street Journal reported that student-loan debt had surpassed credit card debt, and the popular press has consistently reported on the student loan crisis since that time, with Forbes and other financial publications reporting that student loan debt in the U.S. rose to $1.5 trillion in the first quarter of 2018.

In addition to higher student loan debt, tuition, and fees, students are faced with textbooks whose cost has outpaced the rate of inflation by 800–1,000% (depending on the time period examined).[4] The Trends in College Pricing 2017 report from the College Board indicates that student budgets should include at least $1,200 for books and supplies at public and private four-year institutions, and at least $1,400 at public two-year institutions (2017, p. 10). In Time to Degree, the National Student Clearinghouse Research Center indicates that the average time to degree completion for students at four-year public and private institutions is 5.2 and 4.8 years, respectively (2016, p.8). If students pay $1,200 per year for books and supplies, they have paid $6,000 for these materials by the time they graduate. And if students take out additional student loans to pay for these materials, they spend approximately $1,650 in interest as well (assuming an interest rate of 5.05% and 10 years). Paying $6,000–$7,650 is equivalent to paying for an extra semester of tuition at many four-year public institutions.

> **In addition to higher student loan debt, tuition, and fees, students are faced with textbooks whose cost has outpaced the rate of inflation by 800–1,000% (depending on the time period examined).**

1. Mitchell, Leachman, and Anderson in "A Lost Decade in Higher Education Funding" provide a summary of the decrease in state support for higher education. For more detailed data for each state, see the State Higher Education Executive Officers Association report on State Higher Education Finance Fiscal Year 2017 and "Appropriations, Tuition, and Enrollment, by State" data
2. See Rick Seltzer's summary in his article "Net Price Keeps Creeping Up" in Inside Higher Ed from October 25, 2017. Figure 4A (taken from the College Board Trends in College Pricing 2017 Report, p. 13) demonstrates tuition increases across three decades.
3. The Trends in College Pricing 2017 Report from the College Board indicates that "...between 2012–13 and 2017–18, increases in grant aid and tax credits and deductions for full-time students covered only about 7% of the $730 (in 2017 dollars) increase in published tuition and fees at public four-year institutions and about two-thirds of the $3,770 increase in published tuition and fees at private nonprofit four-year colleges and universities. For public two-year college students, the $200 increase in tuition and fees over these five years was accompanied by a $90 decline in average grant aid and tax benefits." (2017, p. 8)
4. See "College Textbook Prices Have Risen 1,041 Percent Since 1977" from NBC News (2015) and "College Textbook Prices Increasing Faster Than Tuition and Inflation" from the Huffington Post (2013, updated 2017).

In Student Success Upfront, Subiano demonstrates why dollar amounts like the annual cost of textbooks are important to today's students:

> The public conversation about college affordability tends to center on big, scary numbers, like the $50,000 some colleges now charge in tuition, or the $1.5 trillion Americans collectively owe in student loans. But college officials working to improve completion rates know that much smaller sums of money can play an outsize role in student success. The difference between graduating or dropping out could hinge on a student's ability to come up with just a thousand dollars.

Several student surveys[5] have examined behavior related to textbooks, and demonstrate that students are taking fewer courses, are dropping or withdrawing from courses, and are failing courses because of high textbook costs. All of these outcomes have the potential to negatively impact students' time to or completion of a degree. The emphasis on student completion rates in higher education has been demonstrated frequently during the last decade.[6] As universities acknowledge that student success is impacted by relatively small dollar amounts and that student behaviors related to course enrollment are affected by expensive textbooks, providing affordable course content programs becomes even more important.

Beyond student success, the high cost of course materials can also have a relatively hidden impact on the ability of college students to afford the basic necessities of their daily lives. In addition to managing course loads and finishing assignments, many students face the stresses of being unable to pay for food, housing, transportation, and tuition. According to a recent report by the California State University system, 41.6% of CSU students reported food insecurity, with 21.6% reporting very low food security[7]—a troublesome statistic that is most likely the reality in other college and university systems nationwide as well. Making students choose between a textbook and food for themselves or their families is an undue burden that affordable content can help alleviate. Some faculty and staff may think course material costs are a minor concern when compared with the sticker shock of tuition, but providing affordable content to students can often make the difference in helping students meet their basic needs. Affordable content efforts can therefore be framed as a matter of social and economic justice, with some students immediately feeling their impact.[8]

Textbook Selection and Support Models

The selection of textbooks or other course materials has traditionally been made by a single faculty member, a department chair (for some entry-level courses), or a cohort of faculty (for large enrollment courses taught by multiple instructors, for example). Choices are focused on the materials that best convey the subject matter to students, and these choices often reflect strategies that were modeled to faculty during their own higher education experiences. Price may or may not be a consideration when faculty are considering textbooks for a course; the NYPIRGs found that "Twenty-eight percent (28%) [of faculty] reported that they do not typically know the prices

5. See The Florida Virtual Campus *2016 Student Textbook and Course Materials Survey* and Fixing the Broken Textbook Market from the Student Public Interest Research Group.

6. See the Association of Public & Land-Grant Universities announcement from February 2018 about a new degree completion and student success project, and An Open Letter to College and University Leaders: College Completion Must Be Our Priority from the National Commission on Higher Education Attainment (January 23, 2013).

7. See the California State University Basic Needs Initiative's Study of Student Basic Needs.

8. For more information on libraries' possible roles in regards to economic justice, see Char Booth's excellent CNI Spring 2018 Membership Meeting presentation "Libraries, Information Equity, and Economic Justice."

of the books they assign" (2008, p. 4). Given attention to textbook costs over the past decade, it seems likely that faculty are now more aware of the issue; they may not, however, know about the various affordable content options available to them today.

Alternatives to the traditional textbook model have existed on college campuses for a long time.

Alternatives to the traditional textbook model have existed on college campuses for a long time. Some institutions have developed student textbook rental programs, or have provided all course materials for a dramatically reduced fee (some for more than 100 years[9]). Bookstores, like ours at the University of Minnesota, have worked hard to provide students with a range of affordable options including used books, rentals, robust buyback options, discounted digital textbooks, and more. Bookstores, printing services, and local copyright permission centers have produced print course packs as an alternative or in addition to textbooks for a course. Libraries have placed print materials on reserve either as primary or supplemental course materials for decades, and later added digital reserves. Libraries have also begun purchasing multi-user ebooks to replace course textbooks.

In addition to these alternatives, wholesalers and publishers are providing a range of options that further complicate faculty and student choice. Tools like RedShelf, Verba, and Engage provide bookstores and the faculty they serve with the opportunity to institute an "all students purchase" option for a course, with a discounted digital textbook price. (Federal regulations require an opt-out allowance for students when an alternative version of the material is available.) Cengage Unlimited offers students semester-long access to their complete catalog of digital materials for $119.99, with print rentals for $7.99 and the ability to keep six ebooks for up to a year. Faced with so many options, and with the need to calculate which will be best for them both financially and from a learning perspective, choices are often difficult for students.

The use of open educational resources (OERs) has also increased at many institutions. And new strategies and programs have been developed and implemented across campuses—programs that educate faculty about the impact of course material cost on student behavior and learning, provide specific strategies to produce adoptions on campus, and provide support mechanisms that improve faculty experiences as they work to adopt OERs. In addition, librarians, academic technologists, and others have begun to support the adaptation of existing OERs and the publication of new openly licensed textbooks and student-produced works—which can take advantage of multimedia elements, interactive quizzing, and annotation or discussion threads to increase student engagement and enhance learning. Finally, collaborative models across institutions are being developed to solve problems, such as the lack of ancillary materials to accompany OERs.

A majority of these options make use of digital materials, requiring an improved understanding of their impact on students, the integration of a range of tools into campus learning management systems, and the development of new faculty skills for using this content effectively. This increasingly complex course content environment has produced the need for new service models involving collaboration across campus units to educate and support faculty and students.

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9. The University of Wisconsin Stout began their textbook rental program in 1910.

Why Create *The Evolution of Affordable Content in Higher Education: Programs, Case Studies & Examples*

A variety of groups and organizations focus on a narrow aspect of affordable content (OERs, open textbooks, all inclusive purchase models, etc.), and many research publications have a singular focus as well (OERs again, or information meant for librarians, for example).

Our experience working in this space led us to believe that the path to the greatest possible success involves implementing a wide range of affordable content options, providing the expertise needed to educate campus constituents about these options, and devising the collaborative service models to support them—with the involvement of libraries, information and academic technology units, teaching and learning entities,

> **Our experience working in this space led us to believe that the path to the greatest possible success involves implementing a wide range of affordable content options ...**

bookstores, individual faculty and faculty groups, and administration. Finally, we had concluded that there is no one right way to do this work. Affordable content programs can be formal or informal, can begin with the involvement of one campus unit or faculty member or multiple entities, and can focus on one option or many. Our belief that it was time to represent these broad perspectives and possibilities led to gathering the voices of colleagues from many different institutions and positions on campus and reporting on a variety of programs, case studies, and examples—examples to inspire those new to these efforts and to demonstrate how far we have come with affordable content efforts in higher education in the last decade or more.

Practicing what we preach when it comes to sharing content, we have made all of the chapters of the book available with an CC-BY 4.0 International License. We invite you to dig in and explore the professional practices devised and explained by colleagues across the country, and to consider how you can share your knowledge and expertise on your campus and beyond.

Get started with the sections of the book that most interest you:

- **Individual Courses** – examples of the implementation of affordable content in unique ways at a variety of higher education institutions.

- **Students and Affordable Course Content** – information and data from a survey of students in affordable content courses at one institution.

- **Library eBook Affordable Content Programs** – examples of programs that utilize library-licensed ebooks as affordable course content options.

- **Creating Affordable Content Programs** – a range of strategies and efforts, often collaborative, promoting and supporting affordable content at a particular institution and across institutions.

- **Affordable Content Models** – details about particular affordable content approaches and strategies including inclusive access, campus-wide textbook rental programs with a student fee, and a bookstore program.

- **Creating and Publishing Openly Licensed/Open Access Content** – a variety of topics including

Universal Design, collaborative authoring of test bank questions, a unique publishing program including student-authored publications, a networked approach to OER publishing, and lessons learned from adapting an existing open textbook for a course.

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Kristi Jensen is the Program Development Lead for the eLearning Support Initiative at the University of Minnesota Libraries. She co-manages the Libraries' Partnership for Affordable Content grant program, is working with campus partners (the Center for Educational Innovation, Academic Technology Support Services, and the Disability Resource Center) to develop a streamlined and highly coordinated Teaching and Learning support model on campus, and works with partner institutions through the Unizin Teaching and Learning group to further Affordable Course Content efforts at the national level.

Shane Nackerud has worked at the University of Minnesota – Twin Cities since 1998, first as the Libraries webmaster, then as the Director of Web Development, and currently as Technology Lead for Libraries Initiatives. In his current position Shane is working on finding new ways of integrating open access and library content into courses and curricula, as well as investigating new publishing and content creation models. Shane's research

interests include library use assessment, libraries and e-learning, resource integration, academic publishing, and web design.

Individual Courses

Chapter 2 - Accessing Science through an Online Database: A Comparison of Student Learning and Engagement Using Library Database Readings as a Textbook Alternative

Mary Ann Cullen, Dion Stewart, and C. Bayard Stringer

by Mary Ann Cullen, Dion Stewart, and C. Bayard Stringer (all from Georgia State University, Perimeter College) (bios)

Introduction

Online alternatives to traditional textbooks can lower educational costs for students and provide students access to the text on the first day of class. In many science disciplines, however, free, high quality, online textbooks are not readily available. This chapter explores the affordable content option of using online readings from a science reference database (AccessScience) to replace assigned textbook readings in freshman-level geology and astronomy classes, discusses the practical aspects of selecting and using a database as an introductory learning resource, and looks at the librarian's role in the project.

Origin of the Project

This project came about when our librarian notified science faculty of a trial subscription to a science database, asking them to examine the database and provide feedback about adding it to the library's subscription collection. The database consisted primarily of encyclopedia-like articles about science topics, with supplementary information including videos and news articles.

One geology instructor decided to use the database in lieu of his current textbook. He had found that students seemed bored with the text and frequently did not do the assigned readings, and that some did not purchase the textbook due to its high cost, even though he had approved the use of older and thus less expensive editions. Circulation data also showed that few students were using the textbook placed on course reserve in the library. An astronomy instructor noted students often searched Wikipedia for answers to their homework rather than referring to the assigned text, a practice leading to incorrect answers and an incomplete understanding of course material.

> **This project came about when our librarian notified science faculty of a trial subscription to a science database, asking them to examine the database and provide feedback about adding it to the library's subscription collection ... One geology instructor decided to use the database in lieu of his current textbook.**

The instructors speculated that students might be more interested in online sources, especially if they resembled something familiar, like Wikipedia. Unlike Wikipedia, however, the database articles are written by experts in the fields of study, with their credentials clearly visible at the beginning of each article. The librarian was interested to see if exposure to a high-quality resource would encourage students to use the database for reference when not required to do so.

The study took place at Georgia Perimeter College, a public, two-year, Associate degree-granting institution with an open access mission, meaning that admission is not restricted based on standardized test scores or high school grade point average. While the school has a few professional programs, the majority of students major in core academic programs that allow them to transfer to a four-year program at another university or college in pursuit of a bachelor's degree. The science classes in this study count toward the science requirements of this core curriculum; the classes' concepts are standardized across the University System of Georgia to facilitate transfer of credit. It is worth noting that in the year following the study, Georgia Perimeter College became Perimeter College, a distinct college within Georgia State University, a large research institution.

We were often asked why the instructors wanted to use this particular database, rather than choosing articles from the library's existing and extensive collection. The faculty involved in the project preferred to use one database because they wanted a single, consistent place for the students to look for information, and wanted as well to simplify their own searches for appropriate readings. Many of the articles in the library's existing databases were not written with the purpose of introducing college freshmen to a subject; most are either too basic for college-level work, too advanced, or too specific for an introduction to the subject. The encyclopedia-style articles in the database, written with an academic tone, provided foundational knowledge for the subject at hand.

We were also asked why the instructors did not use an openly licensed textbook, many of which are available online as well as in print. In this case, the researchers were specifically interested in using the database as an alternative resource. The librarian in this study is an advocate for low-cost textbook alternatives and has frequently served as a resource for finding open educational resources (OERs) for different subjects. She has identified textbook alternatives for many classes by using search aids such as Merlot, OER Commons, and the Open Textbook Library, as well as materials available through OpenStax and Affordable Learning Georgia. At the time of this project, however, she could find no viable textbook alternatives for introductory college geology and astronomy. While there were some openly licensed educational materials, they were piecemeal rather than being a single default resource that would fully replace the textbook.

The first year of the database subscription was funded jointly by the library's funds and a Perimeter College STEM Mini-grant, itself funded by the University System of Georgia STEM II Initiative, and we obtained Institutional Review Board permission for the study. With these technicalities out of the way, we began preparing for use of the database.

Literature Review

Reviewing the literature related to this project, we found that using library resources for all or part of a course's assigned readings is neither new nor uncommon. Library subscriptions to electronic databases provide students and faculty access to articles, ebooks, and other materials. Typically, these databases require user authentication

to access copyrighted materials off-campus, and are available from the first day of class. Most databases provide permalinks to articles, making it easy for faculty to link to electronic materials in the library's collection. While database subscriptions are not free, costs are not directly billed to students, so content is "free to students." Database resources are as readily accessible as online course packs, but avoid the time and expense of digitizing materials and obtaining usage rights for individual articles (Buczynski, 2008).

Jennifer Knievel (2003) describes a project for the University of Colorado's freshman writing program in which librarians drew from the library's online collection to create a set of readings centered on various themes. These readings supplemented or replaced the course's print anthology, described as having "static content, rigid topic selections, and dated material," (p. 71). While the curated electronic readings were effective as a learning resource, Knievel noted some drawbacks: the changing nature of electronic collections as items are withdrawn beyond the control of the librarians, the greater-than-expected time to select articles, and the challenges of keeping up with current topics. One noted benefit, however, was that students became accustomed to using library resources.

Ratto and Lynch (2012) explored the use of e-textbook content available through the Books 24×7 database as an alternative to a traditional textbook in an introductory marketing course. A common hurdle in using ebook content is that usage can be restricted to 1–3 concurrent users, but all texts in this study were available concurrently to an unlimited number of users. Students had the option to use the print textbook only, the e-textbook only, or a combination of the two. By the end of the semester, just 4% of the students reported using only the print text, with the remainder split between the e-text only (44%) and a combination of the two (43%). Instructors reported no significant difference between grades during this semester and the previous semester, which used only the print textbook. End-of-course surveys and interviews indicated that the majority of students were at least "somewhat likely" to take another course using e-texts.
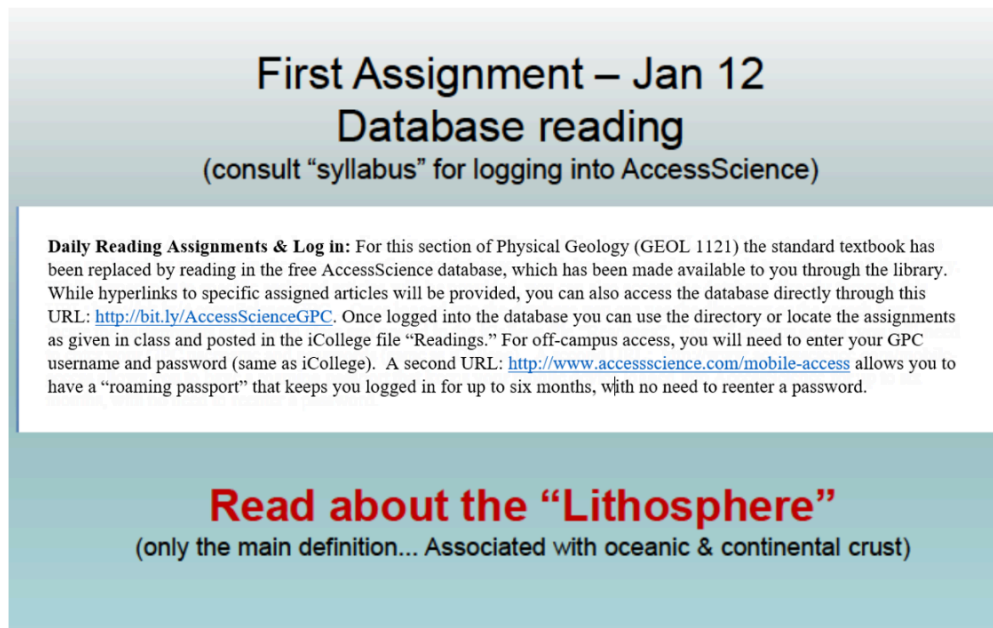
The literature did show promise for positive outcomes in student learning and attitudes when using online library resources as a learning resource, but none of the studies we found used a single reference database in lieu of a textbook.

Methods

Preparation for the Semester

Both the geology and astronomy instructors structured their classes to include short weekly quizzes on the material covered that week. For this study, one question on each quiz covered content found only in the assigned readings and not duplicated in the lecture or other in-class activity. Questions were carefully selected so that the readings-based questions were answered in both the textbook and the comparable database assignments.

The instructors included an explanation of the project in their syllabi. Textbook assignments were given by providing page or chapter numbers, while database assignments were given using hyperlinks or specific search terms for locating material within the database. Because some articles were too lengthy and advanced for the course content, most database assignments included additional instructions about which portions of the articles to read, as shown in Figure 1.

Figure 1: Database assignment

The librarian on the project showed the the instructors how to provide direct links to the articles using the college's proxy server, and arranged for an online training session with the database vendor. She also prepared information for the students about how to locate and use the database apart from having a hyperlink to the required reading. She included instructions on how to set up a cell phone or other mobile device so that students could easily access the database without having to enter login credentials each time. This information was included in the course syllabus as well as in a LibGuide. In addition, she attended the first meeting of the Geology class to provide a short demonstration and to establish herself as a contact person for questions or problems. She also alerted other librarians in the college about the project so they would be prepared to answer questions in person or by virtual reference.

On the first day of class, the project was explained to the students. Informed consent forms were signed by all but eight of the students. One student in the Geology database class declined to participate, and seven Astronomy students did not return their consent forms. With data from the students who did not have signed agreements omitted from the results, there were a total of 42 Geology students (22 in the database group and 20 in the textbook group) and 142 Astronomy students participating in the study. In the data analysis, student identities were masked by using a number to represent each individual student.

Research Design

The geology instructor had one Physical Geology (GEOL 1121) class use only readings in the database; a textbook was not assigned for this section. Another section was assigned readings on the same content in *Earth: An Introduction to Physical Geology* (Tarbuck, Lutgens, and Tasa, 2016), one of the top-selling textbooks at four-year

institutions that have a geology major. Lectures, assignments, and exam questions were the same in both classes so that all students were exposed to the same knowledge, with only the delivery methods being different. This "between-subjects design," comparing one group with another, allowed for students to have realistic experiences of purchasing a textbook or having the benefits of a free-to-the-student textbook alternative available on the first day of class. (In one instance, the database assignment was to watch two videos, but for the sake of simplicity, the question covering this content will still be considered a "readings" question.)

In the Geology classes, data were collected that allowed correlation of students' performance on the readings questions with performance on quizzes and exams. Rather than using average correct response rates to compare the classes, correlations examined whether students did as well on the readings questions as on the quizzes and exams; in other words, did each student do "as well as could be expected?" These correlations were compared for the two conditions to see if the database condition was more or less predictive of overall outcome than the textbook condition.

A different design was used in the Astronomy classes. The instructor used both the textbook and the database in two sections of ASTR 1010 (Astronomy of the Solar System) and two sections of ASTR 1020 (Stellar and Galactic Astronomy). In two sections, textbook readings from *Astronomy Today* (Chaisson & McMillan, 2014) were assigned during even-numbered weeks, while database readings were assigned during odd-numbered weeks; in the other two sections, the reverse was true. This "within-subjects design," comparing performance of the same students in both experimental conditions, allowed for variations among students and in other extraneous variables such as time of day, holiday patterns, differences in lectures, etc. Students also had the opportunity to experience both the traditional textbook and the online database, so they could compare the two sources for themselves. (These classes also included some YouTube videos; these results are included separately from the database and textbook results but the related quiz questions are still referred to as "readings" questions.)

Student Impressions Survey

Geology classes also included an anonymous survey completed by students at the end of the course, asking if they used the assigned resource (textbook or database), how they used it, whether they felt the readings improved their understanding of the concepts presented in class lectures, and whether they felt the readings improved their class performance. Figure 2 shows an image of the survey given to the students using the textbook. The corresponding survey for the students using the database is provided in Figure 7 in the Results section.

Anonymous Survey - BE AS HONEST AS YOU CAN BE….
This has nothing to do with your grade

1. Do you have a copy of the textbook? Circle one   … **YES** ….. or ….. **NO**

   If "no" then check the reason that most closely matches why you didn't get a book
   _____ Too expensive (couldn't afford it)
   _____ I use a copy from the library on a regular basis
   _____ I don't use textbooks in many of my classes, so I just don't buy them
   _____ Didn't get around to making the purchase

   IF YOU Circled "NO" and you are not using a textbook, then you have finished the survey, as the questions below are based upon your use of the textbook available to you

2. How often do you read it? …. Circle the answer closest to your past frequency of "reading"

   Prior to every class   _About once a week_   _Only before a test_   _I hardly ever read it_   _Never_

3. Does the textbook reading improve your understanding of concept covered in lecture?
   Check the best answer that corresponds to your past experience…

   _____ I don't read it so I can't honestly answer this question

   _____ I find the textbook confusing but the lectures make sense

   _____ I find the lectures confusing but the textbook makes sense

   _____ The textbook reinforces the concepts I am learning in lecture

4. How much has the textbook readings helped your performance on quizzes & exams

   _____ I don't read it so I can't honestly answer this question

   _____ The textbook readings are VERY helpful to my having a better performance

   _____ The textbook has been SOMEWHAT helpful to my having a better performance

   _____ The textbook has been of VERY LITTLE to NO help to better my performance

   WHEN YOU FINISH….. FOLD IT IN HALF WITH ANSWER INSIDE…
   PASS TO CENTER AISLE, AND FORWARD TO FRONT

Figure 2: Textbook survey

Results

Geology Classes

In the Geology classes, correlations of student scores for the readings quiz question (Q#4) with exam scores were calculated for both classes. For students in the class using the database (n=21), there was a moderately significant correlation (R^2) of 0.4669 (Fig. 3). For students in the class using the textbook (n=20), the correlation (R^2) was 0.1863, indicating there was not a significant correlation between performance on the readings quiz questions and

performance on exam scores (Fig. 4). (Note: In the graphs, some data points represent more than one student.)
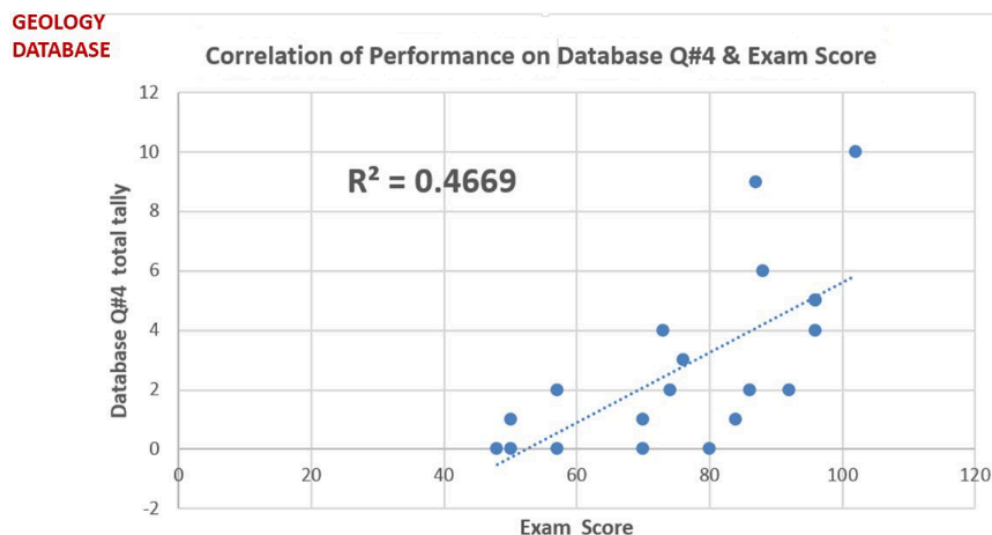
Figure 3: Correlation of Performance on Database Q#4 and Exam Score
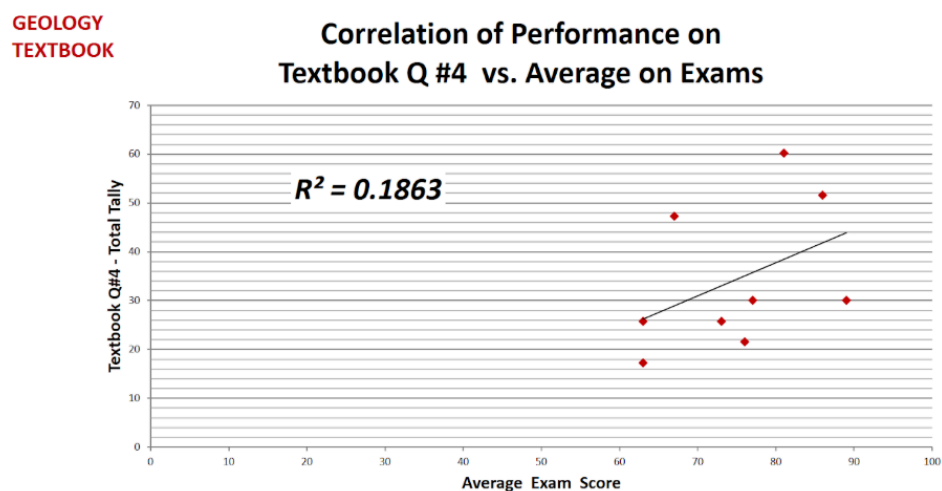
Figure 4: Correlation of Performance on Textbook Q#4 vs. Average on Exams

Correlations were also calculated comparing performance on the readings quiz questions (Q#4) and overall quiz performance. In the class using the database (n=21), there was a moderately strong correlation (R^2) of 0.4702 (Fig. 5). For the class using the textbook (n=20), there was a correlation (R^2) of 0.0491, indicating no significant relationship (Fig. 6).

GEOLOGY DATABASE
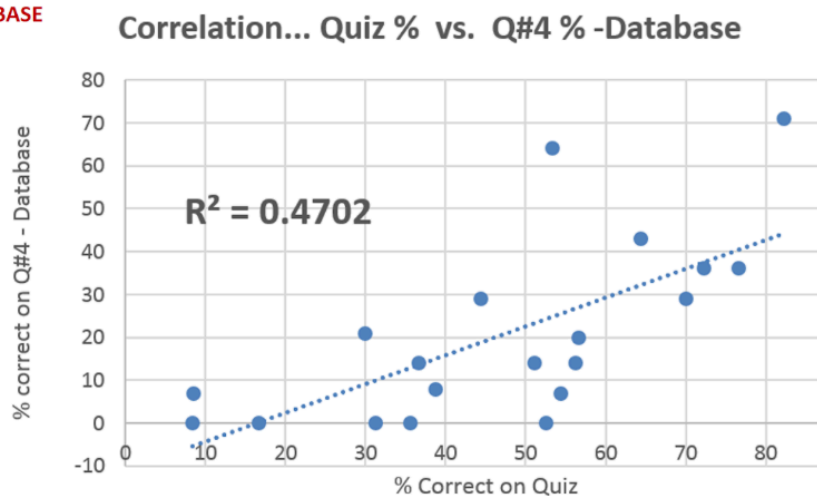
Figure 5: Correlation: Quiz % vs Q#4% – Database

GEOLOGY TEXTBOOK
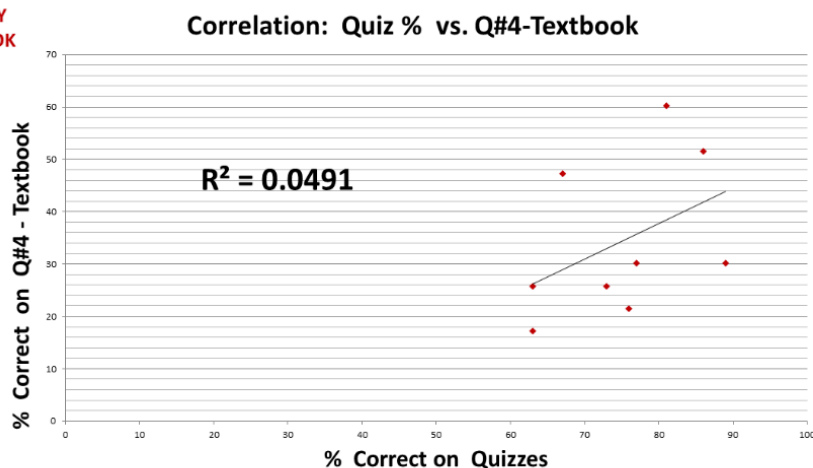
Figure 6: Correlation: Quiz% vs. Q#4 – Textbook

Results on the surveys for the two classes were also compared (Figs. 7 and 8). Figure 7 shows the complete survey for the databases classes with the percentage of students who indicated each response. All students indicated in Question 1 that they used the assigned database, despite 5% and 11% of students in the database class subsequently responding to survey Questions 3 and 4, respectively, that they didn't read the database assignments. Survey Question 2 asked students how they used the database. Fifty-three percent used it only for assigned class readings, but 37% reported "using the database on their own to explore class concepts."

Anonymous Survey - BE AS HONEST AS YOU CAN BE….
This has nothing to do with your grade

1. Do you use the AccessScience Database? Circle one   <u>100%</u> **YES**   or <u>0%</u> **NO**

    If "no" then check the reason that most closely matches why you haven't used the database
          _____ Too much technology (too difficult to get to it)
          _____ Don't have it loaded into a useable format within my electronic devices
          _____ I don't do outside assignments in many of my classes, so I just don't use it
          _____ Didn't get around to making or using the links provided in this class

    IF YOU Circled "NO" and you have not used the database, then you have finished the survey, as the questions below are based upon your use of the database available to you

2. How often do you read it? …. Circle the answer closest to your past frequency of "usage"

I use it on my own to research class concepts	*Only when there is an assignment*	*Only before a test*	*Very Rarely*
37%	53%	5%	5%

3. Does the database reading improve your understanding of concept covered in lecture?
    Check the best answer that corresponds to your past experience…

      <u>5%</u>   I don't read it so I can't honestly answer this question

      <u>21%</u> I find the database confusing but the lectures make sense

      <u>5%</u>   I find the lectures confusing but the database makes sense

      <u>69%</u> The database reinforces the concepts I am learning in lecture

4. How much have the database readings helped your performance on quizzes & exams

    <u>11%</u> I don't read it so I can't honestly answer this question

    <u>21%</u> The database readings are VERY helpful to my having a better performance

    <u>63%</u> The database has been SOMEWHAT helpful to my having a better performance

    <u>5%</u> The database has been of VERY LITTLE to NO help to better my performance

WHEN YOU FINISH….. FOLD IT IN HALF WITH ANSWER INSIDE…
PASS TO CENTER AISLE, AND FORWARD TO FRONT

Figure 7: Survey results

Figure 8 shows the comparison of each class's responses to Questions 3 and 4. For Question 3, "Does the database/ textbook reading improve your understanding of concepts in the lecture," 69% of students said the database reinforced concepts learned in the lecture while only 36% said the same of the textbook. For the Question 3 option, "I find database/textbook confusing, but the lectures make sense," 21% found the database confusing while 46% said the same of the textbook. For Question 4, fewer than 10% of students in both classes found the readings "very little or no help" in bettering their performance on quizzes and exams. The biggest contrast was that 21% of students in the database group found the database "very helpful" while no students said the same of the textbook.
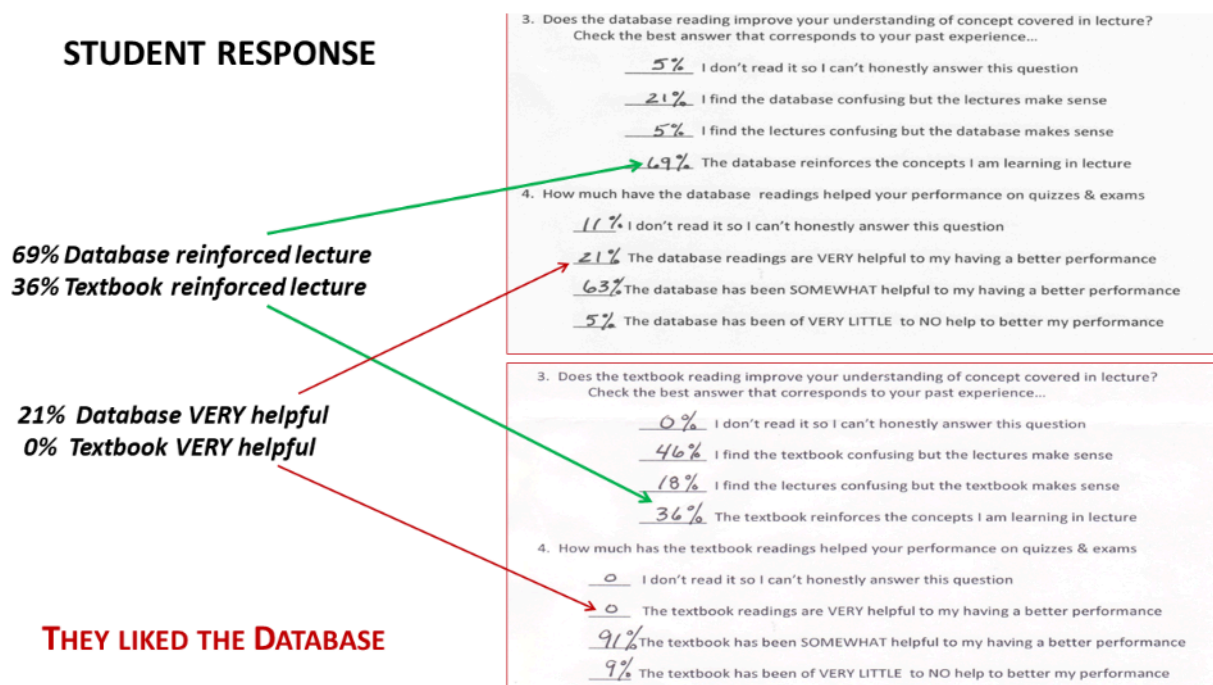
Figure 8: Comparison of each class's responses to Questions 3 and 4

Astronomy Classes

Because all students in Astronomy classes were given assignments in both the database and the textbook, the within-subjects experimental design allowed for extraneous differences between classes. Indeed, measures for these classes were inconsistent between classes.

Figure 9 shows the rates of correct responses for all classes, as well as the combined results for all classes, for textbook questions, database questions, YouTube questions, and other review questions. (For clarity, the range shown in the graph is 60% to 90%.) The success rate for YouTube videos varied widely between classes, and there was no consistent pattern in textbook and database response rates. In one ASTR1010 class, the database questions were answered correctly more often than the textbook questions (83% vs. 74%), while the opposite was true in the other section of the same class (84% database vs. 88% textbook). In ASTR1020, the database and textbook questions were answered correctly at a roughly equal rate.

Comparison of the readings questions with performance on the review questions also varied from class to class. Using a Chi-square test, $X2=1.12$ with $P=0.29$. Using a critical value of $P\alpha>0.05$, the data do not support the hypothesis that any of the observed differences are statistically significant; they could be due to chance. Indeed, a qualitative inspection of the results does not indicate any obvious trends.
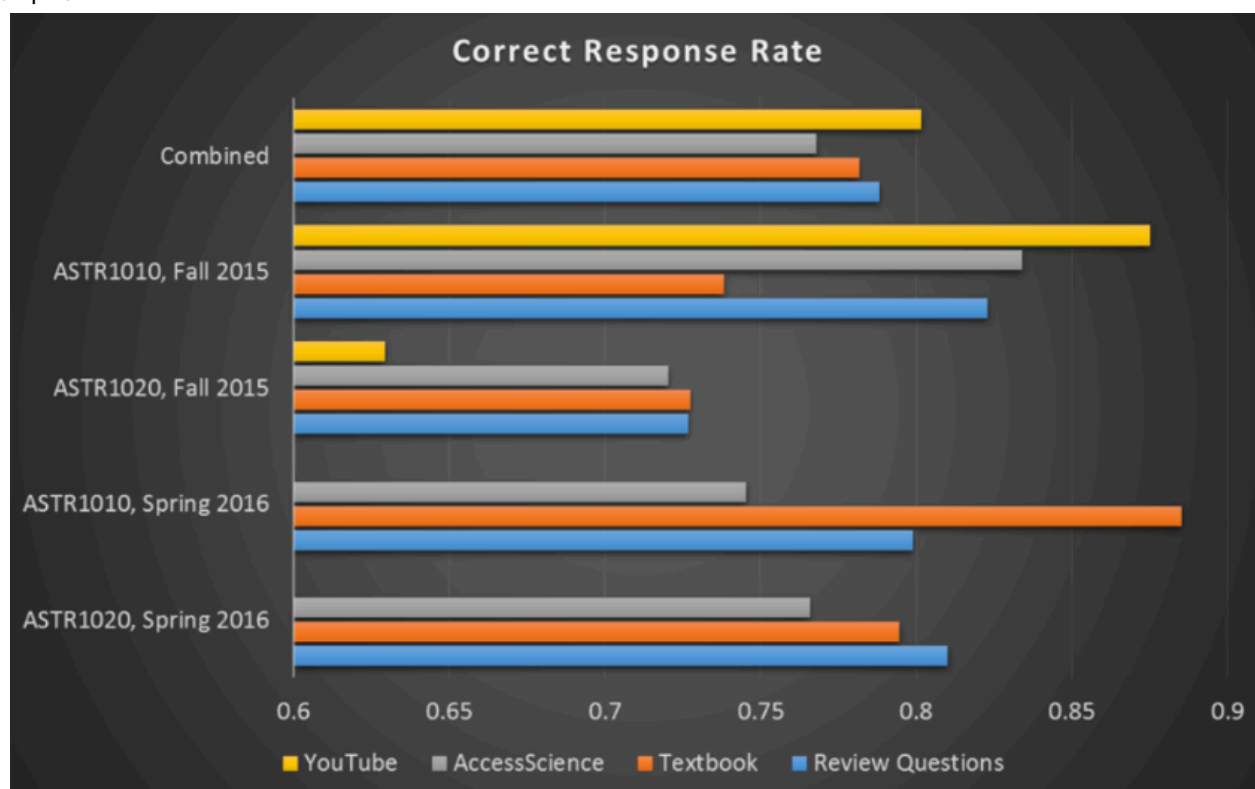
Figure 9: Correct response rate

While no user feedback survey was given in the Astronomy classes, the instructor noted that much of the database content was above the course level and that students complained about the scholarly style of writing.

Conclusions

Survey results in the Geology classes indicated that students using the database found the assigned readings more helpful in supplementing the lecture than did students using the textbook. Likewise, compared to students using the textbook, more students using the database rated the readings as being "very helpful" in improving class performance. Correlations with the readings questions for these classes supported these statements, as there was a moderately significant correlation between performance on the database readings questions and average quiz and exam scores. In contrast, correlations between the readings questions for students using the textbook found no significant correlation between performance on these questions and performance on quizzes and exams. While the sample size was small, results indicate that the students rated the database more positively than the textbook and found it more useful for learning course material.

Results from the Astronomy classes showed no significant differences in class performance between the textbook and database conditions, indicating that the database could be as good at helping students learn course content as a traditional textbook, but at a lower cost.

In response to the librarian's question of whether students would learn to use the database as a resource, the fact

that 37% reported using the database to understand concepts even when not assigned is encouraging. Although it is doubtful that students would use the database if it was presented to them in class as a stand-alone potential resource, no definite conclusion can be drawn since students using the textbook were not surveyed about their use of the database. Anecdotally, the Geology instructor had six students from the database class in a subsequent course, and four reported that they continued to use AccessScience for other courses. Future studies could formally examine generalized use of the database by surveying students in the database groups to ask if they used the database beyond the assigned readings and if they continued to use it in other courses.

> **While using a reference database in lieu of a textbook can be an effective and low-cost-to-student alternative, we did encounter problems with the practical aspects.**

While using a reference database in lieu of a textbook can be an effective and low-cost-to-student alternative, we did encounter problems with the practical aspects. The primary hurdle was the considerable amount of time it took for the instructors to find appropriate content in the database and communicate the assignments to students. Textbooks are written with a particular level of students and learning outcomes in mind, while a database is not. It is relatively easy to assign a specific textbook selection to cover certain material, but assignments of similar material in the database may require multiple articles, and when only portions of these articles are relevant to the current assignment, instructors will have to take the time to direct students to the relevant portions. In addition, while the database has no direct cost to students, the subscription cost comes out of the library's budget or must be otherwise funded. When deciding whether to continue the subscription, the usual criteria of cost versus use and need apply; if the database is only used by a handful of students, it may not be the most effective way of providing a textbook alternative.

The instructors felt that the burden of finding appropriate readings could be greatly reduced if the adoption of a database was shared across all sections of the college. With the involvement of more faculty from the curriculum committee, a standard set of readings could be established that would be assigned in every section. This idea was explored with all science faculty at a "Development Conference" presentation, and while the response was moderately positive, the idea was not adopted.

Since the time of the study, both instructors have abandoned the use of the database as a textbook alternative, but both refer their students to it as a supplementary resource. Several reasons contributed to this decision. The Astronomy instructor found the assignments cumbersome, and students complained about the scholarly writing style. The Geology instructor encountered departmental mandates about standardized texts, and also found that the amount of time to select readings prohibited the expansion of this idea into other courses.

As the movement toward affordable textbook alternatives grows, an increasing number of subjects are covered by openly licensed and low-cost textbooks, including introductory college-level geology and astronomy courses. If an objective is to provide students with high-quality supplementary material, a reference database or carefully selected web resources could be assigned as additional readings or recommended to students as alternatives to less-authoritative websites. Librarians can help identify and assemble these resources in science guides or widgets for use in learning management systems.

The results of this study are limited in scope to the specific textbooks and database used. While results are encouraging in terms of the efficacy of the database to support student learning, additional study is needed to

determine if these results are generally true. Instructors wishing to use a database in lieu of a text should be prepared for the initial time investment in setting up the readings. They should also consider issues with the library's commitment to continuing the database subscription and departmental buy-in for using the database as a textbook alternative.

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Georgia State University, Perimeter College was known as Georgia Perimeter College at the time of the study.
This research was supported in part by a Perimeter College STEM Mini-grant, Funded by the University System of Georgia STEM II Initiative.
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Chapter 3 - Faculty-Library Collaboration in a Course Without Assigned Textbooks

Lauri DeRuiter-Willems and Stacey Knight-Davis

Lauri DeRuiter-Willems and Stacey Knight-Davis (both from Eastern Illinois University) (bios)

Introduction

When making textbook decisions for college courses there are many issues to consider and questions to ask. First, does the course need a textbook? Is the course focused on standard content or on applying content to ill-structured problems or projects? If the course does need a textbook, what will be the purpose of the book? Will it serve as supplemental instruction or the primary source of content? Is the textbook author also the instructor? Do students purchase textbooks, or rent them?

The primary question when deciding which, if any, textbook to adopt is this: What value does the textbook add to the course? For the two courses discussed here, a textbook was less valuable than a carefully curated selection of articles and other professional sources. Our discussion has a heavy emphasis on health promotion, because that's our field, but we also try to generalize our

The primary question when deciding which, if any, textbook to adopt is this: What value does the textbook add to the course?

thoughts so the decision process can be used in other disciplines. The decision not to use a textbook for these two courses at Eastern Illinois University (EIU) has allowed us to follow the guidelines of the course proposals while modifying the content resources to reflect current practices in the field.

Marketing Concepts for Health Promotion Professionals

Developed over the last ten years, the curriculum of Marketing Concepts for Health Promotion Professionals (DeRuiter-Willems, 2017a) addresses skills identified by interns and recent graduates as being important to have practiced and trained to use on the job. These topics were identified in several ways: by the Health Promotion department chair, who holds "exit" interviews with soon-to-be graduates (those who have completed all coursework and internship requirements), by faculty conversations with graduates through social media, by discussions with colleagues in the field, and by occasional advisory group activities.

To explore health promotion and health marketing, the course uses content in online training modules, videos and e-textbooks available through the library, and industry websites and professional organizations. After course content has been examined with the students, application of concepts happens through group and/or individual

projects that follow a basic instructional plan from one semester to the next, but with a new topic or focus. The projects occur in a controlled setting in which the instructor leads the projects and offers comprehensive research support.

The Centers for Disease Control and Prevention (CDC, 2017b) offers a health literacy online training program that includes several modules and videos, and a training series offered by the University of Minnesota provides supplemental information on health literacy which is added to the library module (University of Minnesota, 2017). Students study this online program, then discuss and practice the concepts during class sessions. The CDC has also created a series of social-marketing training modules (CDC, 2016). Works from the CDC and from other United States government entities are typically not covered by copyright and can be freely distributed (USAGov, 2017). Students study these modules, then review and discuss the concepts in class. The material is included in an exam.

After completing the health literacy training, students begin the health literacy project. Using a popular media news story on a current health trend or recent study, the student groups apply health literacy concepts by designing a marketing-style artifact for a specific audience to increase awareness of the health issue and offer suggestions for behavior modification. Chosen each semester based on current news, topics are ones that students are likely to use during internships and on the job. Examples include concussions, disaster preparedness, distracted driving, hydration/dehydration, the obesity epidemic as related to screen time and physical activity, infectious disease prevention/handwashing, sleep, and stress. Because these topics are important for many groups of people, they lend themselves well to this type of project.

To emphasize the health literacy concepts, each group is assigned the same topic but a unique audience. Audiences for a project addressing sleep, for example, included college students, families with young children, parents of middle school/high school students, middle/high school students themselves, and older adults with no children at home. While we do make some assumptions about audience characteristics, such as education, cognitive ability, and socioeconomic status, the purpose is for the class to see examples of artifacts that incorporate health literacy strategies and convey information to a variety of audiences. The project requires that students have a good understanding both of the topic itself and of the characteristics of a specific group of people–knowledge acquired by researching the topic through the learning management system (LMS) library module and internet searches.

It should be noted that these projects are not used in public settings with "live audiences." The projects ultimately allow students to see several examples of products related to the same topic but tailored to and meeting the needs of different audiences. The number of audiences is determined by the number of students enrolled in the course, with the goal of having small groups of 4–5 students.

In recent years we have added the newer concept of social media marketing to the course. We bring in a guest speaker who serves as the social media director for the university, and use videos identified by the instructor and librarian as current and on-trend. After class sessions to review concepts, each student begins a blog project that allows them to research a health topic and write several related blog-style posts. The audience is assumed to be college students—more specifically, their student classmates. While a more relaxed, conversational style of writing is allowed and encouraged, each blog entry must include at least one professional/academic reference to add credibility, accuracy, reliability, and support. While these references may be found from a Google search, the library resource module also provides great direction (see Figure 1).
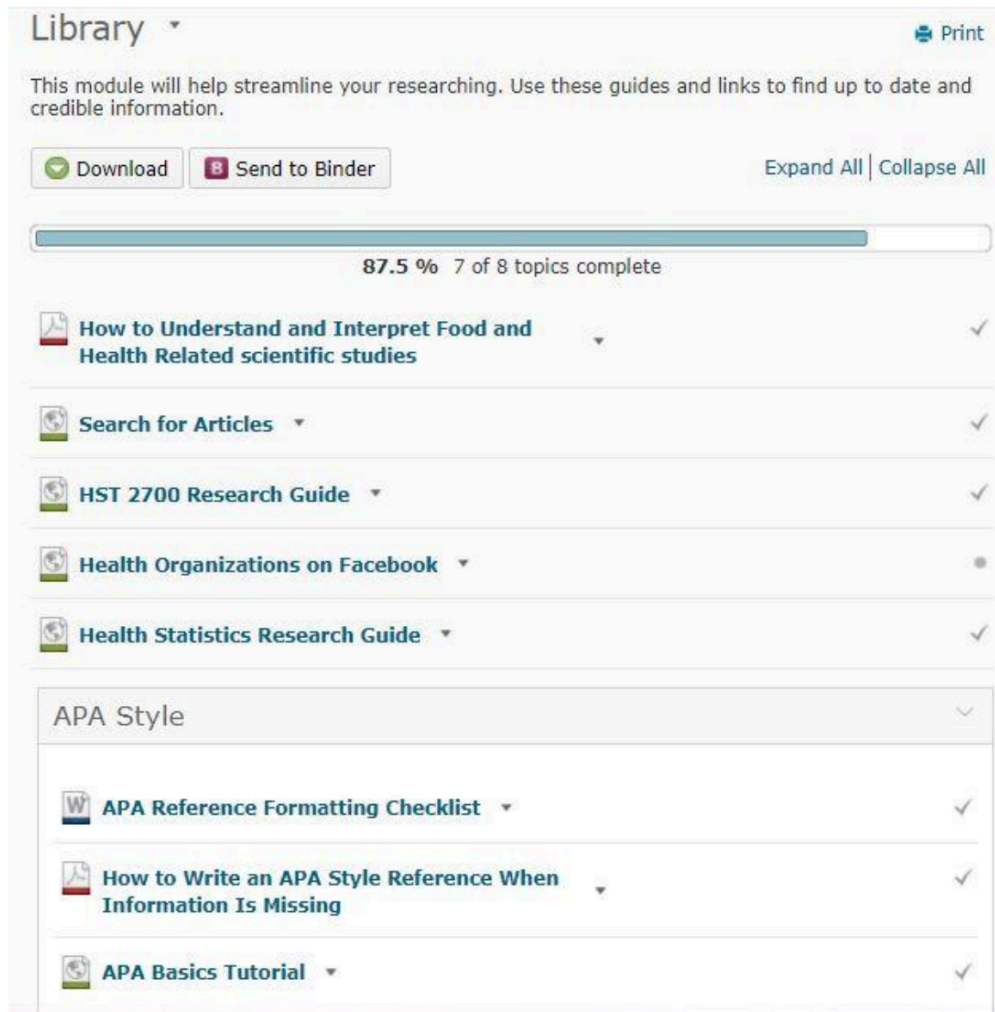
Figure 1. Library Module for HST 2700. From HST 2700 Marketing Concepts for Health Promotion
Professionals.
Reprinted with permission.

To encourage interaction, student writers are required to ask questions of their peers related to the health topic. In addition to health literacy principles, blog entries must include social media marketing and social marketing components. "The 4 C's" (Content, Connections, Conversations, Channel), for example, are emphasized in social media marketing, and a key concept in social marketing is to encourage voluntary behavior change. Blog entries should therefore include the 4 C's and a call to action that encourages voluntary behavior change related to the health topic.

This assignment is also kept "in-house." To ensure a variety of topics, only one student is permitted to use each topic. The students choose topics based on a list generated from CDC Disease and Conditions web page and the CDC Healthy Living web page (CDC, 2017a, CDC 2017c).

As a culminating project, small groups are given instructions to create a marketing plan proposal. This proposal must include all of the major concepts covered during the course, including health literacy, social marketing,

social media marketing, the writing of behavioral goals and objectives, and program plan components: health issue/problem description, audience/behavior analysis, and implementation/intervention strategy. Groups choose the health topic and audience, and design the implementation plan.

Applied Health Communication

Another course that does not require a textbook is Applied Health Communication (DeRuiter-Willems, 2017b), an upper division course modified after having been taught for several years. The course originally included communication content as well as student-led health communication projects, but we determined that two separate courses would better serve the students. The first course, Communication for Health Professionals, retained the textbook, and became more content-oriented, allowing for in-depth exploration of many aspects of health-related communication. The second course, Applied Health Communication, was developed to allow students to apply knowledge gained in the first course, and includes ill-structured projects developed, created, and implemented by the students. It was determined that not using a textbook would allow more flexibility and the use of more current information, and would require students to lead the research, instead of following a prepared plan. While there are assigned readings from electronic reserves and links to professional organizations, the students must find topic-specific material, and are encouraged to use the LMS library module. In addition to expanding the course content, the format of Applied Health Communication allows us to offer hybrid and online versions. Using digital material eases the burden of sending textbooks to out-of-town students. In fact, in 2016, one student was deployed overseas but was still able to participate in the online course.

The field of health promotion, like many other fields, includes basic content that is used across the discipline, and students must have a working understanding of this basic material. For health promotion, the essential content areas include dimensions of health (physical, spiritual, mental/emotional, environmental); epidemiology; lifestyle behaviors and risk factors that influence good health—physical activity, nutrition, tobacco use, mental/emotional health, alcohol/ substance use and abuse, and sexual practices; program planning—educational, promotional, events, and communications; and behavior theories. To provide a refresher on this material, the LMS library module contains ebooks, online resources, image usage, and statistical resources.

Ill-Structured Assignments

Herbert A. Simon (1977) described an ill-structured problem as "a problem whose structure lacks definition in some respect" (p. 304), and explained that it is what is left over after the well-structured problems are identified. While Simon is describing how to structure a problem so that it can be solved by a computer program, the arrangement of ill-structured problems makes them excellent teaching tools that mimic situations encountered by health promotion professionals and in many other disciplines. Foshay, Silber and Stelnicki (2003) explained that an "ill-structured problem has no clear or spelled out initial state, goal, set of operations or constraints" (p. 130). Such problems reflect those typically encountered by adults in work and life situations, and addressing them results in meaningful and useful learning. Students are required not only to develop their own interpretation of a problem, but to create a solution. There may be multiple solutions appropriate to resolving the problem. Two central requirements in these assignments are that a student or group must justify the solution to show that it can

be implemented and solves the problem, and must reflect on the process. As Foshay, Silber and Stelnicki (2003) concluded, "it is the reflection on the process that aids in both more effective problem solving next time, and in generalization of the process to new, related problems" (p. 131). This reflection is what we hope our students will retain and use during internships and work settings.

In Applied Health Communication, a senior-level course, the capstone project fits the criteria for an ill-structured problem. Students apply what they have learned and reviewed in the course by creating individual health communication campaigns. This assignment is similar to the marketing plan project previously described, as students pick and develop their topics, but they do this individually rather than in groups. The project is evaluated using a holistic rubric, which provides a structure and specific elements to consider in the evaluation; there is no way for the evaluation process to be mechanized. While some boundaries and requirements are built into the project, students are free to explore and create, to bring in knowledge from varied sources, and to add new information throughout the project. This capstone project demonstrates student success in integrating course content, design skills, and communication techniques.

With typical assignments having very specific guidelines and requirements, ill-structured assignments can be overwhelming to students not familiar with them. Foshay, Silber and Stelnicki (2003) and Simon (1977) suggested that an ill-structured problem can be approached by breaking it into smaller, better-structured units. Foshay, Silber and Stelnicki (2003) offered the following general teaching strategies:

With typical assignments having very specific guidelines and requirements, ill-structured assignments can be overwhelming to students not familiar with them.

- Providing an appropriate sequence of problems that fit the context in which the problem-solving skill will be applied.

- Providing instruction, examples, and practice in a sequence that allows learners to develop the problem-solving heuristics for themselves.

- Keeping cognitive load within the capabilities of the learners through problem type, format selection, and the use of scaffolding.

- Allowing for and encouraging reflection on the process. (p. 132)

For the health communication campaign, students complete a series of small projects with defined constraints. For example, students write a problem description for the topic they have chosen for their campaign, followed by an audience behavior analysis. Use of information from the course materials and library module is strongly encouraged for both assignments. To support the reflection process, students post summaries of their papers in online discussions, along with ideas for the next phase of their campaigns. Classmates ask questions and offer critiques based on their own understanding of the process. One of the key elements of an ill-structured assignment is that students can continually add information and reformulate their approach to the problem. Providing information for the student to use throughout the campaign creation project is a balancing act between offering a well-defined list of tools and resources appropriate for all projects and providing access to a wide variety of information that is not fully curated. The students are in the driver's seat, and are expected to identify resources that meet the criteria of being credible, timely, and reputable.

Professional Organizations and Online Sources

Organizations that serve as authorities in a particular field often provide information—through websites, publications, conferences, and so on—that can be helpful to students. And professional organizations provide members with continuing education and professional development opportunities that are important for keeping current with industry trends and information. Health professionals, for example, are often members of the Society of Public Health Educators (SOPHE), the American Public Health Association (APHA), and SHAPE America—the Society of Health and Physical Educators. In additional to annual conferences, many organizations have state or regional conferences and meetings. Organization websites are often not limited to members, and can therefore be very useful as online resources for students. Many of these organizations also have a social media presence that promotes membership and provides educational information to the general public. We have included these organizations and websites in the course library module.

Supplying Information Resources to Students

In our LMS we include video links, online training modules, and library modules. The instructor builds the general tools, such as the CDC resources, directly into the instruction module (see Figure 2).

Figure 2. Module 5: Social Media, Message Design. From HST 4910 Applied Health Communication. Reprinted with permission.

The tools and resources presented in the module fulfill the role of a textbook by providing standardized presentation of content. The instructor selects the resources that best fit the course concepts, and can mix from a variety of sources. If a source goes out of date, a new source can be added.

Our university offers a textbook rental program that is sometimes criticized because most students do not purchase their book at the end of a course. Some professors believe that not keeping the book robs students of their "intellectual dowry." With freely available resources, students have access to the materials at no cost after graduation. This is a great advantage, as students have learned to navigate and utilize free resources, and are not reliant on an expensive textbook or handbook, which may also become outdated.

For information needs unique to each project, the library supplies electronic books, electronic articles, and streaming videos within the library module included in the course's LMS. This model has been expanded to several other Health Promotion courses, providing supplemental readings at no cost to students. The library module consists of several pages that vary from course to course, but all include a "research guide" specific to the

course, providing a portal to article indexes and full text articles, search tools for electronic books, and curated lists of titles appropriate for the course.
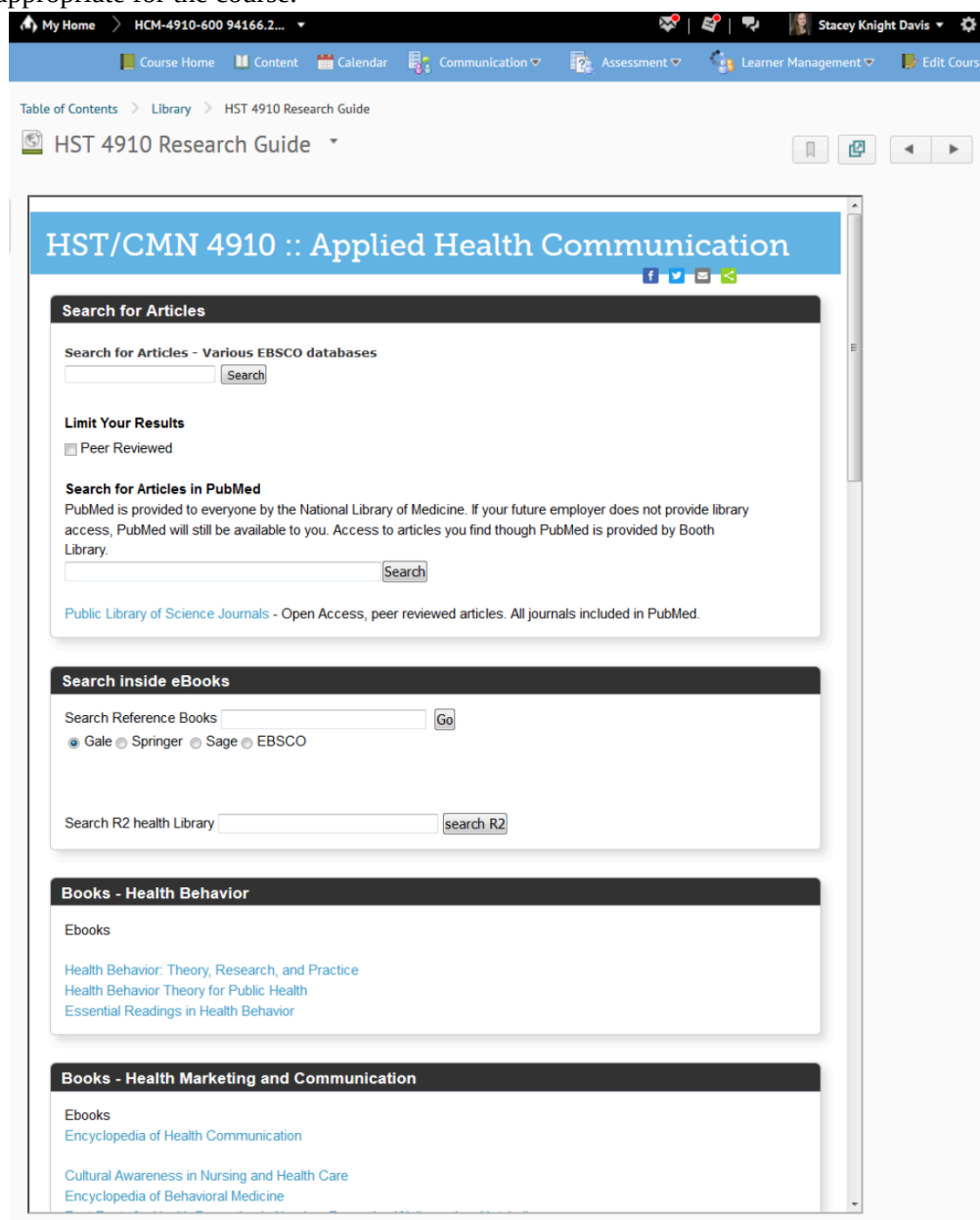
Figure 3. Library Research Guide. From: HCM 4910 Applied Health Communication.

As mentioned earlier, we are always conscious of the resources our students are likely to have available once working in the field. PubMed, for instance, is a freely available index. We also highlight the Public Library of Science journals to familiarize students with providers of open access content.

Article search boxes provide semi-unstructured access to information. Our library does not have a single search tool covering all of our resources, so some artificial division does result from combining content from several different commercial providers. The majority of our article content comes from EBSCOhost, so the guide provides a customized search box that pulls articles from CINAHLPlus with Full Text, Business Source Elite,

Health Source: Nursing/Academic, PsycARTICLES, and the Professional Development Collection. Due to the interdisciplinary nature of health communication and health promotion, and the intersectional nature of many health problems, this selection of databases was identified by the librarian as providing coverage for most topics the courses might touch upon.

Our approach to the EBSCOhost search is a balancing act. We provide a search box whose functioning simplifies the actual available resources. Students don't know about the underlying databases, and likely could not build a comparable combination without librarian assistance. The search function constrains the problem, and provides some structure. By pre-selecting appropriate resources, the librarian allows students to devote energy to evaluating articles instead of struggling to find the right databases and learning how to combine them effectively. Search results open in a new window, so students can easily return to the screen where they started.

The PubMed search box also includes some mediation from the librarian. The PubMed URL is constructed so that articles not immediately available through the library's licenses can be filtered out. Interlibrary loan links are displayed, while links to unsubscribed full text are suppressed. These modifications make PubMed function differently from what students will encounter outside of their classes, but the added convenience and functionality are more beneficial than the exact mimicking of a setting in which a health educator has to work without library support.

Each resource guide concludes with a curated list of resources chosen by the librarian to fit the course syllabus and assignment. Electronic books are preferred, as they allow courses to be fully online. (The library does mail books to students, but instant access electronically is strongly preferred.) Resource lists are separated by topic and reviewed regularly. Unfortunately, searching inside ebooks is an area for which the librarian cannot build in much customization. While the online catalog provides searching at the title level across all ebook providers, it cannot search inside the full text of electronic books. To get full text searching, students must use each provider's platform. We have tried to streamline this by providing search boxes, but the process is more fragmentary and unguided than is ideal.

Library Support

Libraries need a robust technical infrastructure and well-developed collections to provide support for courses without textbooks. Excellent communication between faculty member and librarians is also a must. A faculty member must first describe the course and the anticipated information needs of its students. The librarian will then need to know about assignments and the topic areas to be explored.

Libraries need a robust technical infrastructure and well-developed collections to provide support for courses without textbooks. Excellent communication between

faculty member and librarians is also a must.

Once these anticipated needs are established, the collection must be evaluated to make sure that appropriate search tools, articles, books, videos, and other materials are available. Web resources beyond those selected by the instructor should also be identified, and the instructor and librarian must check these resources regularly to ensure that the links are still working properly.

Identified sources must then be aggregated for ease of exploration and use by students. A content management system such as SubjectsPlus (University of Miami Libraries, n. d.) or LibGuides greatly simplifies the process of creating resource guides for classes or assignments. Content management systems allow reuse of content over multiple guides, so an article search box developed for one class can be dropped into the guide for a similar class. SubjectsPlus is distributed under a GNU GPL license, so it is in keeping with the spirit of Open Access and open educational resources (OERs).

The challenge with creating guides is to steer students toward useful content while leaving room for them to develop their own search skills. One approach, described above, is to provide an article search box that targets a pre-selected group of databases appropriate for the class, and then provide a selection of books and ebooks for students to browse. Since health promotion is an interdisciplinary field, students can struggle to identify useful books. Providing a list of selected titles lowers the barrier for exploration.

Distributing the targeted resource guides though the library's website is helpful, but it is best to embed the guides directly into the LMS. We use an iframe to insert the guides into a library module for each course. The content stays on the library's servers, and the librarian is responsible for edits and updates. The librarian is also added to the course, with limited permissions, through an instructor account, so that material can be added to the library module as needed.

Embedding the guides into the LMS does require some special configuration on the library side so that students do not have to authenticate several times. Remote access systems such as EZProxy allow students to use library resources from off campus. The library's remote access system should be configured to treat students coming from the LMS as if they are on campus, so they do not have to authenticate to access library resources linked inside the LMS.

Developing Faculty-Librarian Collaboration

Opening a dialogue between the instructor and the librarian is the key to collaboration. Either can reach out to start a conversation. Regardless of who does so, it is key to have the instructor describe the course, and the librarian discuss how the library can support it. In some cases, a team of librarians may be involved. In our case, the health subject specialist happens to be the technology specialist, so no outside expertise has been needed to create custom tools. Most large academic libraries have a subject specialist assigned to each department. If this specialist does not have the needed technical expertise, the librarian should seek out an expert and build a team to meet the instructor's needs.

The secret to collaboration is to start talking. Faculty should keep an open mind about what is possible from the library, while librarians should listen carefully and keep an open mind to developing new services and systems.

Assumptions held by librarians and instructors can be a barrier to communication. Instructors may assume that the library does not offer a desired service, or that librarians are too busy to offer in-depth support. Librarians may assume that, if instructors have not requested assistance, no services are needed. These barriers fall quickly once communication starts. The secret to collaboration is to start talking. Faculty should keep an open mind about what is possible from the library, while librarians should listen carefully and keep an open mind to developing new services and systems. It has been our experience that these potential barriers can be eliminated quickly, and that collaborative efforts greatly enhance the information available to students. Students can avoid the frustrations of doing a generic "Google search" that may generate hundreds of thousands of hits in only a few seconds. Since the introduction of the library modules to our LMS, the quality of information students include in their assignments has improved.

Open Access

In further support of Open Access, selected capstone projects are added to the University's institutional repository The Keep, which is operated and managed by Library Services. By publishing student work in this repository, we allow projects to extend beyond a single class and classroom. Ideas constructed in the course are shared both at our university and around the world.

Student work from HST 4910 was first posted in May, 2016. (Student work that included images that the student did not have permission to reuse was not posted.) The initial collection included 17 works. The collection has been viewed about 40 times in the since it was uploaded. Figure 3 shows the first page of the collection, which also includes links to project components on social media.

As shown in Figure 4, each image in the collection is covered by a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License. Students typically submit their projects as image files, which are converted to JPEG format for upload to the repository. Each image is manually transcribed to provide search engines access to the text in the image, and key words selected by the librarian are applied to enhance discoverability.

Figure 4. Health Communication Campaign Messages. From http://thekeep.eiu.edu/ healthst_undergrad_campaign_images/

Figure 5. CC License on Health Communication Message.

Challenges

One of the challenges of this "non-textbook" approach is the ongoing process of ensuring that resources are

still available. Because webpages are not static and regular updates are not guaranteed, they must be continually checked to ensure that the information provided still meets the instructional needs of the instructor and course. Web links must also be checked for accuracy—a potential barrier for courses using a common syllabus and/or multiple instructors. In the Department of Health Promotion at EIU, faculty worked with the librarian to make each course library module look similar, making their use easier for students enrolled in multiple health promotion courses.

Our librarian has worked diligently to make the information available to students without the need to log in to the university system multiple times, but there are occasions when student access is limited by browser and plugin issues. As our society is rather dependent on easy internet access, this can be frustrating to the students as well as instructors. It will continue to be important for both instructor and librarian to communicate any access issues.

Benefits

A key benefit to this approach is that the materials selected for the course are the same types of resources students will use once they are employed. Many community health practitioners do not have access to a research-level health science library, so we stress resources that are freely available. Teaching critical evaluation of sources is a skill that immediately transfers to professional practice. This approach also encourages critical thinking to integrate information from multiple sources.

Lessons Learned

Lessons learned from this approach are many. We feel confident that our students have access to the most current information in the field and will be able to use these resources in future courses as well as in internships and jobs. We know that this approach adds work time for the instructor, but we do not view this as a negative; the field of health promotion is ever evolving and instructors must keep up to date.

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Chapter 4 - Internationalizing the Curriculum: Area Studies Collections and Affordable Content Programs

Pamela Espinosa de los Monteros

by Pamela Espinosa de los Monteros, Ohio State University (bio)

The World Geography LibGuide initiative at the Ohio State University Libraries has brought together three trends in higher education: the emergence of Open Educational Resources (OERs) and affordable content initiatives, the demand for greater internationalization of academic curriculums, and the changing instructional role of the academic librarian. Each of these areas supports 21st-century education and curriculum, and is addressed by a significant body of scholarship.[1]

The World Geography LibGuide[2] initiative demonstrates the intersection of these trends in a single project. And perhaps more importantly, it reveals the challenges and limits of affordable content initiatives affiliated with the greater global OER movement, library subscription-based resources, and faculty-librarian collaborations.

This chapter aims to explain how these trends met in one unlikely initiative, and to describe the initiative's educational, logistical, and technological pitfalls and successes. It also briefly discusses the philosophical and conceptual dissonance between the original aims of the OER movement and projects such as the World Geography LibGuide.

> **The World Geography LibGuide initiative at the Ohio State University Libraries has brought together three trends in higher education: the emergence of Open Educational Resources (OERs) and affordable content initiatives, the demand for greater internationalization of academic curriculums, and the changing instructional role of the academic librarian.**

The Open Education Resources Movement

From the beginning, OERs have aimed to address inclusive and equitable access to knowledge. In July, 2002, the United Nations Educational, Scientific and Cultural Organization (UNESCO) convened a forum on the Impact of Open Courseware for Higher Education in Developing Countries. In its final declaration, the forum expressed its desire "to develop together a universal educational resource available for the whole of humanity" (UNESCO, 2002, p.28). The concept of OERs was born, and with it a new platform to improve access to knowledge across existing "digital, societal, and cultural" divides (D'Antoni, 2009, p.19). In the same year, the Massachusetts Institute of Technology (MIT) initiated a global OER movement by announcing that it would place its course catalog online. UNESCO saw OpenCourseWare, OERs, and the OER movement as a mechanism to harness the

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1. See UNESCO (2009) Open Educational Resources: Conversations in Cyberspace; Hans de Wit, Jocelyne Gacel-Ávila, Elspeth Jones and Nico Jooste (Eds.), *The Globalization of Internationalization: Emerging Voices and Perspectives*; Monty L. McAddo (2012) Fundamentals of library instruction
2. The World Regional Geography can be found here: http://guides.osu.edu/c.php?g=463881.

power and potential of online education and to bring knowledge, online tools, education, and expertise to students in less prosperous and more geographically isolated societies (Siemens, 2015).

The international scope and accompanying global ideology of OERs are intentional, and speak to UNESCO's broader goal of promoting a society which shares rather than partitions access to existing knowledge and information (UNESCO, 2007). OERs were therefore envisioned as the sharing of resources and pedagogy "in all directions, not just north to south" (Johnstone, 2005, p.18).

UNESCO's definition of OERs is simple: "Open Educational Resources (OERs) are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone anywhere can legally and freely copy, use, adapt and re-share them" ("What are Open Educational Resources (OERs)?", n.d). The emphasis on open resources is deliberate. Only open and shareable educational resources can circumvent the unequal distribution of library resources (i.e. journals and databases), computer access, professional development training opportunities, and internet penetration (UNESCO, 2002) that limit the educational opportunities of students at the local level. The Second World Congress on OERs continued to advance the "transformative potential" of OERs to meet the objective of providing "equal access to knowledge and educational opportunities" to worldwide educational systems (CERLAC-UNESCO, 2016, p.12). This includes promoting multilingualism in cyberspace by encouraging the production of OERs in different languages and for distinct cultural contexts (CERLAC-UNESCO, 2016, COL, 2017, p.16). It thus seems clear that, from the inception of OERs, UNESCO's intellectual focus has been on access to global educational resources, and not solely on textbook affordability.

Internationalization of the Curriculum in Higher Education

For the past 30 years, the internationalization of higher education (IoHE) has been an important concept which espouses the value of post-secondary education (Polak & Marmolejo, 2017; Hudson & Hinman, 2017). IoHE is largely seen as a response to globalization and its transformative effect on many sectors outside of education (Egron-Polak & Marmolejo, 2017, p.8). Like OERs, IoHE has also aimed to address education pedagogy that will prepare students to live, work, and thrive in an increasingly integrated world. Higher education has responded in myriad ways, with one strategy being the internationalization of the curriculum (Dash, 2017).

There is no consensus on how to define the internationalization of the curriculum (Bordonaro, 2013), nor is there a universal approach to its implementation in post-secondary education (American Council on Education, 2017). The most accepted definition is that of Jane Knight (2004): "the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of postsecondary education" (p.6). Adaptations of this definition emphasize the "purposeful integration of an international and/or intercultural dimension into the content and form of the curriculum" (as cited in Larsen, 2016, p.99).

Traditional efforts in the internationalization of the curriculum include, but are not limited to, education abroad and service learning programs, the recruitment of and service to international students and scholars, areas studies and foreign language programs, and multi-disciplinary "global citizenship" initiatives and learning objectives (Aktas, Pitts, Richards, & Silova, 2017). Efforts in the internationalization of the curriculum attempt to reframe and decentralize knowledge traditions among students and scholars (Turnball, 1997) by including "international

and comparative content" (Larsen, 2016, p.102). This type of curriculum is intended to make students "aware of their own and others' cultures" (Dash, 2017, p.195).

Developing or adapting curriculum around internationalization is no easy task, and can present challenges parallel to those of creating interdisciplinary curriculum (Hudson & Hinman, 2017). Course content and learning objectives may require an update and/or a complete redesign in order to integrate relevant global and international perspectives (Hudson & Hinman, 2017). These pedagogical considerations parallel those of creating, remixing, or customizing an OER. Faculty seeking to internationalize their curriculum may therefore consider OERs or affordable content initiatives as complementary platforms for this end.

Faculty investing in the internationalization of the curriculum may simultaneously consider OERs and affordable content initiatives as a mechanism to capture their new curriculum. New curriculum that is inclusive of international scholarship and perspectives may also meet the broader goals of the global OER movement.

Librarian Engagement in Instruction

The changing education and information environment has brought with it an increased focus on teaching pedagogy, curriculum design, and the inclusion of new educational materials for online instruction (Cisse, 2016). These changes provide new opportunities for academic librarians to collaborate with teaching faculty to integrate information literacy curricula that address critical thinking, problem-solving skills, and effective use of information resources (Wickramanayake, 2014; Cisse, 2016).

Since its inception, the World Geography LibGuide project has provided an excellent testing ground for librarians, collaborating with highly motivated faculty members, to use their expertise and the potential of an affordable content initiative with OER ideology to effect real change in classroom instruction, information delivery, and curriculum alterations.

Today's librarians are looking beyond their bibliographic duties, the physical limitation of the reference desk, and the time constraints of the "one-shot" instruction session to proactively embed their expertise in the classroom and reach students where they are (Kane & Summey, 2017). Librarians equipped with the Association of College and Research Libraries' Framework for Information Literacy are redefining and stressing their teaching role (Cisse 2016; McAdoo, 2013). Information literacy instruction is focused on lifelong learning skills, workforce readiness, and global competitiveness in a knowledge economy (Cisse, 2016). These objectives closely align with the stated roles of the OER movement and the internationalization of the curriculum. OERs and affordable content initiatives thus provide an avenue for librarians to expand their foothold in course-integrated instruction by allowing them to work collaboratively with faculty in the design and creation of international curricula.

Since its inception, the World Geography LibGuide project has provided an excellent testing ground for librarians, collaborating with highly motivated faculty members, to use their expertise and the potential of an affordable content initiative with OER ideology to effect real change in classroom instruction, information delivery, and

curriculum alterations. The project's genesis and challenges, successes and failures provide an interesting and cautionary tale about the potential and constraints of affordable content initiatives.

The World Geography LibGuide Project

In 2016, the University Libraries at The Ohio State University partnered with the Office of Distance Education and eLearning (ODEE) and the Undergraduate Student Government (USG) to sponsor a textbook affordability grant of $1,000 for faculty interested in exploring the adoption of low- or no-cost course materials. Focused on affordability, the grant allowed professors to replace a textbook without creating original content, as similar grants often require.[3] Faculty members could choose to create, adopt, or remix an existing OER, and/or use licensed and purchased content to replace a traditional textbook. That same year, a geography professor approached the area studies library department with the idea of creating a replacement textbook for an online undergraduate world geography course.

Inspired by his work directing the University's Service-Learning Initiative, our geographer was looking to restructure his course curriculum in order to engage students with contemporary global issues. The course he conceived would cover thematic topics on globalization[4] that demonstrated an interdependence on world communities through the lens of geography: geography and natural environment, people (demographics), economic development, culture and geopolitics. Each theme would be explored through multinational perspectives, and the professor was seeking to find regional experts at the university who could recommend and aggregate informational resources from distinct international vantage points. To accommodate his request, area studies librarians began work on the World Geography LibGuide.

Our aim for the guide was to include quality global information sources (free and licensed) suitable for an undergraduate world geography course, and to do so on a free and accessible online platform. Unlike other library guides, this interdisciplinary guide would be used as a textbook, and would unify the expertise of multiple librarians from different institutions for the purpose of introducing distinct world regions through an "egalitarian perspective on internationalization" (Starr-Glass, 2017, p.307). The guide would aggregate a variety of existing multimedia sources (video, maps, audio, text, and other digital content) on distinct world regions, sources available freely online or through the library's collections. Critically, it would also aim to promote the global citizenship dispositions and competencies that were objectives of the course. The identification of global information became the responsibility of the area studies library department and its librarians.

LibGuide Team and Assigned Roles

Lacking in-house expertise for all of the geographical regions required for the project, we decided to seek talent beyond our institution, and extended invitations to area studies librarians from Ohio University and the University of Illinois Urbana-Champaign to collaborate and complement the regional expertise available at The Ohio State

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3. For more information on the criteria for the Textbook Affordability Grant, refer to https://library.osu.edu/projects-initiatives/affordability/textbook-affordability-grant-2/

4.

University. Invitations were sent to area studies library department heads and individual librarians, requesting their participation in the project.

In the end, ten area studies librarians generously donated their time and expertise and worked together to aggregate informational resources from distinct regional perspectives to cover the course's thematic areas.[5] The librarians each brought expertise in the foreign languages, history, and literatures of large geographic areas. Their genuine interest in supporting accurate representation of world regions in undergraduate curriculum helped Ohio State overcome its uneven coverage of area studies.

The project provided a unique opportunity for these librarians to collaborate on the design of an educational resource for a general undergraduate audience that could bypass the linguistic and cultural contexts often required to engage with their international collections. Traditionally, the primary users of area studies collections have been scholars, regional experts, and graduate students proficient in the language(s) of the region. Without mediation, engagement with these collections can be hindered by cross-cultural and linguistic barriers, similar to those confronted in other international educational programs, such as foreign language courses and study abroad. To mitigate these challenges, librarians would select introductory resources that would demonstrate the distinctiveness of place and region while also being accessible to English speakers. Additionally, the geography librarian and GIS specialist would select other relevant and discipline-specific resources.

The project provided a unique opportunity for these librarians to collaborate on the design of an educational resource for a general undergraduate audience that could bypass the linguistic and cultural contexts often required to engage with their international collections.

The project's geography professor envisioned using a geobased platform that would connect text and multimedia content with its associated geobased region. Unfortunately, a GIS platform capable of integrating multimedia content was not available. The team instead proposed a multi-page LibGuide to serve as the resource's platform. A LibGuide content management system offered several advantages: our librarians knew the tool; it provides custom templates that librarians can design, duplicate, and edit; it supports multimedia and allows librarians to integrate library and non-library content in one platform; and, significantly, it was already integrated with the University's course management system.[6]

Coordinating the variety of potential sources for the LibGuide was a challenge. Two librarians served as co-leaders in the effort, working in tandem with the instructor to design a template to reflect the course's thematic structure. These consultations helped define the guide's geographical and topical coverage, and covered both the required and supplementary sections of the regional page template. Librarians were initially supplied with a general overview of course goals, a framework for the course structure, and access to previous World Geography textbooks; the LibGuide and course syllabus were then developed simultaneously. Based on feedback from the

instructor, the librarian team concentrated on designing a regional page template that provided uniformity among the pages.[7]

Upon the completion of the regional pages, the project co-leaders spent significant time editing each page for consistency, checking links, and adding additional content when needed. Additional support on licensing, access, and overall design issues came from the Libraries' Teaching & Learning Department, the Copyright Resources Center, and the electronic resource officer. The project took a year from start to finish, and the guide continues to be maintained and updated by the project managers.

Challenges Confronted by Librarians

Work on the LibGuide presented many challenges, parallel to those encountered by Miller and Homol (2017) at the University of Maryland University College. These centered on issues of access, limit to digital/online resources, cross-institutional collaboration, resource selection, and the relationship between librarians and the course instructor. The need to provide multiple students with simultaneous access to library-licensed content, for instance, required additional resources unanticipated by the project team. The majority of electronic resources in the Ohio State library collection had been purchased with a non-concurrent single user license, anticipating use by individual researchers rather than students in a course. Licensing agreements for existing electronic resources were not accessible to area studies librarians through the library catalog or the libraries' content management system. To review and alter existing license agreements, the team relied on an electronic resources librarian to check user limits for selected resources and upgrade licenses when required. Librarians also found limits on the type of international sources students could access online. Format restriction tended to limit the availability of quality resources in specific regions where e-formats are not common.[8]

Non-Ohio State area studies librarians faced their own challenges. A logistical glitch left them without online access to Ohio State library collections, preventing them from reviewing all available content. To overcome this, they suggested resources available through their own institutional collections and/or international resources for which reviews were available online.

> **This project greatly extended the librarians' professional reach, allowing them to move away from their traditional role of suggesting sources to actually selecting sources and directing users to them.**

Issues of scope and coverage also plagued the project. Librarians struggled with selecting resources that comprehensively addressed the global topics proposed by the professor. Area studies collections mirror the subjects most commonly taught at a university. To overcome these challenges, the librarians relinquished comprehensive coverage and settled for regional boundaries centered on available collections and professional expertise.

This project greatly extended the librarians' professional reach, allowing them to move away from their traditional role of suggesting sources to actually selecting sources and directing users to them. In the end, many librarians

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7. The template included five main boxes of content including: introduction to the page and representing collection; resource arranged by topical subject; English news resource; regional map; international events available in the local area; and two cultural multimedia resources on language and music.

8. For many area studies collections, print continues to be an important publication format. As an example, in 2016 only 23% of new Iberoamerica publications are available as an ebook (CERLAC, 2016, p.8).

embraced the opportunity to embed a regional perspective into a project and to play a greater role in the learning process. Others, however, felt uncomfortable with the responsibility of selecting specific sources.

Conclusion

The push for OERs and affordable content initiatives in higher education continues unabated. In the spring of 2018, the federal government approved a $5 million pilot program to support OERs through the U.S. Department of Education (Liberman, 2018). This new program, like other OER and affordable content initiatives, provides an opportunity to meet the broader goals of the global OER movement, addressing affordability and knowledge equity disparities in existing education resources. New curricula that are inclusive of international scholarship and perspectives meet the broader goals of the global OER movement.

This chapter explains one initiative in which faculty, librarians, and area studies experts collaborated to replace a textbook, building a LibGuide that included curricula addressing global topics and perspectives. The road to creation of this resource, like the road to the development of international curricula, was fraught with challenges. The lessons learned are valuable, and should assist those embarking on similar projects.

The first iteration of the World Geography LibGuide received 2,069 views in its first semester of use. It was used by 115 students, resulting in an average cost savings of $140 per student. Together, 10 area studies librarians and three subject librarians aggregated 398 information sources for the LibGuide, including licensed and free ebooks, journal articles, videos, websites, and maps. The geographer was able to use the libraries' rich international studies collection to meet the objectives of the textbook affordability grant and the goal of internationalizing the curriculum. The success of the librarian-faculty partnership has also led to new opportunities for participating librarians to collaborate in the classroom. The Ohio State World Geography LibGuide project provides a replicable model for faculty and librarians seeking to support OER and affordable content initiatives as well as the internationalization of the curriculum.

The emergence of an OER and/or affordable content effort in higher education institutions challenges faculty to navigate issues that may fall outside their discipline expertise or typical academic publication workflows, including publication conventions for educational materials, program management, copyright law (beyond fair use), and instructional design, among others. These issues may quickly overwhelm faculty, making them less likely to explore OERs and affordable content initiatives.

Faculty seeking to internationalize their curricula may look to identify regional experts who can help find appropriate global information sources. To overcome existing knowledge gaps, faculty may seek partners to help create, publicize, and disseminate a self-developed educational resource. In doing so, they may find strong allies and partners in area studies librarians and collections.

With their early promise to increase inter-global collaboration, OERs offer faculty an opportunity to design and customize curriculum that can equitably represent the world's knowledge. Quality international information resources available online or through a library's existing area studies collections offer faculty tools to internationalize their curricula.

Higher education's concern with educational cost—in particular, with the rising cost of textbooks—often drives

the support and implementation of OER and affordable content initiatives, where the aim is in "reducing costs and ensuring access to required course content" (Salem Jr., 2017, pp. 34-35) for existing and future matriculated students. As a result, these efforts have expanded to include affordable content efforts that utilize copyrighted content, instead of openly licensed materials. Resources created as part of an affordable content program may limit use of these materials beyond the university, but expand affordable options to subject areas where quality OERs are not available. These programs, while promoting the affordability of higher education, omit the global objectives of the greater OER movement in terms of knowledge equity, and may deny professors the opportunity to enhance their curricula with twenty-first century learning goals like global citizenship. The World Geography LibGuide, although not an OER resource, is a successful affordable content project that attempts to align with the broader objectives of the global OER movement, and provides another model for people working on these efforts to consider.

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Library Ebook Affordable Content Programs

Chapter 6 - Beyond OER: Library Licensed E-Books as a Proactive Course Reserves Model and Collections Development Tool

Victoria Raish, Chris Holobar, and Kathy Highbaugh

by Victoria Raish, Chris Holobar, and Kathy Highbaugh (all from Penn State University) (bios)

Introduction

Open educational resources (OERs) are part of the broader disruptive innovation of open source, which also includes sharing software and evolving copyright laws. Multiple innovations have propelled the movement forward, such as the creation of Creative Commons licenses, Open Access Week, the creation of high-quality open textbooks by OpenStax, and learning materials repositories such as Merlot. In addition, current initiatives like Unizin, the Open Textbook Network, and Open Courseware will undoubtedly impact the field in complex and unexpected ways. It is critical to think of Open Ed as a disruptive innovation, because that means it is a process. Processes happen in a system and do not occur instantaneously. Disruptive innovations are successful when they focus on serving an underserved population and on attacking existing models from multiple angles (Yu & Hang, 2010).

Currently there are strong movements attempting to disrupt the traditional publishing model and course material process, and aiming to place alternative systems in the power and reach of academia, students, faculty, and their strategic partners. Some schools now use OERs throughout their institutions or in multiple programs, including the University of Maryland system, the State University of New York system, and Tidewater Community College. In addition, several states have beneficial legislation that supports increasing student affordability (Steen, 2017).

The traditional criteria of OERs are that they are free and actively encompass the 5 Rs: retain, reuse, revise, remix, and redistribute (eCampusNews, 2014). At Penn State University (PSU), this definition has been adapted to include:

> any type of educational materials that are available to the university community with little or no cost. It may also be the case with PSU-OER that the nature of these open materials means that students, faculty, and staff can legally and freely copy, use, adapt, and re-share them within the university community (OER PSU, 2016).

The key feature of this definition distinguishing it from the broader definition of OERs is that, while there may be an institutional cost, it includes educational materials available at little or no cost to students. This means that library-licensed material that provides access to university members is a central part of the PSU-OER model. This expanded definition offers a solution to one common criticism of OERs: that there are not enough materials broadly available for higher-level coursework. We see library-licensed ebooks as being complementary to other OERs and increasing affordability for students.

In this chapter we describe our process of developing a library-licensed ebook program that places ebooks directly into the learning management system (LMS) for students. We cover our reasons for starting this initiative and our methods for assessing its impact and success, and discuss the technical underpinnings and broader theory that underlie our investment in it. If the OER community agrees that the broader focus of OERs is to provide affordable access to course materials, then a program that actively pursues multiuser ebooks and adds them to the library's collection is a nice addition. Library-licensed ebooks are not a panacea, but they can be used to fill a niche in affordable content and should be considered with critical intention.

Rationale for the Program

Surveys suggest that seven out of ten students may take a class without purchasing the required textbook (Redden, 2011). This lack of access to materials considered necessary for a course raises concerns about student success. While there are certainly examples of students not buying books because they prefer not to, the far more likely explanation is rising cost. At Penn State, students can expect to spend $1,800 dollars a year on course materials (PSU Cost of Attendance). This cost is often not covered by financial aid; even when it is, resources are not always available early enough to provide access on the first day of class. In addition to the pedagogical benefit of having access to the fully intentioned design of a course, anything we can do to increase affordability and build affinity to the university is strategically sound from both a library and a university perspective.

Penn State's focus on increasing the quality of the student experience includes a commitment to treating online students as equal to residential students. Residential students have the opportunity to check course out textbooks from the library in order to access materials without cost. Access to ebooks helps online students have equivalent access to needed materials, and follows the guidelines for equivalent access in the Standards for Distance Learning Library Services of the Association of College and Research Libraries (ACRL).

In December, 2016, a team of librarians, staff, and instructional designers were asked to develop an equivalent course reserves model for online students. Team members of this Active Course Reserves (ebook licensing) Program included the following:

- The online learning librarian, who led the group and translated jargon between group members.

- An instructional designer and an IT trainer, who helped communicate the ebook program to faculty and other instructional designers and conducted training on how to add ebooks to courses in Canvas, our LMS.

- A quality assurance team member, who has a direct relationship with the traditional textbook vendor, MBS Direct, and is able to change the course catalog.

- The budget analyst and the acquisitions supervisor, who procure necessary licenses and works with I-Tech to automate the process.

- The manager of lending and reserve services, whose team adds the ebooks directly to Canvas using the Library Resources tab and ebook folder.
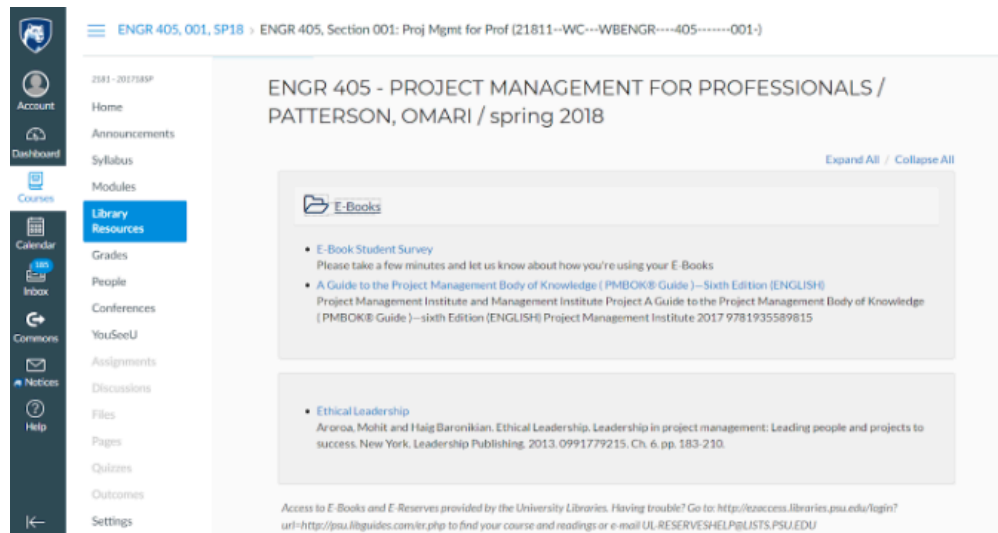
Figure 1. ebooks folder in Canvas.

ACRL Standards

With Penn State's online learning librarian leading the group, the ACRL standards for distance learners served as a base for the program. These standards emphasize equivalent library access for online students (ACRL, 2016). It is important to note that this does not mean identical access; naturally, it would be impossible to have identical access, as online users have unique needs and considerations.

In particular, the ACRL standards stress that it is the responsibility of the distance learning librarian to "prepare or revise collection development and acquisitions policies to reflect the profile of needs, ensure the provision of both electronic and hard copy resource needs, and develop methods for delivering library materials and services to the distance learning community" (ACRL DLS, 2016). Our ebook program is increasing our collections and serving the needs of our distance patrons. Our team sought a way to offer ebooks to students within the existing systems of library processes and procedures. The role of acquisitions and course reserves becomes crucial here, as it allows the program to be automated and complements it with the course reserves model existing for on-campus students.

Course Reserves Model

Rapid and some might say out-of-control inflation in the price of textbooks over the past 25 years, along with increased concerns about college affordability, have generated renewed interest in physical course reserves—a familiar and still popular library service for many resident courses. At Penn State there is increasing demand for course reserves, which is against the grain of nationwide trends.

Reserve textbook collections continue to play an important role, alongside licensed digital content and OERs, in providing cost-effective access to academic materials for our students. Penn State's definition of OERs includes content available to the Penn State community with a total course cost of under $50 dollars. Although our libraries have provided electronic reserves service since the mid-1990s, widespread ebook adoption has lagged behind requests for e-journal articles, scanned book chapters, and even streaming audio and video. Initial barriers to wider adoption of ebooks include the relatively limited number of academic titles available for license, a direct-to-student and non-institutional model for many standard e-textbooks, licenses that restrict the number of simultaneous users, and confusing delivery platforms (Slater, 2010). As the number of ebook titles has increased, so have the number of more course-friendly multi-user licenses and user familiarity with delivery platforms (Celik, 2015), resulting in increased ebook adoption for course reserve supplementary readings. (General textbook publishers are still slow to make digital offerings available for institutional licensing.)

> **With renewed interest in course reserves helping us address college affordability, and with the increased availability of ebooks, the time seemed ripe to explore a more systematic way of promoting ebook use in the curriculum.**

With renewed interest in course reserves helping us address college affordability, and with the increased availability of ebooks, the time seemed ripe to explore a more systematic way of promoting ebook use in the curriculum. Penn State's online learning campus, World Campus, had relied heavily on digital course content and had a more limited course catalog than the resident programs. It was an obvious choice to partner with the library on a program to seamlessly integrate (from the instructor and student points of view) ebooks into Canvas, using Springshare E-Reserves.

To optimize the chances for a successful program, we focused on several issues: defining the ebook licenses we could use, defining our audience, analyzing an automated acquisitions strategy, determining the best place to host the content, and exploring program sustainability in terms of resources, labor, and cost.

Ebooks and Licenses

As mentioned in the introduction, this program is not focused on OERs under the standard definition. It is, however, an affordable educational resource program under Penn State's modified definition. All university employees and students are able to access ebooks provided by the libraries. These ebooks are library-licensed materials that can be discovered within our catalog. User access (unlimited, multiple users, or single users) to each ebook depends on the platform hosting the book and the licensing agreement of the publisher.

From the perspectives of both collections strategy and equivalent access, the ebooks licensed for this program must have a multiuser lending model in the form of unlimited, nonlinear, or aggregate. We want to provide access to all students in a course, and a limited user model does not permit that option, defeating the purpose of an equivalent course reserves model. We are not licensing standard textbooks used in large-enrollment courses because they typically do not have favorable institutional licenses for sharing. Rather, most of our work uses licenses offered by academic publishers and other library-friendly publishers. If someone teaching a residential course learns about the program and wants to use a licensed ebook, we manually complete that process—a

limitation that has more to do with scale and a different workflow for residential courses than with increasing our collections and the money spent on the program.

Audience Served

During the Fall 2016 semester, 40.9% of our World Campus students were residents of Pennsylvania, and 59.1% were non-residents. The vast majority of students were older than 24, and approximately 18% were in the military. These demographics are a compelling reason to find ways to provide content to our students in electronic format: nearly 60% of our students are not able to take advantage of the vast course reserves collections and library resources available at Penn State University Park and our Commonwealth campuses. Even those who live in Pennsylvania are not necessarily close enough or do not have the resources to visit a campus. The ebook program allows us to offer alternative textbook options to our online adult learners.

Sustainability and Strategy

Library Sustainability and Strategy

At the start of any new program, it is vital to develop a plan for each of three scenarios: 1) the program is not successful and needs to be retooled, 2) it is as successful as expected and the plan is working well, and 3) it experiences unprecedented success. We built in necessary constraints and guidance for increasing the program at a rate that was feasible in terms of both financial costs (the actual expense of licensing the ebooks) and manual labor (primarily that of the course reserves staff, as they are responsible for adding ebooks to Canvas and answering any technical access questions).

Our pilot project began in the summer of 2017 with 18 courses. Based on a review of the full World Campus catalog, the Libraries proactively purchased 151 titles , at a total cost of $21,200, prior to the end of the 2016 fiscal year. Since many of these titles are reused every semester, subsequent new purchases decreased to just 38 additional titles for the fall of 2017, for an additional cost of $5,043. Licensing fees thus far for the project total $26,343.

The potential cost savings for students thus far has ranged between $383,000 and $417,000 each semester, calculated based on the mean course enrollment times the average book cost times the number of books offered. This return on investment has been extremely justifiable in terms of library resources spent. The current labor cost is manageable, but the workflow needs to be addressed as we explore residential courses. The busy time for the course reserves team is in the weeks just before a new semester.

Long-term sustainability and the possible expansion of this service beyond Penn State World Campus are not without challenges at our large, multi-campus university. Our current ebook program provides titles to approximately 160 course sections in World Campus, which typically offers 1,400 sections each semester, so approximately 11–12% of sections are using titles that are available as licensed ebooks. Resident course sections across all Penn State campuses with active sites in Canvas, however, number more than 14,000. If a similar

percentage holds, the number of course sections for which we could potentially purchase titles could increase to almost 1,600. With approximately 1.2 ebooks available per section and an average cost of $139 per title, total investment could exceed $220,000. All of which is speculative, of course, as wide expansion of this service to so many course sections will no doubt reveal wide discrepancies between different subjects in ebook title availability and cost, which would significantly impact this estimate. Even if costs exceed this estimate, however, potential dollar savings to students could number in the millions of dollars, making this a worthwhile investment overall.

World Campus Sustainability and Strategy

Prior to the start of a new semester, instructional designers are responsible for reviewing the semester ebook report to determine which courses/titles are available via this program. Design staff then contact the faculty to make them aware of the ebook partnership between the Penn State Libraries and World Campus, noting this is part of the provost's access and affordability initiatives. Potential savings for students are also provided to faculty. The program requires minimal work by faculty, resulting in it being well received. Sustainability efforts center on informing learning design shops, updating course information in the required materials system, and maintaining records over time to track material changes. World Campus staff place the ebook information in the course catalog, and we notify academic advisers of all ebooks so they can share the information with their students. Program sustainability revolves primarily around communication and alerting the appropriate units.

Final Workflow

After the summer 2017 pilot, in which we worked with a handful of receptive instructors, we finalized a workflow process:

1. Approximately twelve weeks prior to the first day of class for the upcoming semester, World Campus provides the library with a list of all required books for the upcoming semester catalog.

2. Library acquisitions staff compare that list both to our current ebook holdings and to other ebooks not currently owned but available for purchase. Only ebooks with multi-user licenses are considered, and current holdings with more limited licenses are upgraded if possible.

3. After verifying holdings, acquisitions staff make the final list of ebooks available to:

    1. World Campus staff, who add this information to the student course catalog

    2. course reserves staff, who create the ebook records, associate them with course numbers and instructors in Springshare, and add metadata to allow seamless learning tools interoperability (LTI) integration with Canvas course sections.

4. The ebook is published in the course catalog eight weeks before courses start. Ebooks are added to the Canvas space immediately prior to the start of the semester.

For more specific details on the workflow, see Appendix A.

Communication Processes

It is essential to make sure that students enrolled in these courses are aware of the program, and know ahead of time that they do not need to buy these course materials. This communication happens in four ways: the ebooks are listed in the World Campus course catalog and on the World Campus ebooks webpage, their availability is communicated to advisers who then inform their students, and faculty have the option to send students a message letting them know an ebook is available (see Appendix B).

With preliminary survey results showing that students were not going to the World Campus catalog to find their course materials, we also began obtaining a list of all instructors and emailing them about this program a week before the start of each semester.

Pros and Cons

The benefits of this program include: filling the niche for more affordable course content for higher-level courses not currently being served by OER choices, bringing the library into our local OER conversation and making it a visible player in affordable content initiatives, providing students first-day access to the ebooks, embedding materials directly in the LMS so students do not have to go to the library website to access course material, creating potential student savings of around $400,000 per semester, reaching the standards of ACRL Distance Learning Standards, and creating a great return on investment.

These benefits solve several existing problems. Because of constraints of time, resources, and staffing, it is not feasible to have all faculty create OERs for their courses. Using ebooks to provide access to materials faculty have already selected is therefore a way to work within their existing course material selection process. In addition, by working directly with the course list and adding these materials to the LMS, we bring the library to the fore for people who choose course materials, allowing faculty who might not have a strong relationship with the library to turn to their library resources in the LMS and gain access to the provided ebooks.

Access on the first day of class is an important focus of the OER community. Through the work of acquisitions, World Campus, and course reserves staff, we provide first-day-of-class access to available course ebooks. Placing the ebooks directly into our LMS is also crucial, as it increases ebook adoption and lessens the frustration of having to go to multiple resources and websites in order to successfully complete coursework—a frustration felt especially by online students.

The potential cost savings for students will only increase as more ebooks are placed online and faculty become cognizant of student affordability. While we are unable to provide exact numbers on usage statistics because these books are also readily available in the library catalog, we can assume a potential cost savings.

The potential cost savings for students will only increase as more ebooks are placed online and faculty become cognizant of student affordability.

This program also allows us to provide equivalent

services and a specialized program for World Campus students. We believe its benefits will cross over to residential and blended programs as well, as most students can be considered remote users at one time or another.

One unexpected benefit of this program has been its effectiveness as a marketing tool. The online learning environment is very competitive and students can enroll in different schools with, essentially, a click of the mouse. Promoting student affordability to potential students is an appealing strategy to show that we are student-centered and consider the affordability of our programs.

The program has a few downsides to consider as well, the largest being that we are not able to fulfill all demand through this program, primarily due to publishing license limitations. Another is that while this ebook program fits within Penn State's definition of affordable content, it is not truly OER in the spirit of **R**etain, **R**euse, **R**evise, **R**emix, and **R**edistribute, and might not fit with your institution's definition. Additionally, depending on the needs of your institution and your budget, it might not be possible to acquire new ebooks; existing records, however, should be checked for ebooks already in the collection and being used in courses.

The different features, access requirements, and accounts required by the databases and interfaces hosting our ebooks require a learning curve to students who might have to use one or more databases to access their materials. The program can be cost-prohibitive for some institutions, although the initial investment is low compared to the final return. And finally, we are not able to look at actual ebook use in the LMS, as our data are not reported at that level of granularity.

Implementation of any new program is unlikely to solve every existing issue. This is especially true for an emerging concept such as OERs, which lacks the depth of content to fill the need of every course. For Penn State, the benefit of the ebook program has greatly outweighed the downsides, and the program has significantly increased use of the library collections. Even if the complete program is not replicable at other institutions, pieces can be borrowed and tweaked to fit local needs.

Assessment of Program

We assessed the program through a few different channels. First, to gauge the perception and voice of those with access to the ebooks, we emailed a survey to instructors and placed a student survey directly within the ebooks folder in Canvas. Through email we also provided instructors with a message they could forward to students to encourage them to take the survey and provide feedback. Briefly, these surveys demonstrated that the top two reasons instructors choose to participate in the program are student affordability and the minimum work required on their part. Students reported being very happy with the program overall, but noted a need for increased communication and awareness. One suggestion for those interested in a similar program is to seek user feedback at all stages of the process to make sure it is meeting the needs of constituents.

This program has been operationalized with minimal issues or roadblocks, the feedback has

been overwhelmingly positive, and the investment is more than justified in alignment with Penn State's strategic plan.

We also measured the library's financial investment, along with student use of the program. At this point, these are all potential savings and use statistics. From a financial perspective, we are measuring initial investment, decreases in spending in subsequent semesters, and financial scaling. In terms of use, while we cannot obtain granular usage statistics, we can obtain access records for a semester's ebooks and compare them to average ebook usage in the future.

This program has been operationalized with minimal issues or roadblocks, the feedback has been overwhelmingly positive, and the investment is more than justified in alignment with Penn State's strategic plan.

Challenges

Due to our establishment of team and shared goals at the beginning of the process, our challenges were minimal. We made several early decisions that helped us avoid potential roadblocks:

1. Test, test, test: Several different parts of this process needed to work well in order to implement it effectively. These included obtaining a complete and accurate list of required course materials from World Campus, running this list through the library acquisitions database, deleting duplicates, and communicating the finalized list to the course reserves staff. We tested these elements in the spring of 2017, prior to launching the small pilot program.

2. Start small: We started with a small pilot that involved only two instructional design units on campus, and ensured that the process worked before communicating about it further. To make sure that we worked with willing and eager participants, we also used an opt-in model for faculty during the pilot.

3. Collaborate: A crucial part of our success was effective collaboration among the assembled team members. To make this project successful, we had experts in each of the necessary departments. We met monthly and communicated via email and cloud storage whenever necessary, and conducted training with external stakeholders when appropriate.

4. Request needed information: A key element for each member of our group was knowing what information they needed to ensure success with their part of the process. If inputs and outputs did not match or other concerns arose, we were able to immediately identify problems.

5. Communicate: Ebook program information needed to be communicated to instructional designers, faculty, advisers, students, and librarians. This was accomplished by the appropriate central team member conveying an agreed-upon message to their colleagues. For example, the online learning librarian communicated information to other librarians, and the IT trainer conducted a training for other instructional designers.

6. Seek feedback: We sought feedback through formal assessments but also through informal conversations with peer institutions and administration. Though students are the primary recipients, we want the program to serve the needs of everyone it is benefitting. Actively seeking internal and external feedback allows us to see if we are meeting the needs of our students, and to gauge initiatives

and programs at other institutions so we can stay current with trends in affordable content.

Recommendations and Conclusion

Penn State's ebook program, working through a partnership with World Campus, has successfully placed ebooks in approximately 150 courses each semester. This program complements other OER initiatives and places ebooks directly into the LMS. The average potential cost savings per semester ranges from $383,000 to $417,000. This program has been successful in no small part due to the support of administration, connection to the Penn State strategic plan, and the involvement of the right people on the team. Although fully launching the program does require an investment in new ebooks, a library could match a list of required course materials against its current digital collections.

If you are interested in starting a similar program at your own institution, there are a few things to consider. The most important is your motivation for implementing a program. Are you interested in serving students with equivalent access? Expanding your definition of OERs? Answer those questions and develop a shared purpose so that your group stays focused on its goals. Second, form

A commitment to student affordability is the ethically correct decision for better serving our students.

a strong and strategic group. Consider starting it with people in management or leadership positions, and have them recommend the most appropriate team members based on your goals; then be sure to engage in regular communication. Third, identify external institutions that have done something similar. Consider setting a meeting with another school to learn more about their process and help inform your future workflows. Fourth, assess and plan for three scenarios: the unsuccessful program, the expected success, and the unexpected success. Develop contingencies and ways forward. Finally, iterate on the project for future semesters, develop timelines, and communicate.

A commitment to student affordability is the ethically correct decision for better serving our students. The cost of textbooks should not be the reason that students choose different courses or, even worse, different majors. At Penn State we have been able to complement traditional OERs with a library-licensed ebook model, and we look forward to scaling this process up to provide access for more students in the future.

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Appendix A

1. 12 weeks out – World Campus QA Team uploads a list of courses and their materials to the "WC Adopted Materials Per Semester" Box Folder https://psu.app.box.com/folder/27786771487.

    1. LD QA Team sends email to acquisitions lead letting them know the list has been uploaded.

2. If needed, the online learning librarian updates the title of the list with the proper semester and time period.

3. The acquisitions lead uses this list and matches it with Gobi to determine which ebooks we license and which we can license.

4. **8 weeks out** – The acquisition lead uploads the list of WC adopted materials with ebooks to the WC ebooks Per Semester Box folder.

    1. Acquisition lead emails LD QA Team letting them know the list has been uploaded.

5. **8 weeks out** – the Learning Design QA Team sends the design shops an email with a link (you must use this shareable link https://psu.box.com/s/9c60znpeu62qcqvxkneb9kddr6ihewpp) to the WC ebooks Per Semester folder which contains the list of which courses will have an available ebook.

6. The World Campus team refers to the list in the WC ebooks Per Semester folder and starts updating the course catalog with the information that an ebook is available to students.

7. The design shops enter the language onto all of the necessary resources to let students know in those classes they will have an ebook and how to access it. This includes language for instructors who may want to post an announcement about this program.

8. The academic advisers are informed by the online learning librarian of what courses will have free-to-students ebooks.

9. Lending and Reserves manager emails the LD QA Team on the day he is getting the list of sections from LP. Quality assurance professional will forward that message to the Design Staff, and if sections are added after that date, the Design Staff should contact lending and reserves manager to let them know.

10. **3 weeks out** – The acquisitions lead provides the list of ebook courses to Course Reserves and to I-Tech. Course Reserves begins adding these ebooks to all WC sections of the course. If there is a merged section, Design Staff for that course lets course reserves know at ul-reserveshelp@lists.psu.edu so we can manually add that for the merged course. I-Tech updates the student savings website that lives in WC with the new semester ebook information. Both of these groups need the list 3 weeks out.

11. **3 weeks out** – Academic advisers are reminded to discuss this program with students who have classes that qualify.

12. The survey for the ebook program is also linked to from the E-Reserves tab. Email instructors and remind them to remind students to complete the survey.

13. Survey Results are shared every semester and the process begins again for the next semester internally with the ebook team and administrators. At a later time, we can evaluate sharing more broadly.

Appendix B

I am very glad to be part of a program that provides you one of the required materials in this course as a free ebook. To access this ebook, do the following:

1. Go to the Library Resources tab in the course navigation menu.

2. Select the E-Reserves link.

3. Open the ebooks folder.

4. Select the appropriate title and URL to go directly to the ebook.

For questions or issues, you can contact the University Libraries Reserve Help(UL-RESERVESHELP@LISTS.PSU.EDU).

Thanks,

[YOUR NAME]

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J. Christopher Holobar has worked for more than 20 years at the Penn State University Libraries and is currently a manager in Access Services. He has written about integrating electronic reserves in course management systems, copyright permissions and the Copyright Clearance Center, and the changing roles of staff in academic libraries. He holds BAs in both philosophy and English from Penn State.

Kathy Highbaugh has worked for The Pennsylvania State University for the past 17 years and is currently a Quality Assurance Manager for the World Campus Learning Design Department. She oversees the material relationship and with the World Campus's bookstore, MBS Direct.

Chapter 7 - Textbook or Not: How Library Ebook Purchasing Power Aligns With Curricular Content Trends

Niamh Wallace and Sara Filion

by Sara Filion and Niamh Wallace (both from the University of Arizona) (bios)

Introduction

Within the broader public discourse on the rising costs of higher education, the issue of textbook prices seems to have struck a particular chord[1]. This spotlight on the textbook—and on the publishing models that drive its production and sale—has opened a conversation on possible alternatives to costly course materials and prompted interest in a larger-scale look at what faculty assign (or could assign) as required reading at the college level.

Enter academic libraries, which have long supported the research content needs of their campus users, and are now beginning to put effort behind curricular content as well. Situated as they are within the ecosystems of scholarly publishing and higher education, academic libraries have substantial ability, and incentive, to align collections with course content. Beyond advocating for the use of digital library content—such as journal articles, ebooks, and primary sources—in place of print textbooks, librarians have also been involved in campus open educational resource (OER) efforts—all in service of ensuring that students have equitable and affordable access to the materials they need for academic success, and proving value in doing so. Collaborating with institutional partners, such as campus bookstores, to implement and support affordable course material programs is a key factor to their success[2]. These partnerships provide an opportunity to redesign how required course content is delivered to students, and what form that content takes.

At the University of Arizona Libraries (UAL), we are fortunate to have such a partnership with our bookstore, and, like many fellow academic libraries, we take a multi-pronged approach to supporting affordable textbook initiatives. Our Open Education Librarian coordinates campus-wide efforts on the creation and adoption of OERs. We also work with the bookstore on a different initiative, though one with the same goal: Rather than focus on supplying print textbooks or course reserves, we chose to put effort into providing ebook access to as many course-assigned texts as possible. In this way, we're able to supply students with free and universal access to course content, offsetting some of the costs associated with enrollment. Over the duration of this program, our library has maintained the ability to make multi-user ebooks available for an average of 20% of the materials that faculty submit to our bookstore as course adoption titles.

1. The high cost of college textbooks, as well as the impact on students who forgo purchasing them, has received substantial media coverage in the past few years. See, for example, Weissmann, J. (2013). Why are college textbooks so absurdly expensive? *The Atlantic*. Retrieved from https://www.theatlantic.com/business/archive/2013/01/why-are-college-textbooks-so-absurdly-expensive/266801/, and Hill, P. (2016). Students are spending less on textbooks but that's not all good. *Chronicle of Higher Education*. Retrieved from https://www.chronicle.com/article/Students-Are-Spending-Less-on/235340
2. See, for example, Bell, S. J. (2017). What about the bookstore?: Textbook affordability programs and the academic library-bookstore relationship. *College & Research Libraries News, 78*(7), 375.

Equally important, this project has allowed a glimpse of the kind of materials that constitute required course reading on our campus. Rarely, in conversations about affordable textbook alternatives, is the type of content for which we're championing alternatives made explicit. What are faculty actually including in their syllabi? Drawing on several years' worth of textbook adoption data, this chapter examines and discusses curricular content trends at the UA, including trends in content reuse, adoption of scholarly monographs for course use, and shifts in the types of materials that appear on UA's textbook adoption list over time. We wanted to understand the types of publications constituting the 20% of texts we're able supply as multi-user ebooks, as well as the 80% we aren't able to include in our scope of acquisition. What universe of ebook content is not available for licensing at the level appropriate for course use?

Drawing on several years' worth of textbook adoption data, this chapter examines and discusses curricular content trends at the UA, including trends in content reuse, adoption of scholarly monographs for course use, and shifts in the types of materials that appear on UA's textbook adoption list over time.

We use the term "course material," rather than "textbook," to refer to any title that faculty require their students to purchase. Our areas of analysis include publisher type (scholarly press vs. "traditional" textbook, for example), ebook platform, and license model. We also look at the titles that see repeated use and/or use by multiple courses, and highlight the disciplines that benefit the most from this program. Our hope is to deepen our understanding of the course content landscape and, with this understanding, better position ourselves to offer instructors the broadest range of options for free, or low-cost, textbook alternatives.

Our Program: Partnership with the Bookstore, and Process

Six years ago, we approached our bookstore (which is campus-owned) to see if it might be possible to view textbook adoption lists. Aware of the rising costs of textbooks, and curious about the overlap among our ebook collections and the adoption lists, we hoped to work with the bookstore to provide access to course materials through the library. From these initial meetings, we established an agreement to share textbook adoption lists prior to the start of each semester, as well as data about available library ebooks. The bookstore was a willing partner, cognizant of the burden that high-cost textbooks place on students, and already offering lower-cost options to students (used copies, rentals, marketplace options, etc). The Higher Education Opportunity Act provided another incentive to collaborate: At the campus level, we recognized the benefit of sharing information, encouraging faculty to submit on-time adoption requests, identifying materials available as OERs or library licensed ebooks, and promoting their use.

The bookstore was a willing partner, cognizant of the burden that high-cost textbooks place on students, and already offering lower-cost options to students (used

copies, rentals, marketplace options, etc). Our process has been refined along the years, but essentially follows the same steps. Before each semester, the project manager receives a spreadsheet from the bookstore listing textbook adoptions. The spreadsheet is then sent to acquisitions staff to determine whether the library already provides digital access to individual titles and, if not, to determine whether a title can be purchased or if a better license can be acquired (in cases where the existing license would be too limiting to allow for usage by an entire class). Acquisitions staff search the library's catalog and discovery tool to identify already-owned ebooks and their respective licenses. They look at both subscription packages and licensed ebooks, and determine whether the library's current access is appropriate for course use.

At UAL, our overarching acquisitions policy is single-copy, preferred-digital, and thus our required course materials program fits nicely within this strategy. Ebooks in our collection include those purchased through demand-driven acquisitions (DDA) plans[3]; firm orders based on faculty, student, and selector requests; and those accessible through large publisher ebook packages from publishers such as Oxford, Elsevier, Springer, Wiley, and Sage, among others. Our criteria for suitability for course use includes a license that allows for multiple (though not unlimited, although that is certainly preferred) simultaneous use.

When reviewing the provided textbook adoption list, the license and access information for each ebook, along with the permanent link to the catalog record and bibliographic record number, are recorded on a master spreadsheet which is later distributed to liaison librarians and used to update links in the course management system and generate emails to relevant faculty. If the licensing/access level that the library currently provides is lower than the unlimited simultaneous users level or if the library does not currently have electronic access to the title, staff search OASIS, ProQuest's ordering interface, to determine if there is an appropriate ebook license available for purchase. In cases where an ebook with a low-access license is owned, acquisitions staff determine if a more generous license option is available to purchase or if the version owned has the potential to upgrade to a higher license based on our auto-upgrade programs with Ebook Central and EBSCO. UAL is set up to purchase ebooks on the Ebook Central (previously EBL and Ebrary), MyiLibrary, and EBSCO platforms through OASIS. If time permits, staff also search an additional major ebook vendor, GOBI Library Solutions, for the remaining titles that the library does not have access to and was unable to purchase through OASIS. UAL has contracts to purchase Ebook Central and EBSCO licenses through GOBI, and can also purchase licenses for individual ebooks on additional platforms such as Cambridge University Press, Project Muse, Wiley, and De Gruyter.

Once ebooks are identified and/or purchased, we generate emails to notify relevant faculty that an ebook is available, and place links to the ebooks in both the course management system and in the bookstore's student booklist portal. We aim to accomplish all of this by (ideally before) the first day of classes. The turnaround time is often quite tight, and leaves little time to notify faculty and students before they've made textbook purchases. Hoping to solve this, we are working with the bookstore to share adoption requests and determine access options earlier in the process, as the requests come in.

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3. DDA plans allow libraries to purchase ebooks only after a user has demonstrated a sufficient level of interest in a particular title (usually by viewing a certain number of pages). For additional information see All About Demand Driven Acquistion (Cramer, 2013).

Analyses

Until now, we haven't taken a comprehensive look at the publishers and platforms of the ebooks we're able to license in support of this program, focusing our efforts on improving communication and workflows, developing new points of access to the ebooks, and piloting new licensing strategies.

One note about our data: Although our course materials program has been in place since Fall 2012, due to inconsistent data collection practices in the early stages of the program, we have only included data from Spring 2014 to Fall 2017 in our analyses below. One inconsistency in the current data is that of varying license descriptors. Non-linear (Ebook Central), concurrent (EBSCO), and access (MyiLibrary) licenses, for example, which all allow for multiple simultaneous users with limitations (a set number of total allowed uses per year that is reset at the beginning of each year), are sometimes categorized as unlimited user licenses. While these license types do generally act like unlimited user licenses from the user's perspective, for very large classes or for popular titles, we've seen that the set number of uses has the potential to get used up quickly and can cause access problems and frustration for users. We thus no longer label these as unlimited use, and are careful to notify instructors of this potential problem if these are the highest available license options for ebooks for their classes.

Publishers

Perhaps not surprisingly, for the 20% of requested course titles that we're able to license as multi-user ebooks, academic publishers and university presses are the two most common publisher types. Combined, they represent the vast majority of available ebooks.

Figure 1. Percentage of available ebooks by publisher type.
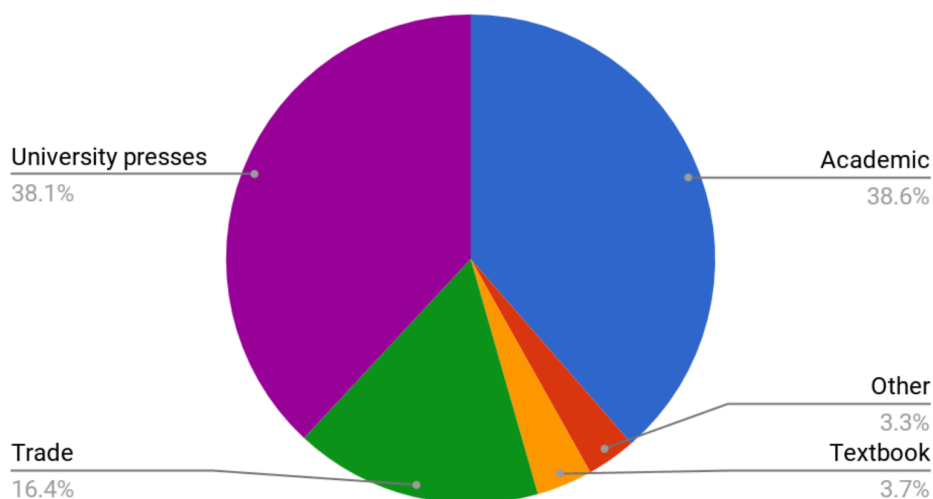
Figure 1: Percentage of available ebooks by publisher type

Under the academic label, we've included publishers such as Elsevier, Sage, Springer, Taylor & Francis, and Wiley. For our course materials program, ebooks from these publishers are acquired through individual firm orders from our two main vendors, GOBI and OASIS, or are already owned through DDA plans or previously purchased large ebook packages from publishers including Oxford, Elsevier, Springer, Wiley, and Sage. Titles in these ebook packages, on the publisher platform, are largely unlimited use and DRM (digital rights management) free and thus offer a better user experience than the aggregator platforms (EBSCO, ProQuest Ebook Central, and MyiLibrary), which often require multiple account creations to view, download, or print portions of the ebook and sometimes create access challenges once multi-user limits are reached. The majority of the university press ebooks, with the exception of those from Oxford University Press, are licensed through OASIS or GOBI and are available on aggregator platforms.

Clearly, our purchasing ability has not extended far into the "traditional" textbook market. In fact, since 2014, we've been able to provide access to only 44 ebooks that would fall into this category, with publishers that include Cengage, Houghton Mifflin, F. A. Davis, and McGraw-Hill. This did not change in the four years for which we have data: In Fall 2017, the proportion of academic publisher, university press, and textbook content we were able to purchase remained the same as in Fall 2014.

Traditional textbooks often carry the highest price tag for students, and publishers have so far been unwilling to license these books for purchase by academic libraries. Locally, because we don't offer a print textbook course reserve service at our library, our inability to purchase these titles in digital format impacts student access and underscores how critical it is to find alternatives to these materials. By understanding the types of texts commonly assigned as course readings, we can be better prepared to offer affordable alternatives to faculty, such as OERs and/or library-subscribed ebooks and journal articles, in an effort to chip away at the prevalence of high-priced textbooks currently in use.

By understanding the types of texts commonly assigned as course readings, we can be better prepared to offer affordable alternatives to faculty, such as OERs and/or library-subscribed ebooks and journal articles, in an effort to chip away at the prevalence of high-priced textbooks currently in use.

Top Disciplines

The disciplines that have benefited most from the required course materials program are within the humanities and social sciences (Table 1). History class titles appear most often on the lists of texts to which we've provided access—241 times, with 206 unique titles. Outside of the humanities and social sciences, our top-ten list also includes the departments of optical sciences and nursing.

Discipline	Times it appears on purchased lists (out of 2,976 total titles accessible)	Unique titles we provided access to
1. History	241	206
2. Philosophy	146	91
3. English	124	105
4. Africana Studies	120	73
5. Optical Sciences	116	52
6. Sociology	104	74
7. Anthropology	101	82
8. Political Science	89	77
9. Nursing	84	51
10. Religious Studies	81	49

Table 1. Disciplines that have benefited most from the required course materials program.

Ebook Platforms and Licenses

We have provided access to the majority of requested titles through three major ebook platforms: Ebook Central (formerly EBL and Ebrary), EBSCO, and MyiLibrary. While most titles on these platforms are acquired title-by-title in response to a need as a required text, others were already available through our DDA programs, ebook subscription packages, or, sometimes, from a previous purchase request.

Figure 2. Major ebook platforms: unlimited licenses vs. "other" licenses
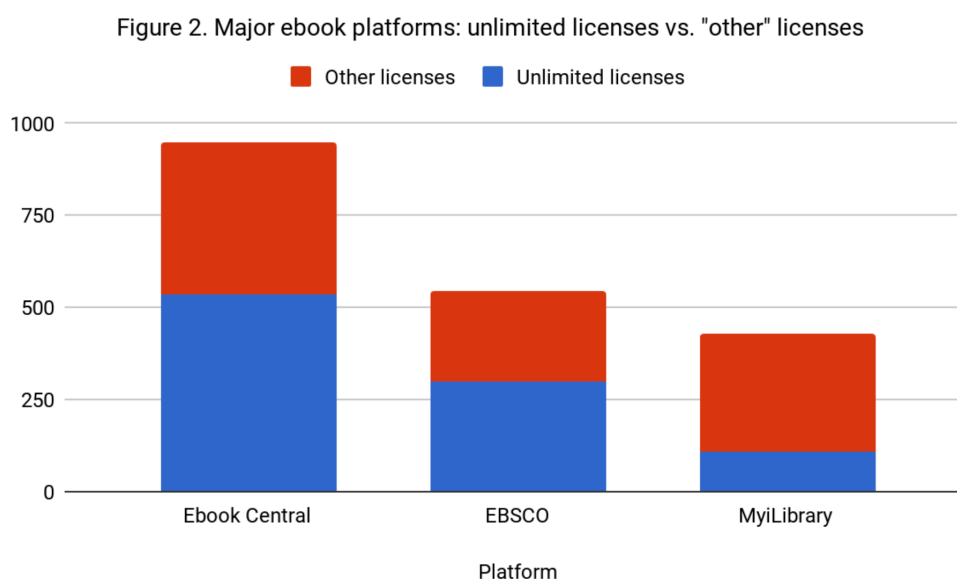
Figure 2

In Figure 2, "unlimited licenses" and "other licenses" have different definitions in our data, depending on the platform. For the Ebook Central and EBSCO platforms, "unlimited licenses" refers to both unlimited licenses and sometimes non-linear (Ebook Central) or concurrent (EBSCO) licenses. MyiLibrary "unlimited licenses" always refers to access licenses (the highest license level provided, which acts similar to Ebook Central's nonlinear or EBSCO's concurrent licenses), while "other licenses" are generally three-user licenses. From Spring 2014 to Fall 2017 we provided unlimited user access to approximately 1,100 unique requested titles, either through subscriptions, ebook packages, or placing firm orders for unlimited user licenses.

For most of the program's duration, we have purchased the licenses for each title that would provide the most access, ideally purchasing unlimited and multiple concurrent-user access level licenses when available. As of Spring 2017, UAL has participated in auto-upgrade programs through ProQuest and EBSCO for ebooks purchased on the Ebook Central and EBSCO platforms, which initially influenced our purchasing strategy for all ebooks. With these programs, licenses for ebooks on the Ebook Central and EBSCO platforms are automatically upgraded based on use. If a title is simultaneously in use by more users than our current license allows, the license is automatically upgraded to the next highest license available on the platform. If no higher license is available, an additional license on the platform is automatically purchased until certain caps are met. Auto-upgrades are limited to $1,000 total per title and auto-purchases to an additional nine single-user licenses (making the title allow for 10 simultaneous users) or $1,000 per title, whichever comes first.

Since this change, when investigating purchase options, acquisitions staff now purchase the access license on either of these two platforms with the lowest cost, which is generally the lowest access license option—usually a single-user license. We then rely on the auto-upgrade program to either upgrade to higher license levels or auto-purchase additional licenses based on use. This is a cost savings measure; if an ebook is highly used, it will automatically upgrade to the next license level until the highest available license is purchased. For texts that are

not used by students, the licenses will stay stagnant, as there is no need for a more costly higher license. This way, resourcing for course texts is spent on titles that are actively being used by students.

In the first two semesters since the auto-upgrade/auto-purchase license model program began (Spring and Fall 2017), we purchased or provided access to 287 single-user license titles. Some have higher license levels available to which they can auto-upgrade, while others are titles to which we previously wouldn't have provided access due to single-user licenses being the only license option available. In many cases, where a single-user license is the only option available, it is possible that these licenses can auto-purchase an additional nine single-user licenses, allowing access to up to 10 simultaneous users at a time, depending on price and whether enough users access the ebook at the same time to trigger the auto-purchase. In the future, it will be important to look at how the auto-upgrade program has impacted the success of the program, including cost savings, upgrades initiated vs. licenses that stay stagnant, and access issues (turnaways, particularly for fiction/popular titles), especially related to downloading ebooks.

Beyond the major ebook aggregator platforms, large publisher ebook packages have allowed us to provide access to 150 titles that have no DRM. Titles available through these publisher-hosted platforms have been most likely to benefit STEM fields, with 65% of these ebooks used in STEM courses.

Recurring Titles

Of the course-adopted titles to which we've been able to provide access, 30% appear on multiple semester lists, pointing to a certain amount of reuse in curricular content within a four-year range of data. This recurrence also underscores the impact this program can have in terms of return on investment: Licensing an ebook that will be used in multiple semesters or courses can result in significant cost savings for students. Table 2 shows a few examples of titles we're able to license that have appeared on more than one semester's list.

Title/author or editor	Publisher/ publication date	Ebook platform	Courses using	No. of semesters in use	Approx. cost of new print	No. of students impacted
A History of the Modern Middle East / Cleveland, William L.	Westview Press/2013	EBC	History, Middle Eastern Studies, Political Science	5	$45	188
Advanced Optical Communication Systems and Networks / Cvijetic, Milorad	Artech House/2013	EBC	Optical Sciences	6	$145	159
The Disordered Mind: An Introduction to Philosophy of Mind and Mental Illness / Graham, George	Routledge/ 2013	EBSCO	Philosophy, Psychology	8	$150	1,034
The Economic Development of Latin America Since Independence / Bértola, Luis and Ocampo, José Antonio	Oxford University Press/2012	EBC	Latin American Studies	3	$50	60
English Words: A Linguistic Introduction / Harley, Heidi	Wiley/2015	EBC	English, Linguistics	6	$50	182
Mathematics for Physical Chemistry / Mortimer, Robert G.	Elsevier/ 2013	Elsevier Science Direct	Chemistry	3	$55	230
New Museum Theory and Practice: An Introduction / Marstine, Janet	Wiley/2008	EBC	Anthropology, Art History	6	$150	152

Table 2. Examples of recurring required course materials available as library ebooks.

Unavailable Content

Although our course materials program provides students with free access to required course content, most titles on the course adoption list (80%) are not available to license as multi-user ebooks. Initially, we wondered if this proportion largely encompasses those books produced explicitly for the educational market—"traditional" textbooks, with titles such as *Introduction to Heat Transfer* (Wiley), or *An Introduction to Human Services* (Cengage), for example. A targeted scan, however, revealed a mix of content: Textbooks appear frequently, but they are listed alongside novels, such as *Their Eyes Were Watching God* (Harper Perennial), and university press books, *such as Is the Goddess a Feminist?: The Politics of South Asian Goddesses* (NYU Press). Unfortunately, because the publisher and publication date for course-adopted titles are not included on the spreadsheets we receive from the bookstore, we weren't able to produce a comprehensive analysis of the types of titles that are consistently out of our reach. But in looking at the most frequently appearing titles among those we cannot provide, we do get a sense of the critical gaps in content. Table 3 lists a few examples of the most frequently appearing titles.

Title/author or editor	Publisher/ publication date	Courses using	Number of semesters in use	Approx. cost of new print
Film History: An Introduction, 3rd ed. / Thompson, Kristin, and Bordwell, David	McGraw-Hill/ 2009	Film studies	9	$160
Modern Latin America / Skidmore, Thomas E., and Smith, Peter H.	Oxford University Press/2013	Spanish, Latin American Studies, Political Science	8	$80
Introduction to Quantum Mechanics, 2nd ed. / Griffiths, David	Pearson/2004	Physics	7	$170
Human Behavior in the Social Environment, 5th ed./ Ashford, Jose and LeCroy, C.W.	Brooks Cole/ 2012	Family Studies, Social Work	6	$230
Language Development / Gerken, LouAnn	Plural/2008	Linguistics, Education	4	$85
The Economics of the Environment / Berck, Peter, and Helfhand, Gloria	Pearson/2010	Agriculture, Economics	6	$210

Table 3. Examples of recurring required course materials that are not available as library ebooks.

Conclusion

What do the data tell us about our cumulative efforts to supply our students with ebook versions of required course texts? Perhaps what we might have already assumed: Most of the ebooks we can acquire are from university presses or academic publishers. Most are assigned to courses in the humanities and social sciences. Most are accessible on ebook aggregator platforms that do not always support a positive user experience. A good percentage of the titles reappear on textbook adoption lists year after year. And, finally, most titles on the UA's textbook adoption lists are not available for multi-user ebook licensing at all.

Ironically, if the percentage of ebooks available to purchase were to increase much higher in the future, the costs associated might render our current program unsustainable. But this only underscores the importance of implementing such a program in conjunction with other collaborative efforts around textbook affordability and student success, such as OER outreach. Academic libraries, as both consumers and suppliers of scholarly content, are well-positioned to influence the makeup of curricular content in a way that encourages equitable access to higher education. The first step toward this goal is to examine the types of materials currently being used in college courses.

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Students and Affordable Course Content

Chapter 5 - Student Feedback on Affordable Content in the Classroom at the University of Minnesota

Kristi Jensen

by Kristi Jensen, University of Minnesota (bio)

Introduction

Throughout this book, colleagues from across higher education—including faculty, librarians, instructional designers, academic technologists, and others—explain the need for more affordable content options, and provide examples of specific processes and programs.

This wealth of information includes blueprints for how to implement an affordable content program, the pros and cons of particular approaches, and descriptions of why this work is important and how it impacts faculty and students.

One voice that is not as pronounced, perhaps, is that of the student. After providing an overview of two important and complex issues tied to affordable content efforts—student preference for print materials and the impact of digital versus print materials on student learning and comprehension—this chapter elevates that student voice by sharing feedback from students at the University of Minnesota (UMN) who enrolled in courses that utilized affordable course content.

> **After providing an overview of two important and complex issues tied to affordable content efforts—student preference for print materials and the impact of digital versus print materials on student learning and comprehension—this chapter elevates that student voice by sharing feedback from students at the University of Minnesota (UMN) who enrolled in courses that utilized affordable course content.**

Research on Student Preferences Regarding Course Materials

Limitations of Current Surveys

Affordable content efforts often provide students with digital course materials. Our efforts at UMN are no exception; almost all of the faculty we work with utilize digital course materials in one way or another. Students can print many of those materials themselves, but the cost of this option (either the cost of supplies for personal printers or printing charges for University-provided printing) negatively impacts affordability. Since one of our goals is to save students money, we realized early in our work that we needed to develop an understanding of student attitudes and perceptions about digital materials, discover whether or not students choose to print the

course materials in order to use them, and determine the impact of these materials on students' ability to study for and succeed in a course. In the long run, we planned to survey our students, but until that time we had to rely on information we could gather from others.

Surveys addressing student behavior related to purchasing course materials are numerous, but it was more challenging to find information on how students actually use affordable course materials. Popular press and research publications frequently focus on two issues: student preference for print materials and the impact of digital materials on student learning. As we reviewed publications on these topics, we found conflicting information, along with research that failed to demonstrate the complexity of each issue or provide context reflecting real-life student experience.

Major news publications—the New York Times, the Chronicle of Higher Education, and the Huffington Post, for example—frequently run stories that tout student preference for print textbooks. Numerous issues arise, though, when examining these stories and the research behind them. As Mizrach, Salaz, Serap, Kurbanoglu, and Boustany note, there are issues of scale (too few students surveyed), diversity (the students surveyed are primarily from Western countries), and inconsistent research design (which makes it difficult to discern patterns across studies) (2018, p. 2). Other concerns about the limitations of these efforts arise as well.

Many survey questions, for instance, focus on the text format students prefer when purchasing a textbook. For example, Baron asked students, "If the price[s] were identical, would you prefer to read in print or digitally?" (2015), and in 2010 and 2011 the National Association of College Stores asked students, "If the choice were entirely up to you, what would your preferred textbook option be when taking a class?" Responses to these questions have consistently indicated that students prefer print materials, though there has been slow growth over time in the preference for digital materials. What this approach does not take into account, however, is student preference if the digital materials are free or available at a dramatically reduced price—a powerful advantage of the digital environment.

To ascertain student preference in practice (rather than theory), research needs to include more nuanced and complex questions, such as "Would you prefer a course with free digital course materials or one with print materials that cost x amount?" (A survey could include multiple versions of this question with different values for x, indicating different price points for students to consider.) Or "If a digital textbook costs 80% less than a new print textbook, which would you prefer?" The digital environment also provides faculty the opportunity to integrate ungraded quiz questions or other interactive learning exercises that provide students with feedback during the reading experience, and survey questions could address these enhancements as well. With such approaches, research on student preference for print or digital course materials could be expanded to account for the complex circumstances in which students find themselves and to provide needed information to faculty and the professionals advising and supporting them in the course material development and selection process.

Additional Student Behaviors and Attitudes Related to Digital Course Materials

The 2015 article "Exploring Students' E-Textbook Practices in Higher Education" indicates that lower cost and convenience are the top two influential factors related to student e-text purchases. The article also notes that more than half of American college students have used an e-textbook in at least one course. The 2017 ECAR study of Undergraduate Students and Information Technology reports that almost 50% of students—compared to 31% in

2011 (Dahlstrom, de Boor, Grunwald, and Vockley, p. 18)— said they wished faculty would use more ebooks or e-textbooks (Brooks and Pomerantz, 2017, p 24). Finally, according to reports from the National Association of College Stores, the purchase of digital materials increased from less than 3% in 2010 (as reported in the New York Times by Foderaro) to 23% in the 2016/2017 academic year. Despite research indicating that students prefer print, it's clear that they are buying and using more and more digital materials.

Several chapters in this book describe additional student perspectives and experiences with digital course materials. Rush, Lo, Abdous, and Draper (2018) note the "students' focus on the quality of the teaching rather than the format of the course materials." Lang, Salem, and Sparrow (2018), discussing the benefits of digital materials reported by the students they surveyed, report that "Overall, students were pleased with the experience, felt it had a positive impact on their learning, and were particularly happy with the reduced cost and first-day access." And Walker (2018) notes that a faculty member who surveyed students before and after they used an open educational resource (OER) textbook reported that students liked the digital OER as well as the traditional textbook, that the grade distribution was unchanged, and that fewer students dropped the course.

Student attitudes towards and perceptions of print and digital course materials are complex and changing quickly, and need to be thoroughly explored so that affordable content efforts in higher education are rooted in current and accurate information.

Student attitudes towards and perceptions of print and digital course materials are complex and changing quickly, and need to be thoroughly explored so that affordable content efforts in higher education are rooted in current and accurate information. Singer and Alexander adeptly capture this issue when they note that "there are multiple factors influencing reading in print and digital forms…these factors operate in conjunction, and therefore they cannot be examined in isolation" (2017, p. 1033). To provide successful affordable content programs and services, higher education professionals and faculty must develop a more nuanced, big-picture perspective on the print-versus-digital issue, and, whenever possible, obtain direct feedback from students to guide and inform our work.

The Impact of Digital Course Materials on Learning and Comprehension: A Complex Issue

The question of student preference for print versus digital course materials is, then, less straightforward than it might first appear. But the issue's complexity pales in comparison to that of student learning and comprehension with print versus digital materials. As Mizrach, Salaz, Serap, Kurbanoglu, and Boustany (2018, p.2) point out, "Current knowledge about the suitability and impact of reading formats, whether print or electronic, for different purposes including learning, comprehension and usability is far from complete." A number of factors make it difficult to reach a conclusion about the impact of digital materials on student learning and comprehension.

Research indicates, for instance, that the length of a text, the discipline, and numerous other variables affect learning and comprehension. And opinions vary widely regarding measures of success when comparing print and digital texts. Some researchers measure short- and long-term retention within a particular group of students,

while others compare performance on quizzes and tests among students utilizing different materials. This focus on different measures of learning success may underlie the numerous conflicts in research study results.[1]

Faculty engagement[2] with a digital text (for example, faculty annotations that add insights to the text) can also increase student engagement, which can positively impact student learning. In their systematic review, Ross, et. al. note that "higher education institutions clearly need to train both their staff and students in how to approach digital texts in order to achieve the best learning outcomes" (2017, p. 8).

This point applies not only to faculty engagement with etexts but to an additional issue: most comprehension research doesn't address the fact that current college students have been taught how to study with print textbooks throughout their educational experience, but have not necessarily been trained on studying with digital materials. As noted in the New Yorker, "Maybe the decline of deep reading isn't due to reading skill atrophy but to the need to develop a very different sort of skill, that of teaching yourself to focus your attention" (Konnikova, 2014).

> **[M]ost comprehension research doesn't address the fact that current college students have been taught how to study with print textbooks throughout their educational experience, but have not necessarily been trained on studying with digital materials.**

Finally, much of the literature on learning in the print versus digital environments focuses on use of the same content presented in print and in a digital format. Such comparisons ignore the enhancements available in the digital environment (feedback via self quizzing, videos and other multimedia, opportunities for discussion with other students via annotation tools, shared note taking, etc.) to teach material in multiple learning modes, break up large amounts of text, and potentially improve the student learning experience. The 2014 ECAR Study of Undergraduate Students and Technology notes that "Although technology is omnipresent in the lives of students, leveraging technology as a tool to engage students in meaningful ways and to enhance learning is still evolving" (Dahlstrom and Bischel, p. 34).

Affordable content efforts utilizing digital course materials face a complex array of issues that bring both opportunities and challenges to faculty and students and to the professionals who support them. Almost all of the authors and researchers who discuss student preference for print versus digital materials, and who examine the impact of digital materials on student learning, acknowledge that the use of digital materials is increasing and that this format is here to stay. Wading through the conflicting information on these issues is a large task, but necessary to attain the most successful outcomes possible in our higher education environments. Obtaining student feedback is also crucial. As mentioned above, our work with UMN faculty has provided us the opportunity to seek feedback from our own students so as to compare their responses with what is reported in the research literature.

1. Two systematic reviews on the impact of digital texts on learning (Singer and Alexander (2017) and Ross, Pechenkina, Aeshmliman, and Chase (2017) provide examples of conflicting evidence and results found in the research they review.
2. Dennis, Abaci, Morrone, Plaskoff, & McNamara (2016), in "Effects of e-textbook Instructor Annotations on Learner Performance," examined the impact of instructor engagement with an etext on student learning and found "that the instructional affordances that an interactive e-textbook provides may lead to higher-level learning." (p. 232).

Partnership for Affordable Content Grant Program and Student Surveys

The University of Minnesota Libraries awarded our first round of Partnership for Affordable Content incentive grants in the spring of 2015. These small awards, ranging from $500 to $1,500, provided a mechanism for us to engage with faculty to implement more affordable course content options. Our primary goals were to provide all students with course content from the first day of class, save them money, and give faculty the opportunity to customize content to meet their own teaching needs and the learning needs of their students.

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The Libraries had spent several years developing the expertise, infrastructure, and relationships to support a wide range of potential project types, including faculty-authored open textbooks, customized digital course packs with open and library-licensed content, discounted textbooks based on the all-students-purchase model, and more. This allowed us to work with faculty to find the best ways of meeting their individual teaching and learning goals. The Hanover Research report on Textbook Affordability Options supports this approach: "No singular, best-practice approach to textbook affordability exists. To have the greatest possible impact, institutions are advised to take a varied approach to textbook affordability" (2013, p. 4.) Offering a wide range of customized options to faculty participants has been key to the program's success.

As part of the Partnership for Affordable Content grant process, we provided faculty with an optional student survey to learn more about student experience with the affordable content and about study habits related to the digital formats. Our primary goal for the survey was to gather information to inform our service model and identify areas both of success and of potential improvement. The survey was adapted from one developed for our digital course pack project, with questions changed to reflect the broader experiences of students in a Partnership for Affordable Content course. The survey was first executed at the end of the Fall 2015 semester, and continued through the Fall 2017 semester (excluding Summer courses).

The survey link for each semester was shared with faculty to be distributed to students. Faculty participation was voluntary, and not all courses participated every semester. While students were not required to participate, some faculty provided encouragement or incentives with the hopes of reaching maximum participation.

For those courses distributing the survey each semester, the cumulative response rate varied from a low of 16% to a high of 43%. We reached 10 courses in the Fall of both 2015 and 2016, and six courses in the Spring of both 2016 and 2017. The total enrollment for all four semesters was approximately 2,600 students. Eight hundred students responded to the survey, providing a 30% average response rate across all four semesters. Detail on each course is provided in Table 2, below.

Semester	# of Classes Surveyed	Total # of Students in all Courses	Total # of Survey Respondents	Survey Response Rate
Fall 2015	10	508	163	32%
Spring 2016	6	377	59	16%
Fall 2016	10	894	385	43%
Spring 2017	6	852	193	23%
Total	32	2631	800	30%

Table 1. Number of courses surveyed, student enrollment, survey response count, and percentage

Twenty-one courses are represented in the student survey results, with several surveyed during multiple semesters: six courses were surveyed twice, one was surveyed three times, and one was surveyed four times. A broad array of course subject areas is represented as well (see Table 2). The types of affordable content utilized in each class varied, and included faculty-authored open textbooks, discounted commercial digital textbooks, library-licensed ebooks, book chapters, scholarly and popular articles, and full or partial open textbooks.

Semester	# of Classes Surveyed	Total # of Students in all Courses	Total # of Survey Respondents	Survey Response Rate

Course Subject Areas	Type of Affordable Content Utilized	% of Respondents across all 4 semesters
Aerospace Engineering and Mechanics	Faculty-authored open textbook	6.25%
Agricultural Education (2 courses)	Course 1 – Faculty-selected open content Course 2 – Discounted all-inclusive purchase model	Course 1 – 6.13% Course 2 – 1.38%
Curriculum and Instruction	Faculty-selected library licensed/Fair Use content	0.88%
English as a Second Language	Open textbook	1.38%
French	Print course pack and some faculty-provided items/Fair Use content	2.63%
Geography	Faculty- and teaching assistant-produced open textbook	11.63%
Hindi-Urdu Language	Faculty-created and faculty-selected web video content	0.63%
Industrial Engineering	Open, library-licensed, and fair use content	4.5%
Journalism	Faculty-authored open textbook	15.25%
Kinesiology	Discounted all-inclusive purchase model	5.25%
Math (2 courses)	Two courses with faculty-created open licensed videos and openly licensed content	Course 1 – 2.00% Course 2 – 10.00%
Nursing	Digital course pack with library-licensed material	0.63%
Post-Secondary Teaching and Learning (Math focus)	Faculty-adapted openly licensed textbook	3.25%
Psychology (2 courses)	Course 1 – Openly licensed content Course 2 – Faculty-created digital course pack of library-licensed and open web content	Course 1 – 2.75% Course 2 – 12.50%
Public Health (2 courses)	Faculty-created digital course pack of library-licensed and open web content for both courses	Course 1 – 0.88% Course 2 – 3.88%
Sport Management	Faculty-created digital course pack of library-licensed and open web content	0.5%
Statistics	Library-licensed multi-user ebook and digital course pack with library-licensed content	7.75%

Table 2. Subject areas covered, affordable content types used, and percent of total respondents by course/subject area

While the survey data represent students studying a broad array of topics, students in Journalism, Psychology, Geography, and Math account for more than 50% of the respondents. Course data were shared with individual faculty, but for the purpose of this meta analysis the data were combined to provide the broadest possible perspective and feedback.

Student Survey Results

Student Usage of Affordable Course Content

To better understand the students' experience engaging with the digital course material provided by their instructors, we presented a set of six statements; students indicated their responses on a five-point scale from Strongly Disagree to Strongly Agree. The six statements in this set included:

- The readings/videos for this class were easy to use.

- The readings/videos for this class were easy to access.

- The resources covered material in a way that I understood.

- I read more of the assigned readings because the materials were free/affordable.

- I read more of the assigned readings because they were available online.

- I studied using the online readings/videos.

Answers provided us with feedback on general navigation and access—an area of concern, given the publications we had read indicating student preference for print. In some cases, course materials were compiled from a broad array of resources (unlike a traditional textbook, which is developed to provide consistency and flow), so we also wanted to make sure students found the materials understandable. Finally, we wanted to understand students' perception of how they used the material and the impact of the digital and free/affordable material on their reading practices. In general, students responded positively to this set of questions, with the top two categories, Agree and Strongly Agree, accounting for 60–90% of the total responses and the bottom two categories accounting for only 3–12%.

Based on your experience using the free/affordable course content assigned for this class, rank the following statements:

Statement	Agree & Strongly Agree	Neutral	Disagree & Strongly Disagree
I studied using the online readings/videos.	73%	15%	12%
I read more of the assigned readings because they were available online.	70%	18%	11%
I read more of the assigned readings because the materials were free/affordable.	67%	22%	10%
The resources covered material in a way that I understood.	83%	10%	7%
The readings/videos for this class were easy to access.	91%	6%	4%
The readings/videos for this class were easy to use.	89%	6%	5%

Chart 1. Student responses to questions on ease of use and access, understandability, and the impact of free and digital materials on reading habits

Percentage of Materials Read by Students

Students also reported their perception of the percentage of assigned materials they read during the course. Approximately 80% indicated that they read more than 50% of the material. Throughout this work, faculty have frequently reported concerns about students not reading required course materials. In the article "Students Learn Equally Well From Digital as From Paperbound Texts" (2011), Taylor found that "the key to student comprehension appears not to be the method of text delivery but, rather, getting students to read in the first place." (p. 278) While we have no data from previous iterations of these courses to compare against, these initial surveys do provide baseline data for future comparisons, especially for courses that continue to evolve and in which faculty apply interactive components meant to engage users in the digital environment.

What percentage of the assigned readings did you read?
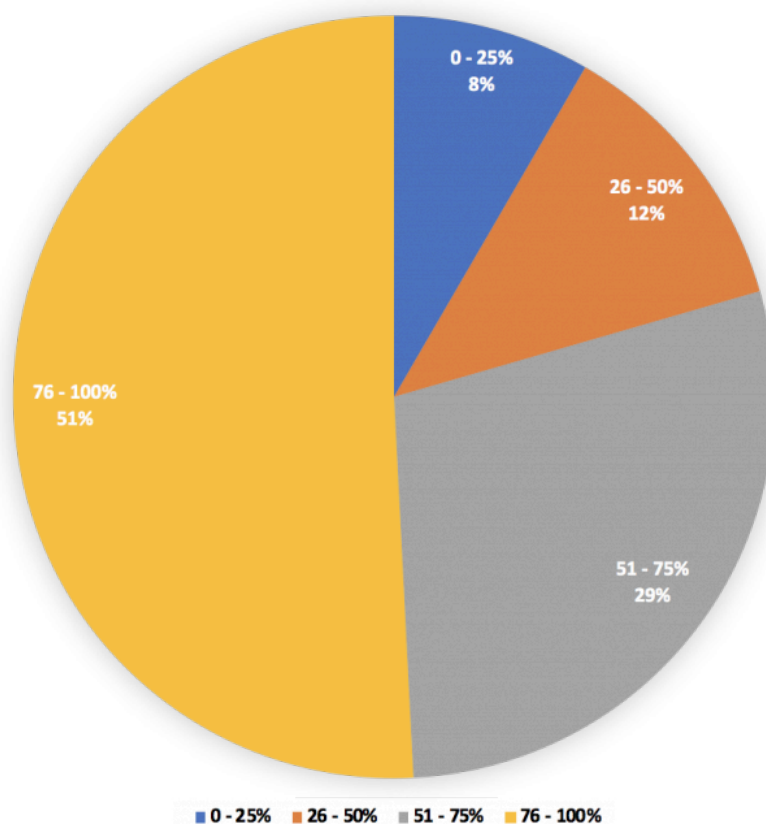
Chart 2. Percentage of assigned readings read by students

Printing Digital Course Materials

As mentioned above, we were particularly interested to learn if students printed out the course materials in order to use them. With the exception of videos, print options were generally available for all course materials, but just 15% (119) of the survey respondents reported printing any of the materials.[3] Despite research indicating that large percentages of students prefer print to digital materials, these numbers were not reflected by the real-life practice of students in our affordable content courses.

Among those students who reported printing out course materials, a majority printed 50% or less, while 25% (28 students) printed more than 75%. While the number of students printing materials is relatively small, and the percentage printing a majority of the readings is even smaller, there clearly are students who utilize print materials for their learning experience. When considering future surveys, we may add questions to help us determine whether those students needing print materials are receiving adequate support, and what percentage of students are reading online versus via print.

3. Due to an error during the initial survey development, seven students who reported printing materials during the fall of 2015 were not required to answer the second part of the question indicating the percentage of materials printed.

Did you print a paper copy of any of the readings?

Yes
15%

No
85%

■ Yes ■ No
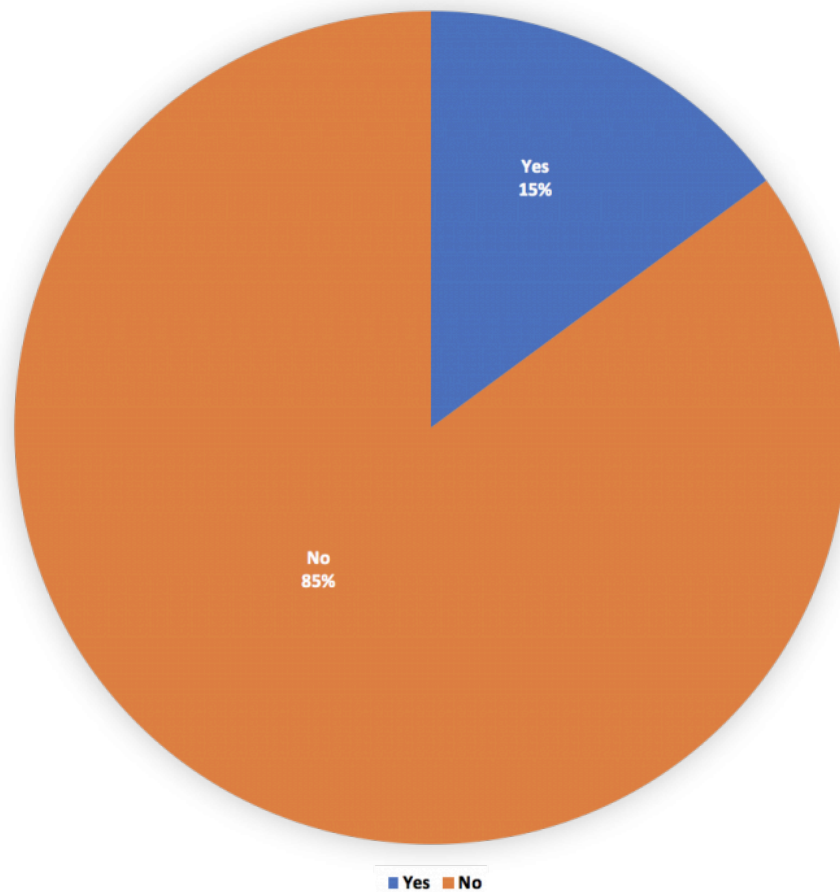
Chart 3. Percentage of students who printed digital course materials

What percentage of the readings/text did you print?

Category	Percentage
76 - 100%	25%
51 - 75%	18%
26 - 50%	22%
0 - 25%	35%
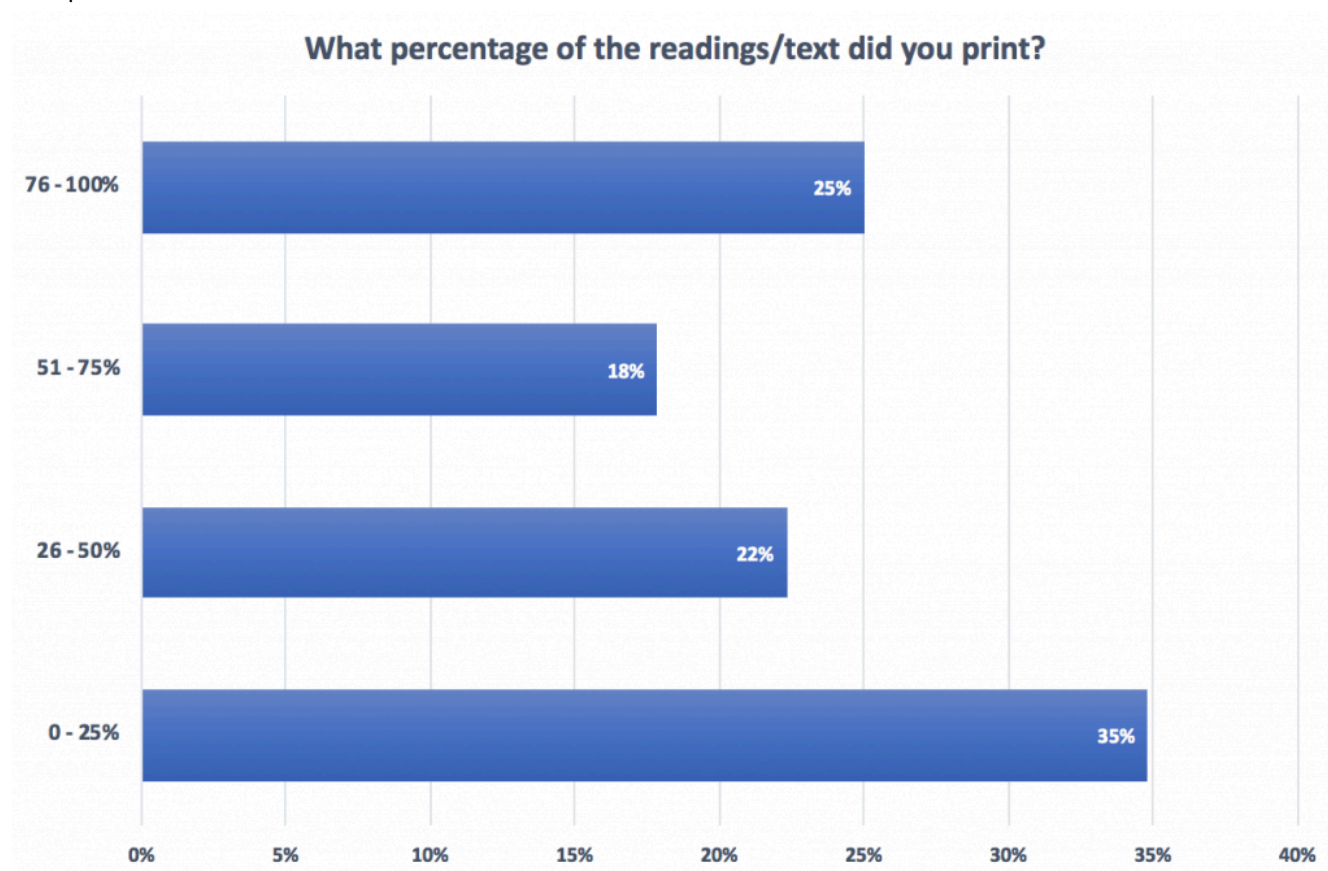
Chart 4. Percentage of content printed

Digital Materials and Student Learning Needs

An additional set of five questions provided insights into the impact of digital course materials on student learning, addressing learning efficiency, flexibility, and organization; engagement with the course materials; and use of tools (like annotation applications). Once again, student response was generally very positive, with the top two categories, "Quite a lot" and "A great deal," accounting for 41–69% of responses across the question set. The bottom two categories accounted for 18–28% of responses. More than 70% of students indicated that the affordable content increased their engagement with the course materials and allowed them to better organize their learning—boding well for student success in these courses.

Further exploration of how students use these learning tools should address the potential need for additional training to enhance student learning experiences, aspects of digital materials that lead to student perception of increased engagement, and content elements that provide for better organization of learning. We could also gather information on the impact of these variables on student comprehension, looking, for example, at whether the use of annotation tools or ungraded quizzes improves student perception of their comprehension of the course materials.

Compared to paper course materials, to what extent were your learning needs met using the digital materials provided?
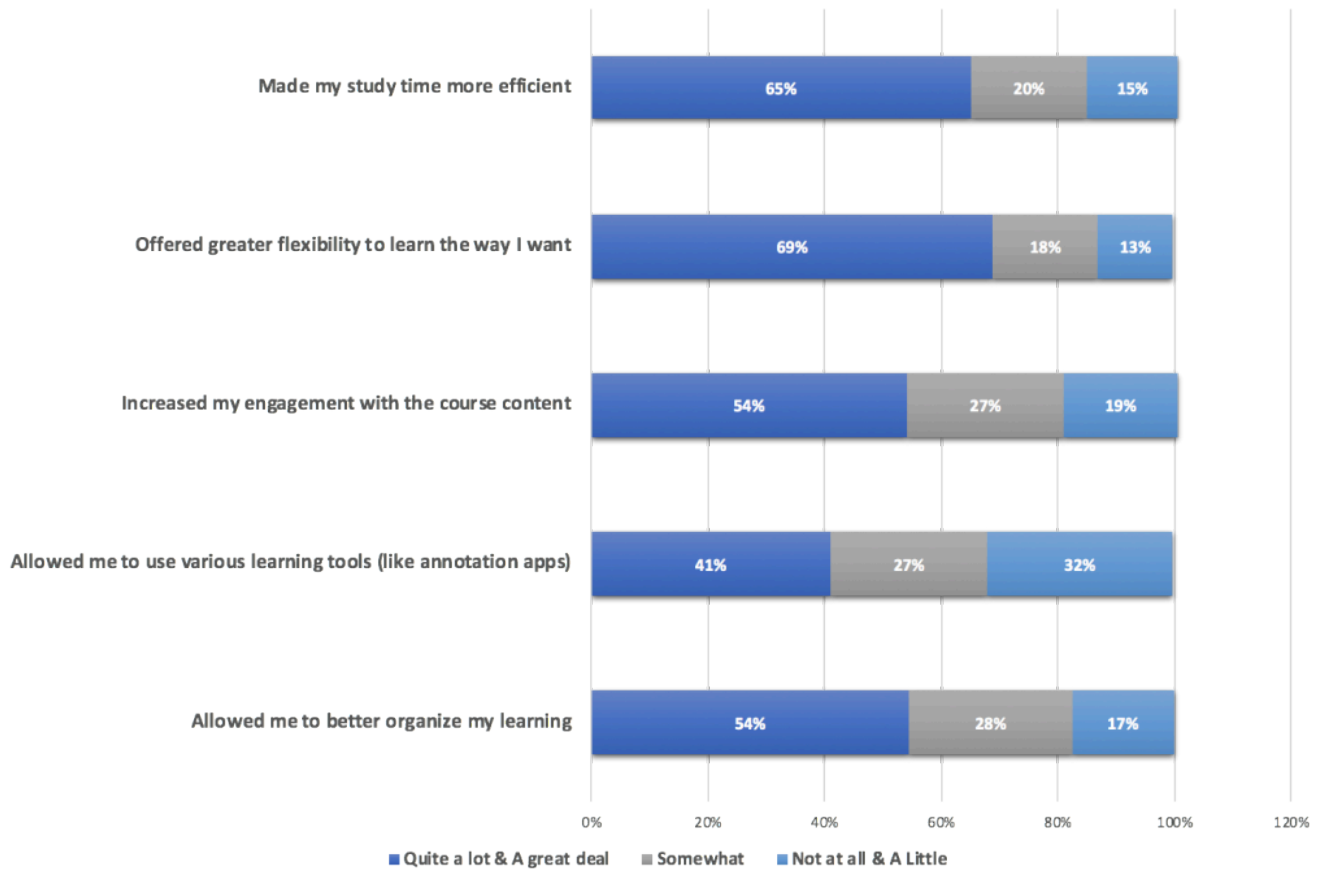
Chart 5. Student responses to questions on how their learning needs were met by the digital materials

What Worked Well and What Challenges Did You Face?

The student voice comes through clearly in responses to a number of open-ended questions included in the survey, including two of the most informative:

- What worked well for you when using the digital course readings/videos?
- What challenges did you face using the digital course readings/videos?

Answers to these questions were not required; we received 480 responses to the first question, and 474 to the second. Due to the representation of multiple themes in some responses, responses were coded to determine common themes. There were 675 coded items for the first question and 512 for the second.

What Worked Well?

Student responses to the question "What worked well for you when using the digital course readings/videos?"

focused on the numerous benefits of digital materials, such as ease of access (including integration with the LMS), the ability to read the materials any time, and the lack of bulky print textbooks. Students also reported improved learning and studying, and noted that the content was free and had been customized to enhance their learning experience. Our data (in the chart below) aligned with Weisberg's findings in "Student Attitudes and Behaviors Towards Digital Textbooks," where students cited the following factors for increasing the desirability of eTextbooks over paper textbooks:

- "provide greater convenience and portability

- are lower cost; less expensive than paper textbook

- offer a valuable ability to conduct search of the content

- are appropriate media and desired by the ''Y'' generation." (2011, p. 194)

What worked well for you when using the digital course readings/videos?

Category	Count
searching content	19
notes/highlights/annotations	19
organization of content	25
digital readings	26
no bulky print book	44
convenient/easy to use	47
customized content	51
watch/read anytime	61
free	65
improved learning/studying	106
easy access/LMS integration	164
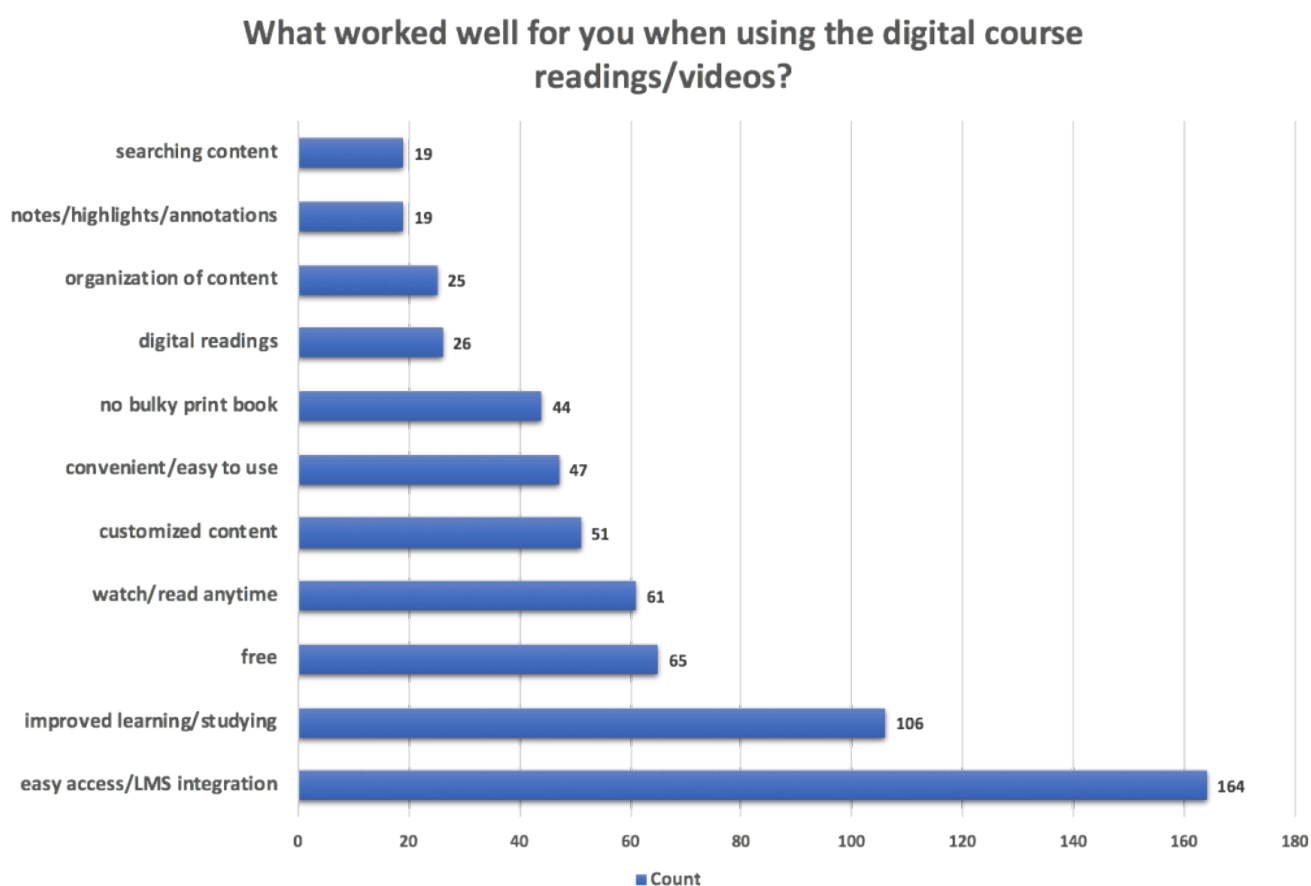
Chart 6. Coded student responses indicating what worked well when using digital course materials

What Challenges Did You Face?

For the question about the challenges of using the digital course materials, it is both interesting and reassuring to note that the largest response—at 30% (151 responses)—was "none." The next largest response, at 11% (55

responses), indicated a difficulty reading digital materials (students did not like reading on a computer) and a preference for print materials. Even if this response is combined with the eye strain/headaches response, only 14% of students reported concerns about using digital material—a far lower rate than that presented in the research studies cited above. Another 14% of the reported challenges related to course issues or criticism of the length/type of readings, with a majority of these comments valuable to faculty but not related to the affordable content aspect of the courses. Approximately 22% of the challenges reported by students were related to technology, navigation, note-taking, access, and internet speed. All of these tech-related issues reflect student expectation of "effective, frequent, and seamless use of technology" (Dahlstrom, de Boor, Grunwald, and Vockley, p. 22), and when the specifics are reviewed provide insights into how we can better support the student experience. For example, although internet is required to first access materials, many can then be downloaded for offline reading. Additional information could be distributed to students to help them understand how to overcome this particular issue.

What challenges did you face using the digital readings/videos?

didn't know length of readings	7
remembering to read/watch	8
distractions on computer	8
bad scan/missing material	9
unorganized	10
eye strain/headaches	16
slow internet/loading issues	17
access issues	20
notes/highlights/annotations	22
navigation	23
technology issues	28
understanding content/long, difficult readings	35
course issues	38
required internet	44
hard to read/prefer print	55
none	151

Chart 7. Coded student responses indicating challenges when using digital course materials

Would Students Do It Again?

One final survey question addressed whether students would take another course using affordable course content. Student response was overwhelmingly positive, with 90% reporting that they would.

Throughout the survey data, and especially in the responses to this last question, we saw that the use of digital

materials did not negatively impact the learning experience of a majority of the students. Indeed, in many instances, students indicated that the free or affordable nature of the content improved their learning experience.

Would you take another course using material like this?

No
10%

Yes
90%

▪ Yes ▪ No
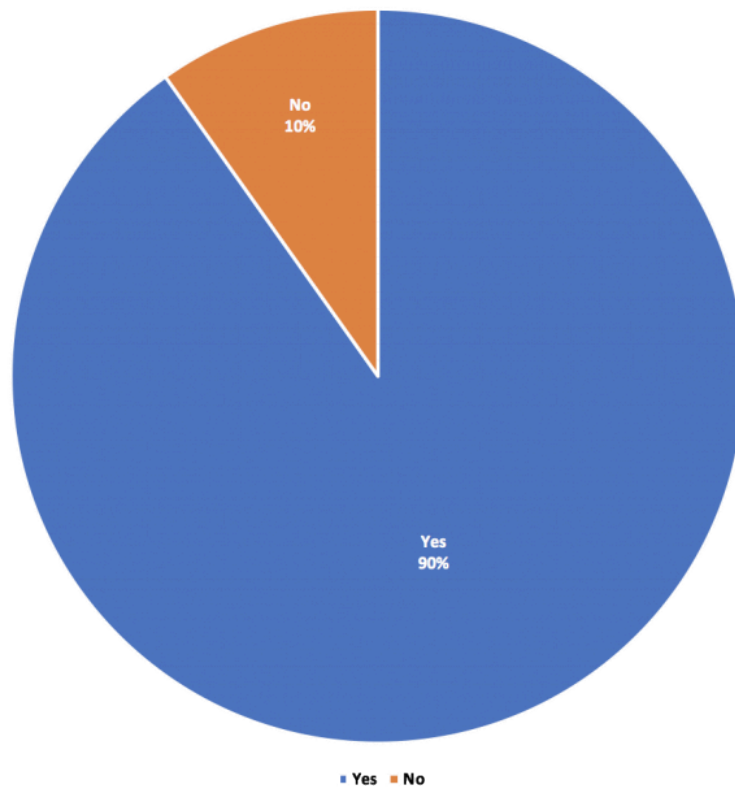
Chart 8. Percentage of students that would take another course with affordable content

Conclusions/Summary

Working with faculty to offer affordable course content to students solves a number of problems: all students have materials from the first day of class, creating a more equitable learning experience; faculty can customize the content to meet their learning goals; and the addition of interactive components creates greater engagement and enhances the learning experience. Headlines frequently tout student preference for print materials and the potential for decreased levels of comprehension with digital materials, but the research literature has produced conflicting results on both of these topics. We have thus relied on frequent surveys of our students in affordable content courses to provide insights into their behaviors and experiences. Their feedback has been critical to the evaluation of our program, and has helped us determine how we can best support students and faculty. Our results show the many benefits students have experienced in these courses, identify potential areas of improvement for our services and programs, and highlight areas where we might benefit from gathering additional information.

The course content environment continues to evolve, but it is clear that the use of digital course materials is growing and that they are here to stay. As Singer and Alexander note, "It is fair to say that reading digitally is

part and parcel of living and learning in the 21st century" (2017, p.p. 1034–1035). Academic institutions have a responsibility to support faculty and students navigating this environment, and to ensure the best possible teaching and learning experiences. Understanding the student experience is one key factor in developing the needed support systems. While conflicting evidence related to print and digital materials exists in the research, the results of our student surveys indicate that a majority of students have a positive experience and would take another course using digital materials. Given this positive response, we expect our program and services to grow and change along with the developing affordable course content environment.

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Creating Affordable Content Programs

Chapter 8 - All Hands on Deck: How One University Pooled Resources to Educate and Advocate for Affordable Course Content

Lucinda Rush, Leo S. Lo, M'hammed Abdous, and Deri Draper

by Lucinda Rush, Leo S. Lo, M'hammed Abdous, and Deri Draper (all from Old Dominion University) (bios)

Introduction

A strong case can be made for academic library involvement in Open Educational Resources (OERs) and Affordable Course Content (ACC). Academic libraries typically employ librarians who are experts in topics aligned with OERs and ACC, including copyright, fair use, and Creative Commons (CC) licensing, as well as in finding resources to support and to map out academic curricula. Libraries are also in the unique position of having distinct and defined connections with members of all three stakeholder groups: students, faculty, and administrators

At Old Dominion University (ODU), the Libraries thus became the initial conversation starter and coordinator of educational and advocacy activities involving these stakeholders. Because ODU Libraries do not have the resources or staffing to provide substantial faculty incentives or serve as the sole provider of large-scale educational initiatives on OERs/ACC, we realized early on that we would need partnerships. These would be crucial in educating faculty about the growing problem of the cost of course materials and about the financial and academic impact of traditional textbook use on our students, and in advocating for the use of OERs/ACC to positively impact student learning. It is of strategic benefit to take advantage of what other stakeholders can offer, and to explore future partnerships.

As a member of VIVA (the Virtual Library of Virginia), our statewide library consortium for non-profit academic universities, the ODU Libraries are part of the Open Textbook Network (OTN), an organization which promotes the use of OERs, and counts more than 600 universities as members. An ODU librarian serves as the OTN campus leader, participating in yearly training sessions provided by VIVA and facilitating faculty workshops on OERs. The Libraries are responsible for all scholarly communications related to open access on campus. At our institution, OERs reside under the umbrella of scholarly communications and hold a place in our Libraries' strategic plan for scholarly communications.

During the summer of 2016, the Libraries began the process of identifying and bringing together stakeholders to promote OERs/ACC on campus. Having recognized that many entities were working on OERs but not sharing information with one another, our goal was to determine how resources could be shared and duplication of effort could be avoided to help as many students as possible.

We began with our student leaders, including representatives from the Student Government Association (SGA) and the Graduate Student Organization. From our Center for High Impact Practices (CHIP), which focuses on student success, we invited a representative who was already doing work and advocacy on OERs. We also invited the director of our Center for Learning and Teaching (CLT), which assists faculty with course design and the integration of technology into their teaching, and a representative from

> **This chapter details our efforts, beginning with a kick-off event—a faculty forum—to introduce OERs/ACC to faculty and administrators with the goal of igniting a university-wide effort on reducing student expenses.**

Academic Affairs, who was a former Dean and served as special assistant to the Provost. Each stakeholder had a key role to play, and we established these roles early in our communications. We will discuss these roles in more detail throughout this chapter.

Since the initial stakeholder meetings, the ODU Libraries, SGA, CHIP, and CLT have worked both separately and together to educate faculty and students, to promote ACC use, and to gather and share information about the ways in which students and faculty view and use both traditional resources and OERs.

This chapter details our efforts, beginning with a kick-off event—a faculty forum—to introduce OERs/ACC to faculty and administrators with the goal of igniting a university-wide effort on reducing student expenses. We describe ODU's membership in the OTN, which resulted in an OER workshop during Open Access Week, and detail our efforts to understand, educate, and assist our stakeholders. We also discuss the Libraries' role in helping faculty obtain external and/or university-funded grants, like those from the State Council of Higher Education for Virginia (SCHEV) Affordable Pathways Partnership and the CLT faculty grant program. In addition, we talk about our collaboration with student leaders in hosting a Student Advocacy event, describe our efforts to gain insight into the impact of textbook costs on student success, and explore how ODU students engage with course materials. We conclude by discussing our plans and the challenges ahead.

Building an OER/ACC Program: Education & Incentives

ODU's biggest challenges in building a robust OER/ACC program are educating faculty from a wide range of disciplines about these resources and providing faculty incentives. Tenure-track and tenured faculty focus their time on research and what is needed for promotion. Non-tenure track faculty are often pressed for time because they have larger teaching loads. If no credit or recognition is given for implementing existing OERs/ACC into courses, or for creating new ones, faculty need other incentives to put in the time needed for this work. This section describes our efforts to educate and advocate on this issue and to incentivize the use of OERs/ACC.

Kick-Off Event: Faculty Forum on OERs and ACC

As a primary result of our initial meetings, the stakeholders collaborated on a faculty forum addressing OERs and ACC. Faculty forums, sponsored by the Office of Academic Affairs, are regular events on the ODU campus, and are typically used to discuss timely topics in higher education or topics relevant to happenings at the University.

Since these events are part of the routine for many faculty, we determined that a forum would be an excellent opportunity to begin a campus-wide conversation about OERs/ACC—to show how their use could reduce student expenses and enhance both teaching and learning, to provide data on the burden of course material costs, and to discuss how OERs/ACC can impact student success.

The forum was promoted to faculty through the Faculty Senate. All interested faculty and staff were invited, including those already using OERs or ACC and those who were simply curious. To provide a common language and framework for discussions, the forum focused on the following:

- Definitions of OERs and ACC
- Key reasons to consider using OERs/ACC in the classroom
- The potential impact on teaching practices when using OERs/ACC, including the ability to reuse and modify open content to promote collaborative and participatory student learning activities
- Opportunities to use OERs/ACC, which can be modified and assembled from the best resources for particular learning outcomes, to provide more diverse learning environments
- Upcoming on-campus opportunities and incentives to learn about and implement OERs/ACC in existing courses

The forum included a panel discussion with ODU faculty who were early adopters of OERs/ACC. The panel was facilitated by the University Librarian, and included three faculty members representing the College of Education and the College of Arts and Letters, as well as a member of the Graduate Student Organization who was also a graduate teaching assistant. The faculty members provided two very different examples of how OERs/ACC could be implemented in curricula, as well as insight into lessons learned. The graduate teaching assistant was in the unique position of being able to provide both student and faculty perspectives on how cost and quality of materials can impact academic success; this personal narrative allowed faculty to hear from a peer-teacher about his very recent experiences as a student.

After a question-and-answer session, the forum ended with a call to action, focused on motivating attendees to continue the discussion, participate in upcoming opportunities to learn more about OERs/ACC, apply for funding opportunities, and implement OERs/ACC in their courses.

To evaluate whether the Faculty Forum helped us achieve our goals of educating faculty about OER/ACC options, we distributed a questionnaire to the 31 attendees. While all respondents (n=10) reported low to no knowledge of OERs/ACC before coming to the forum, four participants indicated that they had a high interest in using affordable course content after the presentation and two expressed a moderate interest. When asked about the obstacles hindering them from using OERs/ACC, the two most common themes were a lack of knowledge about how to find resources or implement the content into course curricula, and a lack of time needed to develop the materials. Four respondents provided their contact information to receive information about future OER/ACC opportunities.

The forum also provided an opportunity to promote an upcoming OTN workshop provided by the Libraries and make a call for applications for faculty OER/ACC mini-grants provided by CLT. These programs are detailed below.

Joining the Open Textbook Network (OTN)

ODU's membership in the OTN, which began in the fall of 2016, led to an important effort to promote and support OERs/ACC. Early in the semester, the campus OTN leader, a librarian, attended an initial training session facilitated by the Executive and Managing Directors of the OTN. The session was a train-the-trainer workshop, in which campus leaders learned how to facilitate workshops to advocate for OERs at their home institutions, and to teach their own faculty how to participate as reviewers of textbooks included in the OTN. These faculty reviews not only help determine the quality of OTN's open course materials, but encourage faculty to engage with these materials—and thus become more likely to adopt them for course use. VIVA provides a $200 stipend for faculty who participate in institutional OTN workshops and review a textbook for the OTN. The ODU Libraries offered two OTN workshops during the 2016–2017 academic year, one during each academic semester.

The first workshop was held during Open Access Week, soon after the kick-off forum. We wanted to build off the momentum we had established, and capitalize on advertising we were already doing for a series of Open Access Week events. In addition to general advertising, we sent targeted emails to faculty who attended the previous faculty forum and expressed an interest in learning more about OERs/ACC. Faculty attendance at workshops provided by the Libraries is usually low, so targeted emails and the $200 incentive provided by VIVA helped boost attendance.

There were 22 attendees at the first OTN workshop. Seven were librarians whose reasons for attending included the opportunity to network with faculty and the desire to learn more about OERs/ACC.

The workshop's ultimate goal was for faculty to engage with OTN materials by completing expert reviews. Of the 15 faculty members who attended, three completed book reviews for stipends and four indicated that they planned to adopt an open textbook in the future. Anecdotally, facilitators of the campus OTN leader workshop shared that about one-fourth of faculty workshop attendees complete reviews, so participation from ODU faculty was slightly less than average.

We held a second OTN workshop in the spring of 2017. To recruit participants we contacted faculty who attended the forum in the fall of 2016, recipients of the CLT Mini-Grants (described later in this chapter), and those teaching high-enrollment courses for which open textbooks were available. Eleven faculty attended and five completed book reviews for stipends, so while attendance was lower the completion rate was higher. While merely speculative, we think this could be attributed to the targeting of faculty who teach the high-enrollment courses or to advocacy efforts in the preceding months, or, perhaps, since this was the second time the campus OTN leader presented this workshop, the presentation itself may have been more effective in motivating faculty to complete reviews of OTN materials.

The timing of the first OTN workshop on campus was important, as it aligned with the call for proposals for the CLT Mini-Grant, which were due the following week and which focused on implementing existing OERs into courses. Faculty attendees were interested both in participating in the OTN materials review program and in learning about OERs in general. A handful of faculty members who attended did receive a mini-grant, and used the book they reviewed for OTN in their classes. While the mini-grants and the first OTN workshop were two separate initiatives, the workshop assisted in supporting and preparing faculty as they wrote their proposals and implemented their projects, and the mini-grants assisted in bringing faculty to the workshop.

The CLT Annual Summer Institute on OERs

As part of these institutional efforts to educate the university community about OERs/ACC, CLT dedicated its Annual Summer Institute to OERs. Featuring a national OER leader, David Wiley, as keynote speaker, the event explored ways in which the use of open educational resources can advance teaching, learning, and research on campus. Subtopics attempted to engage the campus community to discuss, reflect upon, and answer some of the following questions:

1. What are some of the challenges associated with adopting, implementing, and using OERs (workload, quality, technology)?

2. How do we engage administrators to foster OER adoption and stimulate faculty interest in OERs (institutional guidance, policies and procedures, support framework)?

3. How can we engage faculty to embrace OERs as a strategy to improve their students' learning outcomes?

4. How can we use OERs to provide innovative opportunities for teaching and learning (knowledge creation, peer-learning, social interaction, shared learning practices)?

5. How can we jumpstart a research agenda around OER adoption, use, and evaluation?

6. How can we make OERs a core element of our teaching culture, to foster sharing, reuse, collaborative development, and innovation?

7. How do we create student-led OER initiatives, involving students in OER development and production?

With these questions as background, the two-day event included 21 panels, workshops, and individual sessions facilitated by 53 participants. The panels provided a platform for sharing ideas and suggestions on how to promote our institutional OER agenda, while the workshops and sessions offered hands-on activities on how to find, design and assess OER content. More than 210 attendees, including faculty, administrators, and staff, took part.

The Libraries had a strong presence at the Institute, with three librarians presenting and one presenting multiple times. One librarian facilitated a plenary discussion panel of students on the topic of OERs. As it occurred during a meal, was the only event offered during that time slot, and was the only session involving undergraduate students, it was widely attended, and established the Libraries as a strong partner in the ODU's growing OER/ACC movement to attendees who were new to the topic. In concurrent sessions, two librarians presented preliminary results of a student survey on the cost of textbooks, and a librarian facilitated a workshop for graduate students in the University's "Preparing Future Faculty" program on implementing OERs/ACC into their teaching. The Libraries also displayed physical copies of OpenSTAX textbooks purchased by the SGA for the University Libraries reserves.

Attendees' feedback was overwhelmingly positive, with more than 91% of respondents expressing

their strong satisfaction with the institute sessions.

Attendees' feedback was overwhelmingly positive, with more than 91% of respondents (N=256, users responded to more than one survey based on the number of sessions attended) expressing their strong satisfaction with the institute sessions. Similarly, 94% strongly agreed or agreed that the sessions contributed to their understanding of OERs, while 82% expressed interest in including OERs in future classes. Open-ended responses echoed these results; respondents indicated that the institute contributed to their understanding of OERs—the definition, requirements, strategies for adoption, and roadblocks faced by faculty and students. To this last point, several attendees appreciated the opportunity given to students to express their perspective on OERs. The student panel was well-received and attended.

In sum, this event was quite successful and accomplished our goal of providing a platform to institutional and faculty leaders to explore the potential of OERs, and ways in which these resources can enrich their teaching and learning practices while also enabling students to access affordable and appropriate content.

Faculty Incentives

SCHEV Affordable Pathways Partnership Grant

In addition to the introductory program offerings described above, ODU has also participated in two incentive programs meant to provide more affordable content options to two different student populations. First, the State Council of Higher Education for Virginia (SCHEV) Affordable Pathways Partnership Grant allowed ODU to partner with an area high school and community college. With a $140,000 grant from this program, ODU, Kempsville High School (Virginia Beach City Public Schools), and Tidewater Community College (TCC) have developed a program to offer students in the high school's Entrepreneurship and Business Academy dual-enrollment in TCC's business and entrepreneurship program, earning college credit while attending high school, and doing so without incurring fees for tuition or textbooks. Students then have an opportunity to matriculate into ODU's Interdisciplinary Studies in Leadership major.

Kempsville High School's Entrepreneurship and Business Academy welcomed its first class of students in September, 2016, and 230 have enrolled to date. In the fall of 2017, 80 academy students took a test that set them up for dual-enrollment courses at Tidewater Community College for the 2017–18 school year. The partnership team will continue to track dual-enrollment activity to determine tuition cost savings.

The Affordable Pathways Grant uses OERs/ACC rather than traditional textbooks to eliminate textbook costs for ODU upper-class students. ODU faculty were invited to apply to develop OER/ACC courses for the Affordable Pathways program. Sixteen ODU faculty were selected, and subsequently developed 300–400 level courses in a variety of areas including Information Technology, Technical Writing, Engineering Management, Supply Chain Management, Business Ethics, and Women in Leadership.

As a feature of the Affordable Pathways Grant, ODU also

As a feature of the Affordable Pathways Grant, ODU also successfully launched its Bachelor of Science in Interdisciplinary Studies Leadership program, providing students an option for a textbook-free major. While this program is not directly tied to Kempsville High School's Entrepreneurship and Business Academy, we anticipate that students from Kempsville High School and TCC will transfer to ODU through the two programs and the pathway coordinated by all three institutions, completing a full degree with no textbook costs incurred. The BS in Interdisciplinary Studies Leadership is also available to students who do not transfer from the Kempsville High School and TCC program. ODU students have already begun to enroll in this textbook-free degree program, and it is the fastest growing major at our institution. To date, 443 ODU students have enrolled in these upper-level courses, with zero cost for course materials.

successfully launched its Bachelor of Science in Interdisciplinary Studies Leadership program, providing students an option for a textbook-free major.

The Libraries supported the SCHEV grant. Faculty designing OER courses for the Interdisciplinary Leadership program were required to complete an OER course offered by TCC. Called Pathways, the course teaches faculty about OERs, copyright and Creative Commons licensing, and ways to find, select and create OERs for courses. An ODU librarian completed the Pathways course, participated with faculty in the class discussion board and in regular online meetings, and advised faculty on finding and selecting existing OERs/ACC as they designed their courses for the program. Having the librarian embedded throughout the entire process was beneficial to both parties. Faculty were able to seek assistance locating existing OERs/ACC for their courses, and all participants could see the advice and resources presented by the librarian within their online discussions. Participation in the Pathways course and the online meetings made the librarian familiar with the parameters of the project and the information provided to the faculty, enabling her to easily provide help.

Open Educational Resources Mini-Grant program

A second faculty grant program, offered by the CLT in the fall/spring of 2016, was aimed at drawing faculty participants and advocates into the OER/ACC movement across campus. The Open Educational Resources Mini-Grant program encouraged ODU faculty and adjuncts to explore the use of OERs and open textbooks (those that have been funded, published, and licensed to be freely used, adapted, and distributed) as an alternative to traditional textbooks, particularly in required courses with high enrollment or high textbook costs.

Faculty were invited to (1) redesign their courses around existing OERs or open textbooks as an alternative to commercial textbooks, and (2) revise/remix existing OERs to create new open content (modules, question banks, multimedia content, simulations, lecture slides, etc.). The goals of the mini-grant program were as follows:

1. Engage faculty to rethink and redesign their courses by replacing proprietary textbooks with OERs
2. Encourage faculty adoption and incorporation of OERs into their course design
3. Help lower the cost of required materials (textbooks, etc.) for students
4. Enrich learning materials by developing current resources that are engaging and interactive
5. Improve students' learning outcomes and course satisfaction
6. Promote a campus-wide dialogue about OER creation and development

7. Build institutional capacity to develop OERs and, potentially, to offer complete degree programs using OERs

8. Contribute to the growing body of OERs available to the global higher education community

Fourteen proposals were received, representing faculty from a broad range of colleges and departments. Mini-grants were awarded to the seven that best met the criteria iterated above, which included proposals for incorporating OERs into a graduate course in education research methods, developing OERs for a semester of English Composition, incorporating existing OERs into courses in Genetics and Biochemistry and into an Art Appreciation course, and using Free Mathematica Resources for Precalculus I Technology.

Librarians were integral to the mini-grant process. First, a librarian assisted faculty with writing their grant proposals. As mentioned previously, several faculty who attended the first OTN workshop were motivated to attend because it was offered within a week of the proposal due date. They attended for the sole purpose of gaining the knowledge needed to write their proposals, and came with specific questions related to their proposal ideas. A librarian also served as a reviewer of the grant proposals, and provided a broad understanding of how projects might be impacted by the existence or lack of OER resources.

Contributions to the faculty incentive programs made by each stakeholder prove that partnerships between the Libraries and other organizations on campus are integral in advocating and educating for the use of OERs/ACC in teaching, and have helped establish the specific roles each partner plays in this movement.

Students, Perceptions, and Advocacy

Throughout the initial stages of the OER/ACC initiatives at ODU, we shared with faculty national statistics about the rising cost of textbooks, and longitudinal studies about the impact of OERs on student success and on student purchase and use of textbooks. ODU students, however, have their own unique stories to share, and stakeholders on campus recognized that these stories along with local statistics would resonate more powerfully with ODU faculty and students.

Our Student Body

The University is located less than five miles from Naval Station Norfolk, the world's largest naval base, and many of its students are active duty military, veterans, or military spouses. The majority of transfer students at ODU come from Tidewater Community College (TCC), which has a national reputation for its work developing courses that do not require a textbook purchase, and is part of Virginia Community College System (VCCS), which has a robust OER program. The average student age is 24 among undergraduates, and 34 among graduate students, illustrating that we have a larger than average population of "non-traditional" students.

Hosting a Student Advocacy Event

The contributions of student leaders from our SGA and GSO were crucial to the success of OER/ACC advocacy

events involving students. A key contributor to success when involving students is to let students themselves lead. In the early stages of the Libraries' involvement with OER, an officer from our SGA contacted our University Librarian because he had learned about Maryland's open textbook program, which was primarily driven by their SGA. This student, along with a leader in the GSO, participated in all of our education and advocacy events targeted at faculty, took leadership roles in student advocacy events, and helped gather qualitative and quantitative data on student perceptions of textbook costs and general engagement with course materials.

> **The contributions of student leaders from our SGA and GSO were crucial to the success of OER/ACC advocacy events involving students. A key contributor to success when involving students is to let students themselves lead.**

We invited our student leaders to help plan events for Open Education Week 2017, and they did so with great enthusiasm. They were present at our kick-off event in the student center, which motivated uninvolved students to participate and join in the discussion. They were instrumental in bringing student participation to our events. And they suggested placing a "talkback wall" —a bulletin board or whiteboard on which students can post their thoughts on a topic—in our student center and main library. The ODU SGA regularly uses these walls to obtain feedback on timely topics, so students are used to this form of engagement. By the end of Open Education Week 2017, we had over 250 responses to the question: "How do you feel about the cost of textbooks and what do you do about it?" This provided us with a good amount of qualitative data, which we analyzed and provided to faculty in later presentations and reports. Two of the primary themes arising from these data are that our students think that textbooks cost too much and that the cost of course materials presents barriers to their academic success.

Having the perspective of our graduate student leader was also important. Since graduate teaching assistants teach many high-enrollment general education courses, for which high-quality open textbooks are available, their choices and advocacy can impact many students. Our representative from the GSO was able to speak to both students and faculty in their own languages. Along with contributing to the faculty forum, he partnered with a librarian in leading a workshop for ODU's Preparing Future Faculty Program on selecting appropriate OERs/ ACC for courses. This workshop, which allowed us to introduce the topic to our graduate students early in their academic careers, was included in the CLT Summer Institute as part of our larger collaboration and education efforts related to OERs/ACC.

Surveying Our Students

While student leaders and on-campus students represent an important portion of our student body, we also have a lot to learn from our general student population. In the spring of 2017 we distributed a survey via email to a sample group of undergraduate students, identified by the Office of Institutional Assessment. The survey aimed to examine the use of traditional textbooks at ODU, to investigate whether textbook cost plays a role in student success, and to explore how ODU students engage with course materials. We also asked the 486 participants whether they had transferred to ODU from Tidewater Community College (TCC), which has a robust zero-textbook course program. We then asked the former TCC students if they would be willing to participate in a follow-up study. This study, with 30 participants, took place in the fall of 2017, and aimed to examine the

perceptions of students who had experienced both OER courses and traditional textbook courses, and to compare those two experiences as they related to academic success and course engagement.

The two surveys, as well as the qualitative data gathered throughout spring, 2017, have provided us with robust data to share with administration and faculty and to use when advocating for OER/ACC use. We shared preliminary results of the undergraduate survey at the CLT Summer Institute and at a panel discussion between faculty and students on OERs/ACC in the fall of 2017. Participating in the Summer Institute strengthened the Libraries' partnership with CLT, and both events helped us advocate to faculty and administrators on behalf of our students. Our presentations at these structured events provided faculty and administrators with both anecdotal evidence and reliable local data to consider as they develop courses and policies.

For the student panel and roundtable discussions on OERs/ACC in the fall of 2017, we invited those who had completed the TCC transfer student survey to serve as panelists, and the audience was comprised of representatives from several ODU populations including students, librarians, faculty, and administrators. When inviting students to participate in events that also involve faculty and administrators, we learned that flexibility is important. Only one of the planned student panelists attended, but we were able to involve other students who had not transferred from TCC but who had experienced both traditional textbook and non-textbook courses.

One notable point in the panel discussion was the students' focus on the quality of teaching rather than the format of the course materials; in their experience, the courses that used OERs were better taught than those using traditional textbooks. However, when asked if they had to choose between a great instructor who used a traditional textbook and an instructor they knew nothing about who used an OER or ACC, the student panelists stated that they would choose the great instructor regardless of the course materials. For these students, good teaching was more important than the money they may or may not have to spend on course materials.

Both the Summer Institute and the panel discussion proved that the Libraries can play an important role in providing structured opportunities for students to contribute to discussions and share their perspectives, and that faculty and administrators are very interested in understanding student perspectives.

Challenges, Future Plans, and Conclusions

The OER/ACC movement at Old Dominion University is just beginning. While we have solidified key stakeholder roles, there are other stakeholders we would like to involve in the future, including the campus bookstore and other student organizations. We also see the potential for collaborations across our state with other public academic institutions, as well as with VIVA, our state library consortium.

Most importantly, we have discovered that the most important stakeholders are our students, and that local data and student stories can be influential in gaining faculty buy-in when it comes to selecting OERs/ACC for their

courses. Providing students with structured opportunities to share their stories, as we did at the CLT Summer Institute, Open Education Week, and our Open Access Week events, can give them a voice and a venue in which they will be heard.

During the first years of our journey, we have discovered additional questions and topics for investigation. Data gathered through the student surveys, for instance, have led us to focus on *how* students engage with course materials, and we're using this information to advocate for more use of open pedagogy among our faculty, rather than focusing solely on reducing textbook cost. We have also found that faculty incentives are a factor in motivating faculty to change from traditional course materials to OER/sACC. Since we struggle with faculty incentives during a time of economic hardship, but would still like to reward faculty for creating OERs/ACC or implementing open pedagogy in other ways, advocating for recognition during the promotion process is an alternative to consider.

Another challenge is to maintain momentum. Our OER/ACC efforts to date have involved loose collaboration among a wide range of stakeholders at ODU. Collaborating and pooling resources is key to success, but having no real center for OERs/ACC initiatives means that no single entity is able to devote a significant amount of time and resources to this effort, which could cause lags in our progress. Communication and creativity will be key to future successes, and the Libraries will continue to have the essential role of connecting the dots between campus stakeholder groups.

Author Bios:

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Leo S. Lo joined Old Dominion University Libraries as the Associate University Librarian in 2016. He is an expert in library assessment, and leadership. Lo earned his M.S. in Information Studies from Florida State University.

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Deri Draper is currently the Provost Fellow for the College of Continuing Education and Professional Development and Director of Integrative Learning for the Center of High Impact Practices at Old Dominion University. She is an expert in instructional systems, adults education, and training and development.

Chapter 9 - Creating an OER Toolkit: Offering Customized Solutions and Reducing Barriers in a Small Liberal Arts College

Ron Joslin, John Meyerhofer, Angi Faiks, and Teresa Fishel

by Ron Joslin (Macalester College), John Meyerhofer (College of St. Benedict/Saint John's University), Angi Faiks (Macalester College), and Teresa Fishel (Macalester College) (bios)

Introduction & Background

Colleges and universities are increasingly engaging with open access (OA), open educational resources (OERs), and open textbooks. At Macalester College, an exclusively undergraduate institution of roughly 2,000 students, we have long been involved with OA initiatives. We believe strongly in the free and fair exchange of information, which is the foundation of open access.

In this chapter we focus on our experience supporting OERs, which, according to the Hewlett Foundation (n.d.), are "teaching, learning and research materials in any medium—digital or otherwise—that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions" ("Open Educational Resources: OER Defined"). Our background with OA initiatives has served as the foundation for our foray into OERs and open textbooks.

Our first entree into OA was supporting SPARC (originally the Scholarly Publishing and Research Coalition) in 1997; we have been a member since 2002. Although our initial efforts were focused on lowering journal costs, for two decades we have supported a variety of OA initiatives in order to encourage positive changes in scholarly publishing and wide dissemination of scholarly and creative works. We developed an institutional repository that provides OA to student honor projects, award-winning papers, peer-reviewed OA journals, and faculty publications. Resources in our repository have been downloaded more than 2 million times from locations around the world. We have expanded our OA support to include open monograph publishing initiatives such as Lever Press, Open Book Publishers, and Knowledge Unlatched.

We explain here how we have educated our community on OERs, developed tactics for engaging with faculty partners, and created of a set of resources to support anyone interested in working on an OER project. We conclude with lessons learned and next steps. While we write from our small-college perspective, our insights will resonate with all higher education institutions with a similar goal of wanting to meaningfully participate in the OA, open textbook, and OER movements.

> **We explain here how we have educated our community on OERs, developed tactics for engaging with faculty partners, and created of a set of resources to support anyone interested in working on an OER project.**

Starting the OER Discussion & Finding our Motivation

As we started exploring OERs, we looked at initiatives at other institutions of higher education, and attended OER and open textbook discussions, meetings, and conferences. At these gatherings, we found ourselves among librarians and faculty from predominantly large public universities or community college systems, and couldn't find many from our peer institutions who were exploring OERs. It appeared we would be charting a new path for small, liberal arts colleges.

We launched our OER initiative with the belief that we had something valuable to offer to this effort. We began by engaging in a number of activities to encourage OER and open textbook adoption. In January, 2015, SPARC offered an OER Workshop at ALA Midwinter in Chicago entitled "Tackling Textbook Costs through Open Educational Resources: A Primer," led by Dr. David Wiley and Dr. David Ernst. The session focused on how library staff can leverage OERs to increase textbook affordability and on how to create a campus action plan. After attending this workshop, we sponsored a faculty luncheon discussion in the spring of 2015, inviting Dr. Ernst and Macalester economist Tim Taylor to discuss their involvement with open textbooks.

That summer we joined the Open Textbook Network (OTN), a group of libraries at higher educational institutions that facilitates the adoption of open textbooks, the development of expertise and best practices to support such adoptions, and the creation of a methodology for tracking the impact open textbooks have on student success. Joining the OTN was our first attempt to promote the use of OERs and provide access to high-quality resources to support scholarship and teaching at Macalester College. With the OTN, we again found we were the only small, liberal arts college participating.

At the spring 2015 luncheon, mathematics faculty expressed interest in open textbooks. They surveyed their students and found, contrary to expectations, that their students didn't believe textbook costs were a concern on our campus. In an email to us, one faculty member said that students are not worried about costs because they have other avenues for obtaining texts. (K. Saxe, personal communication, March 14, 2015) We assumed this attitude was an outlier and that most of students would disagree that textbook costs were not a concern. The same sentiment, however, was echoed in further conversations with students.

In October 2015, we co-sponsored with the Macalester College Student Government (MCSG) a well-attended forum during Open Access Week. We highlighted the extreme rise in textbook costs compared with the standard cost of living, explained open textbooks, shared the advantages of using open resources, and expressed how these could be a solution to the problem of textbook affordability. During the discussion period, students said, with near unanimity, that textbook affordability was not an issue for them. While they considered cost an issue for many U.S. college students, they did not perceive it as a problem for themselves individually or, anecdotally, among their local campus cohort. We are quite certain that this perception is not due to the common misconception that students at our small, private, elite college do not suffer from financial pressures. Our institutional financial aid data show that in fall 2017, 70% of U.S. first year students at Macalester received need-based financial aid, and the average need-based financial aid package covered 75% of our comprehensive fee (tuition, fees, room, and board) (Macalester College, n.d.).

It is more likely that the relative lack of concern regarding textbook costs is tied to factors unique to our campus. For example, the launch of an extremely successful textbook reserve program developed by student government

and hosted by the library has had an impact on the perception of burdensome textbook costs. This program funds the purchase of the most expensive and widely used textbooks, and places them on reserve in the library. Textbooks in economics, biology, and math are the most popular resources in the buying program. Launched in 2009, this program has been extremely successful; textbooks were checked out 11,342 times in 2017, and the textbooks available increased from four titles in the program's first year to 43 (252 copies) in the fall of 2017. Another option for our students is Macalester's Textbook Advance Program, which pays textbook costs for selected students who have a demonstrated need. Finally, the Macalester bookstore hosts "Bingo for Books" events which award students prizes, including money for textbooks. With these various safety nets in place on our campus, and other informal processes developed by students, we realized that the issue of textbook costs was not a selling point for OERs among many of our students and faculty.

While the motivation for many OER initiatives is to reduce textbook costs, we thus realized that our motivation would stem for our belief in the benefits of OA. The OER movement is closely aligned with our long-time efforts to increase OA for scholarly works and advocate for open resources for all. We did discover, however, that our students are concerned that the content of textbooks in their classes is often lacking, irrelevant, or skipped over by the professor. So while they do not have serious concerns about acquiring a book, the value of that book may be in question. All of these factors fueled our efforts and our realization that a multi-pronged approach to fostering OER use on any campus is advisable in order to address a variety of concerns, needs, and motivations.

Shifting our OER Message

After learning from our community their motivations and sentiments around open textbooks, we shifted the focus of our OER discussions. We emphasized the flexibility and customizability that open resources provide. Conversations with faculty about the flaws of commercially published textbooks resonated with their experiences. Faculty expressed frustration with new editions of textbooks that had little or no substantive change to the content, the lack of interdisciplinary content, and the dearth of adequate undergraduate textbooks in certain research areas. All of this was fruitful ground when we introduced the power behind open licensing as illustrated by David Wiley's 5Rs: Retain, Reuse, Revise, Remix, and Redistribute (Wiley, n.d.)

> **Many of our faculty were excited that they could intertwine and customize OERs, and intrigued by the possibility of adding unique multimedia and interactive content. All of this was highly appealing to the "rugged individualism" that is part of our faculty culture.**

Many of our faculty were excited that they could intertwine and customize OERs, and intrigued by the possibility of adding unique multimedia and interactive content. All of this was highly appealing to the "rugged individualism" that is part of our faculty culture. We saw, then, an opportunity to combine all of our goals: we wanted to encourage OER use, students wanted textbooks that were more closely integrated with courses, and faculty wanted learning resources that more closely aligned with their teaching methods and goals.

Having discovered emerging interests in OERs among our faculty, we shifted our work to identifying barriers and developing the resources and expertise needed to overcome those barriers. For faculty to actually get started we needed to create pathways to successful development of open textbooks and other OERs.

Overcoming Obstacles

As revealed in the Babson Survey Research Group's study Opening the Textbook: Educational Resources in U.S. Higher Education, 2015–16 (Allen, 2016.), it isn't easy to create OERs or open textbooks. Our faculty identified similar barriers. While many, for example, had heard the phrase "open education resource," they did not have a good understanding of what an OER or an Open Textbook was, and were uncertain where to search for and locate OERs in their discipline areas. If they were aware of OERs, they were doubtful about the quality. And while they were excited by the possibility of mixing and adding to open content, they were concerned about the time it would take, their own lack of experience in authoring a textbook, and their lack of technical knowledge.

To address these concerns we collaborated with our academic technologists to hold a full-day, hands-on workshop for faculty interested in exploring OER adoption or creation. Twenty faculty, representing every division, attended the workshop. They learned about Creative Commons' licensing, strategies for identifying OERs in their areas, and software available for creating OERs and open textbooks, and were able to explore Pressbooks, a WordPress plugin frequently used in the creation of open textbooks. By sharing these resources and answering specific questions around OERs, we hoped faculty would feel more comfortable about considering projects. While the workshop was well received, and the audience engaged with the activities, our faculty were still hesitant to proceed on their own. They needed additional support to develop and proceed with their project ideas.

Developing an OER Toolkit & Incentive Program

Wanting to find a way to address these concerns and help faculty more easily navigate the steps and tasks involved with an OER project, we landed on the concept of an OER Toolkit. This Toolkit would be organized by topic areas such as finding OER content, understanding and using open licensing, layout and design, dealing with accessibility issues, and more. We would collect and organize existing content, resources, and tools for creating OERs, and include information on people available at Macalester to assist with projects. Essentially, the Toolkit would be an in-depth, guided version of the workshop. We also envisioned teams of specially-trained students and staff to assist faculty with building multimedia content. Faculty at institutions like ours benefit greatly from personalized and tailored assistance on projects such as these. The Toolkit would serve as a sort of recipe, offering faculty step-by-step guidance in the adoption or creation of an OER, and as with any recipe, users could customize it to meet their individual needs.

To encourage faculty, we developed a stipend program to accompany the Toolkit. Stipends would provide start-up funding to create and implement an OER project. Recipients would receive an initial consultation with a resource team including the OER Coordinator, the subject specialist librarian, and an academic technologist to discuss strategies for successful completion of their OER project. The intention behind the Toolkit and stipend program was to help faculty feel

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less daunted by the tasks involved in OER adoption or creation and to demonstrate library staff expertise and commitment.

Pilot OER Project

To develop and test our Toolkit concept, we envisioned working with a faculty member to develop an OER or open textbook. By working side-by-side on a project, we would create a better Toolkit. Our goals for the pilot project were to:

- document the tools, resources, and services needed and provide them wherever possible;

- document and create best practices for frequently encountered issues;

- test open textbook development software and create support documentation;

- successfully complete our first OER project on campus;

- widely share the story of this project and the resulting OER Toolkit to encourage others to complete similar projects.

We then needed to find a faculty partner. One faculty member stood out for us as a candidate for our pilot project. Professor Britt Abel, German and Russian Studies, had attended our hands-on workshop and had discussed with us her idea for creating an open learning resource for first-year German-language students. She was dissatisfied with the content of the commercial textbooks available. Her vision, developed in partnership with a faculty colleague—Professor Amy Young—at a peer institution, was a multimedia, interactive resource allowing for student engagement beyond simply reading text on a page. Abel, Young, and Joslin (2017) best articulated the goal in their application for a National Endowment of the Humanities (NEH) grant for Grenzenlos Deutsch: an Inclusive Curriculum for the German Classroom:

> An equally important goal is to employ more diverse voices and real-world contemporary perspectives in our curriculum. For that reason, we include content areas on social and environmental sustainability, non-traditional families, and diverse expressions of "culture." For example, rather than only including audio/video tracks of native German speakers, a trend that limits the diversity of the course material, we include non-native speakers with high proficiency as well as native speakers to reflect today's real-world experience of speaking German in Germany, Austria, and Switzerland. Similarly, at a time when gender nonconforming students are struggling to find the vocabulary and tools to represent themselves in the classroom and beyond, this curriculum also addresses the question of gender and language head on in a series of cultural notes and in the presentation of some recently developed usages to avoid gendered nouns (i.e., Studierende rather than Studenten und Studentinnen). The digital platform will enable us to update these terms easily as they evolve. In short, students will be able to see themselves and the world they experience reflected in the curriculum.

We had found our faculty OER champion who embodied the rugged individualism and commitment that we knew would help keep the project moving forward and whose concept matched our broad mission to create something for the greater good.

To aid in our efforts, we applied for and received grant funding from the Mansergh-Stuessy Fund for College Innovation, a family foundation which provides seed grants for innovative ideas developed and tested at selected

local liberal arts colleges. In addition, we joined with our faculty partners in applying for an NEH grant, which was awarded to us in 2017. This funding helped support the ongoing development of the full German language learning resource and our OER Toolkit.

Working with the German project reaffirmed the benefits of librarians partnering with faculty on OERs. We researched open software tools to meet the needs of the project, and connected faculty with them. We brought organization to the audio and visual files the faculty had already created, adding procedures for metadata, archiving, and version control. In addition, we trained a team of students to clean up image files and edit existing video and audio content. We thus developed best practices for ongoing content creation, description, and organization. The insights and knowledge gained from this partnership and pilot project served as the foundation for our OER Toolkit.

The OER Toolkit

Our vision for the OER Toolkit expanded through our pilot project. The Toolkit, which is on the LibGuides platform, begins with an introduction to OERs that includes examples of OERs, myths, and misconceptions, along with David Wiley's 5Rs. The four main sections are as follows:

Figure 1: OER Toolkit website

Finding OERs:

List of the main repositories and collections of OERs, including suggestions for evaluating quality.

Open Licensing:

Overview of open licensing, a summary of the different license types, tips for identifying the best license for a project, best practices for attribution, and methods for finding openly licensed content.

Tools & Resources:

This is the heart of the project. It is a directory and guide to tools and resources for creating a wide variety of OERs. Open source and local resources are highlighted.

Step-by-Step Guide:

This section is for those who may feel overwhelmed by the creation of OERs.

While our OER Toolkit is customized for our campus, with listings of local resources and experts, it is available under a Creative Commons CC BY SA license for all to use, adapt, and build upon.

Lessons Learned & Conclusion

In developing OERs at our small liberal arts college, we took inspiration from university and community colleges' OER and Open Textbook projects, but had to find an approach best suited to our environment and needs. Our OER message, for example, was much more persuasive to our faculty when we switched our focus from cost savings to content customization. We capitalized on our strengths as we planned our OER development strategy, especially our close working relationships with faculty and staff, and our distributed team approach to projects.

Faculty concerns about launching an OER project led us to find ways to lessen barriers, both real and perceived. We developed the idea of the OER Toolkit and sought a faculty champion for a pilot project. We learned a great deal in working with the faculty developing the German curriculum modules, as reflected in our expanded OER Toolkit.

> **Through the pilot project and the development of our OER Toolkit we reaffirmed the value of librarian expertise for OER projects, and found that leveraging existing campus relationships and expertise eased the burden and strengthened the project.**

Through the pilot project and the development of our OER Toolkit we reaffirmed the value of librarian expertise for OER projects, and found that leveraging existing campus relationships and expertise eased the burden and strengthened the project. We worked with Information Technology Services (ITS), the Center for Scholarship and Teaching (CST), our Postdoctoral Fellow in Digital Liberal Arts, and the research and instruction librarians. By taking advantage of the skills and talents among our campus partners we were able to develop a much broader, more diverse, and more useful

OER Toolkit. We have heard from other institutions that collaboration across campus has been important to the success of their OER efforts, and this proved true at our institution as well.

Our OER Toolkit is still in development and will continue to go through iterative changes and improvements. It is not an end but a beginning, one we hope will help Macalester develop a viable and sustainable OER program that engages our faculty, staff, and students while furthering our mission to support OERs well beyond our institution. We believe our program serves as a model that other smaller institutions could emulate for the benefit of their community members and of society as a whole.

Next Steps

We wish to further our message of the benefits of OA and OERs by connecting with our campus' emphasis on social justice, internationalism, multiculturalism, and service to society. A central goal of the German OER project, for instance, is to create a more inclusive and diverse textbook than is currently available. This potential offered by OERs and open textbooks resonates with our faculty.

We also want to develop a faculty mentoring program so faculty can support each other in their OER efforts, sharing their experiences, failures, and successes. We would like to create a culture on campus that welcomes and rewards creation, experimentation, and use of OERs. Ideally, this culture would also incorporate the talents of our students. By involving students in the development of OER materials, we would foster an atmosphere of collaboration and engagement, provide unique e-publishing experiences, and enhance our OER structure by further distributing the workload. This ties neatly in with our campus' long history of student-faculty scholarship endeavors. We hypothesize that students working on an OER or open textbook, while also learning the content, would have a deeper learning outcome.

There has been much discussion about peer review and its role in OERs. In particular, many OER detractors believe these materials do not have the same academic rigour as standard textbooks. At a smaller institution like Macalester, establishing a peer review program for our OER materials is not feasible. Instead, we are exploring a community peer review program with other liberal arts colleges. This network could also be used as a source for OER collaborators. By developing pathways for distributing and sharing the work, the creation of OERs and open textbooks is much more realistic for small college faculty.

We are committed to supporting the creation of OERs and open textbooks that foster new and innovative student learning. We look forward to working with our network of peer institutions to expand our capabilities and to share expertise and technical solutions.

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by Nicole Finkbeiner, Daniel Williamson, Richard Baraniuk (all from OpenStax) (bios)

Encouraging a Yes: Effective Institutional OER Initiatives

College and university administrators are increasingly interested in addressing issues of affordability and degree completion on their campuses. They have found that the use of open educational resources (OERs) can support student success initiatives and lower costs, but are often unsure how to encourage OER adoption while protecting their faculty's right to choose the resources they deem best for their classes and students.

With its innovative, cohort-based Institutional Partnership Program, OpenStax at Rice University has developed a strategic framework with measurable metrics. This program increases the use of OERs on campuses while addressing concerns about academic freedom by focusing on encouraging and incentivizing faculty to consider OERs, and it allows for customization bgy each institution. Using data collected from a variety of colleges and universities, the OpenStax Institutional Partner Program has identified specific common tactics that consistently lead to success. Along with the framework, members of the 10–12 participating colleges and universities provide support to one another and hold one another accountable, ensuring success at each institution.

The eleven schools that participated in the OpenStax Institutional Partner Program as part of the 2016–2017 cohort increased their use of OERs by an average of 150 percent, resulting in an additional 50,000 students gaining access to OERs, and increasing total textbook savings at these institutions to $8.2 million. This chapter discusses the key aspects of the framework of this program that have lead to its success.

Metrics-Based Approach

> **The first aspect of creating an effective OER initiative is to focus instead on the results we want to see.**

In *The Seven Habits of Highly Effective People,* authors Stephen Covey emphasizes that "An effective goal focuses on results, not activity." Yet when it comes to initiatives at educational institutions, we tend to measure our actions, not our outcomes. When asked about the progress of an OER initiative, we talk about our committee meetings, the emails we sent, and the marketing we've done. The first aspect of creating an effective OER initiative is to focus instead on the results we want to see.

Assess Where You're At

The first step in moving to a metrics-based approach is to assess your initiative's current success. To this end, you should know:

- How many students are currently impacted by OERs at your institution?

- How many faculty are currently using OERs at your institution?

While assessing where you are at is an important first step, it's easy to get stuck in creating surveys, getting them approved, and marketing them, which can greatly slow your progress. Instead, focus on the information you can gather in two weeks (or another very brief period of time) and then move forward. You can continue to update your metrics as you go.

A simple spreadsheet, with the following columns, can work well to track OER adoptions:

- Faculty name

- OER title/modules they are using

- Publisher and/or location of OERs

- Number of students per year they are impacting with their use of OERs

- When they began using the OERs

- Course information

From this information, you can calculate current student savings. The most efficient way to do this is to use an average savings for all OERs that takes into account discounts for students who could buy their content used, rent their content, etc. While OER groups vary on this average, most estimate the average savings as between $98.57 and $100 per student per year.

Setting Goals

You can now begin to build the full picture of where your institution is and the goals you want to set for the future. For this, you need your duplicated headcount, also known as your seat count, which counts every student in every course they take. (If student A is taking four courses, for example, he or she is counted four times.)

If your school has a duplicated headcount of 30,000 and 1,000 students are currently impacted by OERs, you can calculate the current student impact and set goals:

Current Savings

OpenStax estimates that the average student will save $98.57 per year. This number factors in a student's ability to buy new or used books, rent books, etc.

- 1,000 * $98.57 = $98,570 current student savings
- (1,000/30,000)*100 = 3.33% of the student population is currently impacted by OERs

Goals

Based on our experiences with Institutional Partner schools, we estimate that, with a strategic OER effort, an institution can achieve a level of 25% of their duplicated student headcount using OERs within a 2–5 year period.

- 30,000 * 0.25 = 7,500 anticipated number of students to be impacted by OERs in 2–5 years
- 7,500 * $98.57 = $739,275 yearly student savings if goal is met

Getting Stuck

While assessments and goal setting are important, many colleges and universities get stuck at this step; they draft a survey, run it through the appropriate channels, and wait for Institutional Review Board (IRB) approval; by then, a year has passed. Instead, do the best you can within a period of two weeks or less, and then move on; if you learn of OER use you didn't originally include, you can always go back and update your numbers.

Build Internal Support

In most cases, the successful OER initiatives are those seen as belonging to everyone, rather than an individual department. Often, when we visit a campus with a struggling OER initiative, we'll hear "I support the library's OER initiative" or "I support the Office of Teaching and Learning's OER initiative." It is particularly troublesome when these comments come from faculty. These speakers do not view themselves as responsible for the success of the initiative. It is important to move to a place where, when asked, everyone sees the initiative as being part of the college or university as a whole.

Senior Leadership Support

In most cases, the successful OER initiatives are those seen as belonging to everyone, rather than an individual department.

Crucial to ensuring that the initiative is seen as an institution-wide effort is to have at least one senior leader regularly emphasize and express support for the initiative. While the initiative shouldn't be top-down, it does need top-level support.

Senior leaders can express their support in a variety of ways: promoting the initiative at faculty and staff events, providing funding for grants and events, sending an email of support, giving presentations on the initiative at board meetings, giving interviews for campus and external articles, and so on. It's key that they express support while also promoting academic freedom, and that they do so regularly.

Include Everyone

Another key to ensuring that the initiative belongs to everyone is to have everyone involved. While membership can vary by institution, these key groups should be involved in your OER initiative:

- Faculty
- Administrators
- Librarians
- Instructional support
- Senior administration
- Students
- Disability Services
- Bookstore

Identify an Effective Leader

While including everyone is a core element of success, you also need to ensure that your initiative has a leader. We define a leader as someone who will be held accountable for the success of the initiative, meaning that it is written into their job description and that their success with the initiative is a factor in their job performance review. Often, when visiting a college or university with a struggling initiative, we'll ask "Who is your leader?" and see many fingers pointing at one another. With no one taking personal responsibility or being assigned formal responsibility, it's very difficult to move forward.

A leader is often chosen by availability—who can take on the work, or which office has the bandwidth to do so. Instead, we recommend that you carefully consider who the most effective leader will be.

An effective leader is someone who:

- Is respected by faculty
- Is viewed as a peer by faculty
- Can dedicate 10+ hours per week to the initiative

The most effective leader of an OER initiative is often a faculty member who is granted leave time to work on the initiative. At some institutions, this arrangement is structured as a faculty fellowship, which has the additional benefit of providing a formal reason for the faculty member to drive the initiative. It also is a way to demonstrate senior leadership support, as these fellowships are usually sponsored and/or funded by a senior administrator.

Another option that has been very successful is to have co-leaders: usually a faculty member along with a staff member from another department. Common combinations are a faculty member with a staff member from Teaching and Learning, and a faculty member with a librarian.

Shifting to an Active Role

One of the biggest factors determining success of an OER initiative is whether promoters at an institution are active or passive in their advocacy. The most successful institutions are those at which OER promoters are actively—and tirelessly—addressing various groups and audiences to promote OERs. The schools that struggle, in contrast, are passive, waiting for people to show an interest in OERs and then only providing information. As one of the authors was told, "My role has never been to go out and promote, my role has always been to wait for someone to come to me for help." As long as the people in charge of your OER initiative see their role as "wait for someone to come to me for help," your institution will struggle to gain ground.

> **One of the biggest factors determining success of an OER initiative is whether promoters at an institution are active or passive in their advocacy. The most successful institutions are those at which OER promoters are actively—and tirelessly—addressing various groups and audiences to promote OERs.**

Direct vs. Indirect Tactics

Central to taking an active role in promoting OERs on your campus is ensuring that you implement direct rather than indirect tactics. A direct tactic should lead to a faculty member indicating "yes," "no," or "I'm interested, tell me more," and allow you to gather leads, encourage adoptions, or collect student impact data. An indirect tactic is the passive approach of "if we build it, they might find it," and is defined as an action that won't directly lead to a faculty member indicating "yes," "no," or "I'm interested, tell me more."

The easiest way to tell if an approach is direct or indirect is to ask yourself "with this tactic, how will I get a list of faculty who are interested and a list of faculty who will adopt OERs?"

Top actions that lead to OER adoptions	With this tactic, how will I get a list of faculty who are interested and a list of faculty who will adopt OERs? What makes this a direct tactic?
One-on-one meetings with faculty	Any faculty member who agrees to the meeting is expressing interest (and counts as a lead). Any faculty member who agrees to adopt an OER is an adoption.
Presentations about OERs during department meetings	Option 1) If it's a small department, follow up with each faculty member and ask for a one-on-one meeting. Option 2) If it's a large department, distribute a sign-up sheet on which faculty can express interest. Any faculty member who signs the sheet is a lead. Have a one-on-one meeting with each of these faculty members.
Adoption grants: providing faculty with course release time and/or a financial incentive to adopt an OER.	Any faculty member who expresses interest or applies for the grant is a lead. Any faculty receiving the grant is an adoption.

Table 1. Top actions that lead to OER adoptions

Go to Them

Faculty are very busy, balancing teaching, office hours, research, and additional duties. Due to their schedules and workload, having them come to you can be a challenge. We recommend that you plan most if not all of your direct tactics around you going to them. Instead of inviting them to a presentation in your library or Teaching and Learning center, give the presentation during their department meeting. Instead of asking them to stop by your office, find a good time to meet with them in theirs.

Making "The Ask"

Another aspect of switching to an active role in promoting OERs is to move from providing information to making an ask: asking a faculty member if he or she is willing to switch to an OER.

A key concern in making an ask is to protect academic freedom. Depending on your relationship with the faculty member, the ask could be as direct as "Would you be willing to pilot this in your course?" or "Would you be willing to adopt this for your course?" It could also be something more subtle, such as "Is this something that may work for your course?" or "What do you think of this material for your courses?"

Building Momentum

The next phase of creating an effective OER initiative is to build momentum by identifying eight direct tactics you will implement throughout the year, and creating a timeline for each.

Focus on Scale

One of the most effective ways to build momentum in an OER initiative is to focus on the number of students who could potentially be impacted. We recommend identifying the top 25–50 courses with the highest enrollment, and focusing your advocacy efforts on those courses. It takes the same or very close to the same effort to speak to a faculty member who teaches 1,000 students per year than it does a faculty member with 30 students per year, so to increase the number of students impacted by OERs as much as possible, it makes sense to focus your efforts on the faculty members who reach the most students.

Another benefit of focusing on high-enrollment courses is that, as the number of students benefiting from the initiative rises, you are likely to see student advocacy increase as well.

Another benefit of focusing on high-enrollment courses is that, as the number of students benefiting from the initiative rises, you are

Adopt, Adapt, Create

As with the focus on scale, your return on investment (ROI) will be the highest if you start with easy wins that

likely to see student advocacy increase as well.

have immediate impact on students. From our experience, easy wins come when an OER is already developed, as it takes much less time for a faculty member to transition to a fully-developed OER than to adapt or create one themselves.

We recommend that institutions focus their efforts on faculty who could adopt already-existing OERs, as this requires the least amount of money from the institution and the least amount of faculty time. After you've exhausted all courses for which this could work, we recommend focusing on those that could adapt an already-existing OER; this still takes significantly less money and time than creating one. Finally, after a few years and if all adopt/adapt options are exhausted, move on to OER creation.

Eight Direct Tactics

In the OpenStax Institutional Partner Program, institutions complete no fewer than eight direct tactics through the academic year (from the beginning of the fall semester until the bookstore deadline for the next fall semester). In our experience, this number of tactics is needed because 1) different faculty will respond to different approaches; 2) it ensures that the conversation around OERs is ongoing, which signals to faculty and staff that it is a priority; and 3) some tactics aren't going to work, and it's difficult to predict which as this varies across institutions. Completing so many in one year minimizes the risk that one unsuccessful approach will derail the entire effort.

Rather than a standard set of direct tactics, OpenStax provides a list of many tactics and works with each institution to identify the eight most likely to yield positive results and ensure enough variety so that, if some don't work, the entire initiative is still successful. Direct tactics include promotions by senior leaders, workshops, and training sessions.

Plan Your Year

Once you've identified your eight direct tactics, the next step is to plan your year to build momentum, allowing time for marketing and cross-departmental collaboration, and with key dates in mind.

The main key dates you'll need to plan around are:

- All faculty events, such as convocation
- Start and end dates of each semester
- Holiday breaks
- Bookstore deadlines

Knowing those dates will help you with a general outline of your year:

- Fall faculty convocation: Begin your direct tactics

- Throughout the fall semester: Continue with your direct tactics until the Thanksgiving break

- End-of-year holidays: Cease direct tactics

- Spring faculty convocation: Start your direct tactics again

- Throughout the spring semester: Continue with your direct tactics

- Fall bookstore deadline: Complete all direct tactics prior to this date

With this structure your direct tactics happen throughout each semester, in a pattern of constant events and communications. We hear from faculty members that this momentum gives the impression that the OER initiative is really important because they "never stop hearing about it."

Planning out the year helps you think through the steps needed to complete each direct tactic and make it as effective as possible; it also helps in coordinating with other departments. Common planning steps include:

- Asking to be added to the faculty convocation agenda prior to the agenda being finalized

- Giving marketing enough time to develop materials so that you can begin marketing OER events two weeks out

- Marketing OER events at least two weeks in advance

- Working through the steps to get a grant program approved

- Providing senior administrators with ample time to review any communications prior to them being sent out on your behalf

Measure and Adjust

> **Another critical aspect of completing eight direct tactics within the school year is to track each with individual metrics so you can quickly identify those that are working and those that aren't.**

Another critical aspect of completing eight direct tactics within the school year is to track each with individual metrics so you can quickly identify those that are working and those that aren't.

At the beginning of the OpenStax Institutional Partner Program, after selecting the eight direct tactics they will complete, each school sets goals for the following three metrics:

- Faculty "leads:" the number of faculty who respond to the direct tactic and somehow indicate they are interested. This could mean putting their name down on a sign-up sheet, registering to attend an event, or responding to your request for a meeting and agreeing to meet with you. If you don't have an exact count, you can estimate the number of leads by using previous initiative data. How many faculty, for example, usually register for your workshops? When you send out an email asking faculty to do something, how many usually respond?

- Faculty adoptions: from use of the direct tactic, the number of faculty who agree to utilize an OER in

their course(s). This number is usually about half the number of the faculty leads above.

- Students impacted: derived from the number of the students in the courses for which faculty adopt an OER. An easy way to estimate this number is to estimate the average number of students taught per faculty member and multiply it by the target number of adoptions.

For many schools these numbers are educated guesses, and that's ok. The goal is not to get these numbers exactly right, but to have some sort of metric providing a baseline to see how each direct tactic works.

The Importance of Tracking Each Direct Tactic Individually

At least once per month, each OpenStax Institutional Partner school provides comparative data for the actual number of leads, adoptions, and students for each direct tactic.

Example

Tactics	Goal leads from tactic	Actual leads from tactic	Goal adoptions from tactic	Actual adoptions from tactic	Goal students impacted from tactic	Actual students impacted from tactic
Direct tactic 1	25	20	12	10	1,250	823
Direct tactic 2	5	0	3	0	250	0
Direct tactic 3	10	15	5	10	500	600
Direct tactic 4	7	6	3	2	350	189
Direct tactic 5	30	2	15	0	1,500	0
Direct tactic 6	10	7	5	5	500	473
Direct tactic 7	4	2	2	1	200	30
Direct tactic 8	50	60	25	30	2,500	3,000

Table 2. Tracking tactics

Note that in this example, direct tactics 2 and 5 didn't lead to any adoptions or students impacted. While many institutions panic at this point, thinking they've done something wrong, it's very common for one or two direct tactics to be unsuccessful.

We measure program completion by whether an institution completes each of the eight direct tactics and records the results and impact numbers. Our goal is to help institutions learn what works and doesn't in their unique campus climates, and then adjust. When we see that a direct tactic isn't working, we advise the institution to stop using it and put the recouped effort into the direct tactics that are working, maximizing their ROI.

Cross-Pollination of Direct Tactics

It's also very important to count each faculty member and their students only once, even if they respond to multiple direct tactics; not doing this leads to inaccurate reporting of your successes. If a faculty member responds to multiple direct tactics, count them and their students under the direct tactic you think had the most impact on that particular faculty member.

Systems of Accountability and Support

Each successful OER initiative must, finally, have systems of accountability and support to keep people on track and focused. All OpenStax Institutional Partner schools in each year's cohort meet monthly via phone to provide this support to one another.

At these meetings, each school shares updated numbers on their OER strategic plan, then reports (based on the numbers) one thing that's going well, one thing that isn't, and one thing on which they'd like feedback from the group. This format keeps the institutions on track, since having to report results to the other institutions as well as to an OpenStax representative is a powerful external motivator for completing tasks. It also provides a structured, confidential place for each school to seek advice and support from other institutions.

It's All or Nothing

The process and tasks we've outlined can seem overwhelming and, admittedly, it's a lot of work and not for the faint of heart. Many institutions understandably try to take shortcuts—skipping the step of getting initial buy-in, not recruiting a faculty leader, completing only a few direct tactics in a year, not tracking the success of each direct tactic. And the results show the difference. When an institution approaches us wanting to only complete a piece of what we recommend, we strongly encourage them to wait until they can do all of it. That's the only way to see dramatic results.

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Nicole Finkbeiner founded the Institutional Partnership Program at OpenStax at Rice University, which saves students millions of dollars in textbook costs each year. A former community college administrator, Finkbeiner

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Daniel Williamson manages the day to day operations of OpenStax using his extensive experience in academic e-publishing to guide content development, technology integration, and overall project coordination. A Rice University graduate and passionate advocate of affordable education, he has dedicated the past ten years of his life to developing and leading education startups from conception to culmination. During that time, he has staked a claim in many areas of specialization, specifically: open education, content development, ed-tech, consumer intelligence, management, and quality assurance.

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Richard Baraniuk is founder and director of OpenStax and a passionate advocate for open education. He has made seminal contributions to the open education movement by spearheading the widespread creation and usage of open educational resources (OER) via Connexions (1999) and OpenStax (2012). Through his belief that all students should be limited only by their aspirations, Richard has led OpenStax to become one of the largest providers of high-quality OER. He has an active research program in machine learning and signal processing, and his group's algorithms are powering the learning analytics and personalization engines in OpenStax's personalized digital courseware.

by Kimberly Johnson and Karen Pikula (both from Minnesota State) (bios)

Introduction: Context for Minnesota State

Minnesota State, one of the largest public postsecondary systems in the United States, is comprised of seven universities and 30 two-year community and technical colleges on 54 campuses across the state. The system employs nearly 9,000 teaching faculty and serves approximately 400,000 students each year, offering certificates and degrees in technical, pre-baccalaureate, baccalaureate, graduate, and applied doctoral disciplines. Across the system, nearly one in four students is classified as low-income. Tuition rates continue to rise and our system struggles with equity in access and completion. With research showing that lowering or removing textbook costs makes higher education more accessible and results in greater student success (Fischer, Hilton, Robinson, & Wiley, 2015), the issue of increasing access and affordability for students through reducing or eliminating costs for course materials has the potential to impact our students in multiple, positive ways.

In recent years we've seen a rapid expansion of interest in open educational resources (OERs) across our campuses, largely due to the efforts of Minnesota State college and university student associations. Students United, the university student association, has identified affordability (which includes advocacy for tuition changes as well as costs for materials) as one of its "issue campaigns" for 2017–2018. And LeadMN, the college student association, has an extensive Affordable Textbooks Campaign, with a student toolkit, OER pledge forms for students and faculty, and a contest to collect student stories. Student representatives serve on system-wide councils and committees, and have also taken their concerns about the cost of course materials to the state legislature, resulting in dedicated OER funding to Minnesota State in the last budget cycle. The issue of affordable content has thus received the attention of nearly everyone in this large state postsecondary system.

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In response to the legislation and to interest across the Minnesota State system, the system's Educational Innovations program offered grants for the 2015–16 academic year to raise awareness and encourage the adoption of OERs. Some institutions used grant dollars to create faculty support and development opportunities, and it became apparent that these elements were critical to the adoption of OERs. At Central Lakes College (CLC) the OER faculty development work, led by psychology professor Karen Pikula, emerged as an impressive and effective approach to encouraging and supporting faculty. Kimberly Johnson, Director for Faculty Development

for Minnesota State, identified this work as a potential model for systemwide support, and Kimberly and Karen have worked together to scale efforts for faculty across the system.

In this chapter we share our focus on faculty support and faculty development, including our work with the Open Textbook Network (OTN) and our campus project grants. We look at the approaches we've used to overcome the barriers faced by faculty when adopting OERs, and highlight the CLC Learning Circles model and our efforts to expand it across the system.

System goals and offerings

While the effort to increase affordability for students involves multiple constituencies, faculty lie at its heart, as they make the final decisions about the textbooks and materials used in their courses. So while we continue to engage college and university leadership to support affordable content efforts, we have focused on faculty needs and development in order to have the greatest possible impact.

One early effort included the development of a strong partnership with the OTN, which is based at the University of Minnesota. As part of that partnership, OTN and Minnesota State facilitators have offered trainings that include data on textbook costs and the impact on students. After the training, faculty participants are offered a stipend of $200 to provide a peer review of an existing textbook housed in the Open Textbook Library. Nearly 300 system faculty have participated, and a recent survey revealed that approximately 75% have since reviewed textbooks and 33% report adopting OERs in their classes. We are pleased with these numbers, yet sobered by the fact that 300 faculty is a small percentage of the nearly 9,000 instructional faculty in our system. Given the recent report from the 2017 Babson Survey Research Group that faculty awareness of OERs across the country remains low—only about 10% of respondents reported being "very aware" or OERs (Seamen & Seamen, 2017)—we know that this level of training continues to have great value and should remain part of our approach.

Along with the OTN training, the system office has offered grants for campus faculty projects designed to reduce costs for students by raising awareness and adoption of open curricular materials as alternatives to higher-cost publisher textbooks. This structure allows campuses to tailor projects to their specific needs, and has been quite successful for funding innovation projects. Nineteen OER projects, at a cost of nearly $400,000 since the 2015–16 academic year, have received funding. Projects range in scope from single departments working together to create a bank of OERs to collaborative student and faculty creation of an open text for college-wide first-year experience courses. Although all projects have resulted in savings to students—over $750,000 to date—many remain specific to the context of a single department or institution, and not much content has been shared widely. In addition, evaluation data has revealed multiple challenges that will need to be addressed in the future.

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courses, and to provide support in overcoming those challenges.

If we are serious about expanding OER adoption, it is critical to understand faculty hesitation and the challenges they face in adopting and integrating OERs into their courses, and to provide support in overcoming those challenges. To better understand the issues, we surveyed 200 Minnesota State faculty who had participated in the OTN training (60 respondents, or 30% response rate). About a third reported adopting an open textbook for their own courses, and many others indicated interest in campus or system supports to adopt or author materials. In that same survey, and through feedback on the campus grant projects, we identified obstacles and challenges that were preventing faculty from adopting OERs in their courses—primarily a lack of time, lack of availability of relevant OERs, and a lack of ancillary materials to accompany existing open texts (test banks, PowerPoint files, and other materials often provided by commercial publishers). None of these challenges could be overcome with our existing OTN training. As educational developers we also recognize that asking instructors to change behaviors and practices requires more than training workshops; development happens only with a more sustained, meaningful, and supportive approach.

As we considered responses to faculty-identified challenges in order to encourage wider adoption of OERs, we identified a campus grant project that had been quite successful and that offered the possibility for expansion beyond one college. The OER Learning Circles project from Central Lakes College, a community college in central Minnesota, created three cohort-based pathways that allow faculty to tailor their learning and next steps based on their own level of interest and experience: understanding and reviewing open textbooks, redesigning existing courses to eliminate textbook costs, or authoring open materials. This project design incorporates principles of effective professional development for instructors: 1) an understanding of faculty as adult learners that encourages critical reflection and opportunities to act on those reflections (Brookfield, 2006); 2) the need for quality learning environments that build on the varying needs, strengths, and interests of participants (Bransford, Brown, & Cocking, 2000); and 3) a focus on specific content that occurs over a period of time to engage colleagues in a coherent, supportive cohort (Desimone, 2011). This successful model is one that we are moving to scale up and across the Minnesota State system. Before sharing those plans for the system, we look more closely here at the OER Learning Circles project at Central Lakes College.

Beginning of a movement: OER at Central Lakes College

Central Lakes College (CLC) is a community and technical college with two campuses in central Minnesota which serve approximately 5,500 students annually. The OER movement at CLC began with a faculty professional development day presentation in January, 2015. The Dean of Technology and the librarian arranged for three individuals to present to faculty on OERs: the Director of the Center for Open Education and Executive Director of the OTN, the Minnesota State System Director of Academic Technology, and the Minnesota State System Director for Policy, Procedure, and Intellectual Property. This presentation explained OERs, the system office's engagement with the University of Minnesota to offer stipends for faculty to review OERs housed in the Open Textbook Library, the legal aspects of Creative Commons licenses, and fair use and copyright and their meaning in terms of OERs and academic freedom.

This presentation jump-started faculty interest in OERs, and many faculty began to investigate OERs and participate in the open textbook review opportunities being offered by the system office. Responding to this

interest, CLC created an informal OER committee made up of the librarian and the Dean of Technology and supported by the Vice President of Academic and Student Affairs. The developing OER movement at CLC had five core elements key to its success:

1. support from administration

2. academic technology supports

3. dedicated commitment of the campus librarian

4. willing partnership of the campus bookstore manager

5. inspired faculty choosing to adopt OERs, redesign their courses around OERs, and even author OERs.

In 2015, CLC applied for grant funding offered by the system office to support faculty in the review, adoption, and creation of OERs, with a goal of saving our students money on textbook costs. CLC also offers the Post-secondary Enrollment Option (PSEO), which allows high school students to take classes at the college; tuition is paid by the state, but CLC provides textbooks and course materials. With textbooks for students in this program costing CLC approximately $250,000 per year, increased use of OERs for PSEO would result in substantial savings for the college.

OER Learning Circles – theoretical framework and rationale

The OER Learning Circle model, written into the grant, funded the creation of a series of cross- disciplinary, collaborative faculty circles. The Learning Circle concept is deeply rooted in constructivist and experiential learning theories, and in active learning strategies. Research with novice teachers identified several things they believe are required in faculty development opportunities to ensure a successful transfer of knowledge from a professional learning experience to the application of that knowledge in new or novel situations: dedicated time to work on professional development activities, opportunities to engage in authentic interactive activities with experts in their field, and opportunities to engage in reflective conversations about those experiences with colleagues and peers (Pikula, 2015). This closely aligns with Dewey's (1959) theory that students learn by doing and develop habits and skills that are useful well beyond the learning circle context. It also encompasses a broader view of transfer that moves beyond the idea of the moving of discrete bundles of skills from one context to another, to seeing it as the moving of dispositions or "habits of mind" from one context to another (Bereiter, 1995).

Kolb's (1984) experiential learning cycle forms a simple structure for the Learning Circle process, where "learning is the process whereby knowledge is created through the transformation of experience" (p. 38). Aligned with earlier work by Pikula (2015), OER Learning Circles engage in the process of boundary crossing (Tuomi-Gröhn & Engeström, 2003a; Tuomi-Gröhn, Engeström, & Young, 2003b), where learners recreate new skills in new contexts by building on foundations they have created in earlier contexts. Learning is thus a fluid, situated process that does not end when the learner leaves the classroom (Hager & Hodkinson, 2009).

OER Learning Circles focus on each individual faculty member's own learning cycle, supporting them in identifying individual goals for participation, the ways in which these goals are related to their content areas and departments, and the impact their work will have on themselves, their students, and their learning community. The Learning Circles also focus on reflection and journaling, analyzing and documenting experiences, and a "pay it

forward" aspect of sharing those reflections and conclusions with colleagues to assist in current and future OER work. The active engagement of participating faculty in the weekly OER Learning Circle sharing sessions, as well as the cross-disciplinary collaboration and online discussion posts, allow faculty to demonstrate their "intention to learn" and to then participate in an "active phase of learning," both of which are critical aspects of experiential learning (Moon, 2004, p. 126).

The opportunity for "learning through reflection on doing" (Felcia, 2011, p. 1003) is facilitated by the faculty member and librarian leading the Learning Circles. Jacobson and Ruddy (2004) argue that ""a skilled facilitator, asking the right questions and guiding reflective conversation before, during, and after an experience, can help open a gateway to powerful new thinking and learning" (p. 2). For this reason, it is very helpful if the facilitators have a passion for OERs and a background in learning theory, pedagogy, and instructional design.

OER Learning Circle – the process

The OER Learning Circle process at CLC is a librarian- and faculty-driven initiative. Faculty participants are selected through an application process. The institution's OER committee reviews applications, and successful applicants are notified by email of their selection. Sample criteria for selection include a course with high PSEO or concurrent enrollment, a course needed for a Z-degree (a two-year degree that can be earned with "zero" costs for course materials), a course scheduled to be taught in the next academic year, a high-enrollment course (>50 students per year), a faculty member new to OER Learning Circles, sustaining support for a current OER course, and potential significant savings to students and the institution for the next academic year.

Selected faculty choose one of three designated pathways: OER materials review, OER course redesign, or OER authoring. Faculty on all pathways are eligible to receive a stipend and work in facilitated, cross-disciplinary, collaborative opportunities with other faculty members. They share ideas and support each other throughout the process, but there are different expectations for each pathway:

- Faculty on the OER materials review pathway complete a work plan, a textbook comparison template, and a review rubric (using the BC Campus Criteria Checklist).

- Faculty taking the OER course redesign pathway create an online course shell using their selected OER materials or create a hard copy portfolio of content, objectives, and assessments for their course. Faculty choosing to accept a stipend for their work license a copy of the course to CLC for department use. This helps move OER adoption from the level of the individual faculty member to the level of the department, making our OER efforts more sustainable.

- Faculty choosing the OER authoring pathway work individually or collaboratively to create OERs that will be shared and licensed to CLC. These resources may be textbooks or other open resources such as test banks, portfolios of worksheets, assignments, quizzes, videos, podcasts, and/or PowerPoint files.

All participants are required to attend 80% of the weekly 2–3 hour OER Learning Circle meetings, held for 10 consecutive weeks during the fall or spring semester, or during five consecutive weeks of a summer session. These meetings take place in a computer lab where faculty can work individually or collaboratively in small groups. Faculty are required to create, submit, and update weekly work plans and journals. Participating faculty are

encouraged to partake in optional discussions designed for the sharing of ideas, thoughts, challenges, successes, and pearls (aha moments or special takeaways) from their week's work. Faculty on all pathways share their completed projects at the final Learning Circle.

In addition to the face-to-face OER Learning Circle activities, faculty have the support of an online course room through our system-wide learning management system, Brightspace D2L. The course room is structured with weekly modules for each of the three pathways, and provides faculty with access to additional support modules, folders for submitting weekly work plans and journals, and optional discussion forums to share and discuss pearls from their individual experiences. Because the project seeks as well to model best practices in teaching and learning, including online course design, the online course room also includes modules dedicated to Universal Design for Learning, Quality Matters (QM), case studies, and simple templates designed as time-saving measures that provide organizational structure as faculty review OERs, redesign their courses, and author OER materials.

A critical piece of the OER Learning Circle process is letting faculty know that their work is not only appreciated, but supported (Pikula, 2015), so participants are paid a stipend for their work. The stipends range in value: the stipend for the OER textbook review pathway is $200– $500, while participants in the course redesign and authoring pathways receive $1500. While these are adequate amounts that create an incentive for faculty to make a change, they cannot fully compensate for all of the time participants dedicate to their OER Learning Circle work. They do, however, show faculty that their work is appreciated and supported by the institution and by administration.

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Expanding the model to new partners

At CLC, the OER Learning Circles model has been extended to include high school partners and collaborating college faculty in OER concurrent enrollment Learning Circles. These provide a collaborative cross-disciplinary environment in which high school faculty and their college collaborators work together to discover, adopt, redesign courses, and author OERs for their courses. These OER Learning Circles (known as Professional Learning Communities, or PLCs, for secondary educators) have been highly effective, with the adoption of OERs resulting in cost savings for the high schools, the college, and students. OER concurrent enrollment Learning Circle participants begin their work with four basic questions in mind:

- What OERs will we research and review?
- How will we evaluate them?
- What are the gaps?
- How will we supplement the gaps? (Pikula & Preimesberger, 2017)

The OER College in the Schools (CIS) Learning Circles are structured differently than the CLC Learning Circles. High school instructors attend from various locations within the region. Their administrators have agreed to provide classroom substitutes when they attend, so consideration for these arrangements means it is not possible

to hold consecutive weekly meetings. Instead, the OER concurrent enrollment Learning Circles meet for three hours five times over the course of the semester. The meetings begin with a provided lunch and a sharing session in which participants discuss their work, things they have discovered unique to their content area or their students, successes and/or challenges they face, and other OER work, strategies, or pedagogy. This is a time for review, reflection, sharing, and collaboration. These activities are led by the high school or college faculty, and often start discussions focused on assessment, outcomes, content, and delivery.

The CLC concurrent enrollment Learning Circles culminate with a final "Findings Summit" to which participating high school principals, superintendents, and college administrators are invited. Participants in the first session were enthusiastic about OERs overall and about the opportunity to pilot OERs during the project, and every participant adopted OERs for use in the next academic year.

The CLC OER Learning Circles and the concurrent enrollment Learning Circles have been critical elements in the successful meeting of the institutional goals for OER work at the college. Our purpose was to increase awareness and adoption of open textbooks and other open access materials, beginning with textbook reviews and then moving to OER implementation, course redesign, and the authoring of new or ancillary OERs. The creation of an A.A. Z-degree (a degree program path with zero cost for class materials), continued work on a corresponding low-textbook-cost degree, partnerships with our concurrent enrollment high schools to promote OER use in our concurrent enrollment classes, and the refinement and creation of print-on-demand services have resulted in increased student success and significant cost savings for students, the college, and our concurrent partners.

Scaling up and across the Minnesota State system

After a few years of offering OTN trainings and campus OER grant opportunities at the system level, we were looking for ways to move forward and support faculty ready to adopt and/or author materials. Although we recognized the need to continue with basic training in understanding OERs, we were concerned about the lack of support for faculty who were ready for more. We began by articulating the system office's goals for OER support:

1. Strengthen our partnership with the OTN as it evolves and expands its offerings (including work with librarians and Creative Commons (CC) certifications).

2. Continue to raise awareness of OERs through virtual or face-to-face trainings with faculty across the system.

3. Encourage collaboration with colleagues across institutions to support growth in the use of OERs.

4. Where possible, align our OER work with other strategic priorities, especially transfer pathways (building seamless pathways for students to earn an associate's degree at a system college and then continue on for a bachelor's degree at a system university), and reducing costs for students in developmental education courses.

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grants, the funding of campus projects provided space and opportunity for local, innovative approaches to advance OER adoption, so we looked to these projects for inspiration to move forward on a system level.

As we saw with the OER campus grants, the funding of campus projects provided space and opportunity for local, innovative approaches to advance OER adoption, so we looked to these projects for inspiration to move forward on a system level. The success of CLC's initiative caught our attention. The OER Learning Circle model felt scalable with current resources and technology, and it seemed possible to adapt the model to align with system goals. We thus created our statewide OER Learning Circles program with two different pathways for faculty, each with different expectations and compensation. The first pathway is the OTN Authoring Projects, which call for faculty at two or more institutions who will collaboratively author course materials for developmental education courses or any courses that are part of completed transfer pathways. Developed materials will be CC-licensed and meet the criteria for acceptance in the OTN, and participants will receive funding for a three-credit course release.

Our second pathway is the OER Course Redesign or Ancillary Materials Authoring Project. Faculty can choose to redesign an existing course around OERs or create ancillary materials to support an existing open textbook for use in a course. Anything developed will be CC-licensed, and participants will receive funding for a one-credit course release.

While the model for the system OER Learning Circles is very similar to the CLC model, the weekly meetings over a ten-week period will all be virtual, and the online course room is likely to play a more significant role. This faculty development will meet our system goals to encourage collaboration, and will align with other strategic priorities.

Mindful of the experience of faculty working to create a Z-degree through Achieving the Dream who found that "collaborating with colleagues on the development and/or collection of OER materials is appealing to many faculty members but can be challenging" (Griffiths, et al., 2017, p 18), we've funded a CLC Learning Circle facilitator to oversee and facilitate the systemwide OER Learning Circles.

In February, 2018, nearly 30 faculty from 16 institutions began work in the OER Learning Circles. We are excited about the next steps with OER faculty development, and have multiple evaluation measures built into the systemwide OER Learning Circles for spring 2018. We will be looking closely at both the model and the final products, and hope to demonstrate substantial savings for students as meaningful return on this faculty development investment. This will help us determine next steps.

Conclusion

In our large, diverse system, we have spent some years raising awareness of OERs, funding small campus-based OER projects, and laying the groundwork for a broader systemwide opportunity to support faculty ready to move beyond awareness to adoption and/or authoring. Minnesota State continues to invest in supports for faculty as we work to expand awareness and adoption of OERs across the many colleges and universities in the system.

Our faculty development efforts began with introducing faculty to OERs through partnership with the OTN and through our "OER 101" trainings. Faculty participants were encouraged to peer review textbooks in the OTN, and provided a small stipend for doing so. This served to raise awareness of OERs and to reassure faculty of the quality of existing open textbooks. Unfortunately, it didn't always lead to OER adoption in courses; subsequent surveying of faculty revealed multiple barriers to adoption and authoring, including the lack of time and supports as well as the lack of available disciplinary texts or ancillary materials supporting existing texts.

In addition to the OTN trainings, the system office was providing small grants to campuses for projects related to OERs. There were many of these small-scale efforts, so we looked to them for potential faculty support and for development models that showed promise for the system as a whole. The OER Learning Circle model at Central Lakes College was one such project. With the availability of additional funding, we created a scaled-up version of the OER Learning Circle to support faculty interested in redesigning courses around free materials or authoring textbooks or ancillary materials. The pilot, with nearly 30 faculty from 16 colleges and universities, is running through spring 2018. This effort has not only shown tremendous success in meeting our goals for increased OER adoption and authoring, but has proven to be positive and impactful in multiple, unexpected ways.

OUTCOME – why is this working?

The work completed by faculty in the OER Learning Circles exceeded all of our expectations. The resulting OER materials are of the highest quality, authored by instructors who are masters of their content. We also discovered gems, such as the unexpected value in peripheral pedagogical, accessibility-related, and culturally relevant components of the created materials. Examples include:

- The creation of accessible text, using style headings for text and Alt Tags for images along with sans-serif fonts for more web readability.
- Video links that include closed captioning.
- Use of a variety of names that indicate diversity, including Latino/a, African/African-American, Native American, and more.
- Examples from authors of diverse backgrounds when possible.
- The updating of research examples and sample topics to reflect student diversity and interests, and the replacement of dull, dry, generic-sounding ("old white") names.
- The addition of folklore and ideas from other cultures and religious traditions to broaden everyone's understanding of and approach to big ideas.
- The inclusion of modern materials, including Ted Talks and speeches of modern-day philosophers who are female, indigenous, or not from a Western context.
- "Sample speeches" collected by students and representing diverse topics and students.

We also saw bridges of collaboration, peer support, and guidance resulting from the weekly web conference Learning Circles, in which faculty could share successes, ask for help with concerns, and connect with colleagues from different disciplines across the college and university system. Faculty who had taught for many years shared

their experiences and thoughts with newer faculty, and newer faculty shared more recent research-based ideas and examples. Faculty collaborating on one resource from two or three voices worked together to make sure the voice of the resource was consistent. Faculty provided new contacts to Learning Circle colleagues that led to added cross-institutional supports and the sharing of ideas, and often shared their knowledge through impromptu presentations in response to a fellow faculty's questions.

With this successful pilot, we look forward to finding the means to continue to offer this model to faculty across our system. It is also our intention to think about sustainability and expansion by sharing resources to promote the model's use at individual campuses and to colleagues outside the system who might be interested in applying this to their own contexts.

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Devin Soper, Lindsey Wharton, and Jeff Phillips

by Devin Soper, Lindsey Wharton, and Jeff Phillips (all from Florida State University) (bios)

Introduction

Florida State University (FSU) is a large research university composed of over 40,000 students in 16 separate colleges and more than 110 centers, facilities, labs, and institutes. Despite the national and global momentum for open educational resources (OERs) in higher education, by November, 2016, FSU still did not have a formal OER program. At that time we also did not have a center or office of teaching and learning or a formal community of pedagogical practice. Any work, discussions, or collaborations to enhance open pedagogy or the use of OERs were occurring informally, and there was no place for instructors, librarians, or staff to share knowledge or materials. Lacking a community of practice, our campus was without an opportunity to design an open educational framework or supporting policies.

Our situation was not unique. In fact, many campuses continue to struggle with the initial steps of planning and developing an OER program. While some OER proponents might see this as a downfall or another hurdle to climb in the open movement, we saw it as an opportunity. At FSU Libraries, we decided to take immediate action and initiate diverse pilot projects to promote and support the proliferation of OERs on our

This chapter details our team's effort to put an OER program into practice efficiently and effectively, using student- and faculty-focused initiatives.

campus, with the clear understanding that we could pivot and improve these projects later if needed. This chapter details our team's effort to put an OER program into practice efficiently and effectively, using student- and faculty-focused initiatives. We discuss the process of forming a team and establishing initial goals, our approach to launching this effort, the engagement strategies we used with faculty and students, and the challenges faced and lessons learned. We conclude by examining the impact of the program and describing our future steps.

Forming Our Team

To jumpstart an OER program, it is key to assemble a team of passionate advocates. Our initial team was comprised of four faculty librarians: a distance librarian, a science librarian, an instruction librarian, and our scholarly communication librarian, who led the group. This was an unconventional arrangement, as committees and teams within our organization usually remain confined within a unit or department.

Our divergent goals and experiences, which drove our individual interests in the project, illustrate how OERs provide innovative solutions for diverse problems, and can bring together wide-ranging stakeholders with multifaceted perspectives. As an example, our extended campus and distance services librarian became an OER advocate due to her experience with our international study centers. During her visit to the European campuses in the summer of 2015, she repeatedly heard from instructors that students were not travelling overseas with their textbooks, shipping overseas was exceedingly expensive, and shipping times were unreliable. At these centers, textbooks were an overall hindrance to teaching and learning.

Our scholarly communication librarian became an OER proponent through his experiences providing copyright consultations to faculty and staff. Because these consultations regularly forced him to confront the restrictiveness of the "All Rights Reserved" copyright regime, he became enamored with the power of open licensing to promote equitable access to information and provide the requisite reuse rights for myriad forms of scholarly and pedagogical innovation. And our instruction librarian wanted to support a wider variety of sources for course materials, providing diverse viewpoints and influencing critical thought—foundational elements of information literacy.

While we approached the search for financially viable and sustainable options from different perspectives, it became clear that there was one common solution: open educational resources.

One additional element made our OER team special and allowed us to jumpstart our initiative: we were unofficial. This does not mean we were unauthorized or unsanctioned; on the contrary, department heads and senior leadership fully supported our endeavor. Yet we were not a faculty committee, or a taskforce, or directed by a library-wide strategic initiative. Without the defining characteristics of a long-standing group, we were able to make decisions on the fly, implement projects on our own timelines, attempt cross-campus partnerships, and delve into our ideas as our framework continued to materialize.

Establishing Our Philosophy and Goals

As soon as our team came together, we began developing a strong and focused philosophy for our OER initiative. This is a crucial step in the formation of an open educational program at any institution, as its sets the direction for the team's efforts and creates a common vision for success. We based our ideology on what we really cared about and why this initiative mattered to us, individually and for our organization. Primarily, we wanted to save students money, and we were disappointed and frustrated by the current traditional textbook model as publishers continued to drive up the price of course materials, increasing profits at the expense of teaching and learning. We also saw that exciting and effective models were being used at institutions across the country (Young, 2017), and wanted to implement these models on our own campus. Our colleagues at other institutions had been involved in OER programs for years, trailblazing the path and creating a model for local efforts.

Our goals for the initiative were broad and wide-ranging, from promoting the role of the library in

pedagogy to developing a community of practice on campus.

Our goals for the initiative were broad and wide-ranging, from promoting the role of the library in pedagogy to developing a community of practice on campus. Our group saw the open movement as an opportunity to further promote and expand the role of the libraries as a student and faculty partner in the classroom and around campus. While following in the footsteps of OER leaders is advantageous and efficient, it is also crucial to develop an OER philosophy that fits your institution, your team, and your community. At FSU, we wanted to create a pedagogically-focused community of practice on our campus and center it on the work, resources, and services of the libraries. Different library units were already engaged in supporting pedagogy, from curriculum-mapped information literacy instruction to deep partnerships with faculty engaged in digital humanities. After one OER team member attended the Digital Pedagogy Lab Institute, for instance, she actively sought to expand the libraries' place in providing critical and thoughtful support to instructors teaching with technology. In many ways, our current ambitions and energy precisely aligned with the OER and open pedagogy movements.

The Slow-Drip Approach

Once our philosophy and goals were in place it was time for us to begin testing the waters around campus and developing plans, programs, and resources for this community of practice. We adopted what we call a "slow-drip approach." Rather than implementing broad, campus-wide changes or policies, we started small and searched for natural partners on campus, relying on our library colleagues and on existing cross-campus partnerships.

We use a subject librarian model in the Research and Learning Services department, so we had librarians embedded in various capacities throughout the academic departments. Because these librarians are familiar with the research, faculty, courses, and teaching within these departments, we began our outreach efforts through them, with the goal of dispersing information about OER opportunities to interested faculty and beginning the conversation about open and affordable alternatives to traditional course materials. We also have a number of functional specialists who collaborate with offices, centers, and staff around the university. These library colleagues connected us with additional campus contacts such as our office of Distance Learning and our School of Library and Information Science.

As we began engaging in regular meetings, troubleshooting hurdles, and conceptualizing the use of OERs on our campus, the community of practice we were trying to create materialized organically. New partners and opportunities emerged. The diverse perspectives provided by these partnerships allowed for better problem solving and ideating. And finally, we were able to target the audience most affected by the high-cost traditional textbook model: our students.

Following the Leaders

Launching an OER initiative has never been easier. Leaders in the field have shared a wealth of high-impact strategies and best practices. Researchers have also generated a wealth of data on textbook affordability concerns,

student and faculty perceptions of OERs, and the impact of OERs on student learning outcomes, to name just a few of the main research areas (Hilton et al, 2016). By leaning on these valuable resources, we were able to get our program started in a short amount of time. Specifically, we consulted experts in the field, reports on textbook affordability concerns, and a variety of other scholarly and popular resources documenting case studies and best practices.

Along with educating ourselves about OER and textbook affordability generally, our main objectives in conducting an environmental scan were to gather ideas for successful initiatives that we could bring to our campus and to identify relevant resources for planning and executing these initiatives. We identified two proven, complementary strategies for bootstrapping our OER initiative:

- Launching an alternative textbook grant program to incentivize adoption of open and affordable alternatives to commercial course materials
- Facilitating a #textbookbroke tabling event to engage with our students and gather feedback on the impact of textbook affordability concerns at our institution

Because these initiatives had a proven record of accomplishment at other institutions, it was relatively easy for us to convince our senior libraries administration to support them. It was also relatively easy to find case studies, reports, and other resources to expedite the implementation of each initiative. We used the FLVC 2016 Student Textbook and Course Materials Survey (2016) to help establish the need for an OER initiative at our institution, and found many examples of OER mini-grant programs on which we could model our own. The process of identifying these programs has only become easier since we conducted our environmental scan, particularly since the launch of SPARC's Connect OER platform (2017a), a directory of OER programs and activities at campuses across North America. We also benefited immensely from the BCcampus OER Student Toolkit (Munro, Omassi, & Yanno, 2016), which provides detailed information on how to organize a #textbookbroke campaign.

While planning our initiatives, we were also careful to engage with our subject librarian colleagues, to keep them apprised of our progress and ensure that they could contribute ideas. Although many of them have not been directly involved, we knew it was important to get their buy-in to ensure the program's long-term sustainability and scalability.

Engaging with our Instructors: Alternative Textbook Grants

We modeled our Alternative Textbook Grants (ATG) program on similar OER mini-grant programs launched across the U.S. in recent years. Although implementation may vary, these programs share a common purpose: providing educators with incentives to adopt, adapt, or create OERs for their courses. In conjunction with these programs, many state governments have passed legislation in recent years to provide central funding for the development of OER incentive programs (SPARC, 2017b).

When we started planning our mini-grant program, there were no established mini-grant programs at other public universities and colleges in Florida that we could use as comparators, and no central state funding available for OER initiatives. Our first task was thus to find a source of funding. We accomplished this by appealing to our libraries' senior leadership—specifically, our Associate Dean for Collection Development, who had allocated

funds from our collections budget for open access initiatives in the past. By presenting evidence of the impact of OER mini-grant programs at institutions across the nation, we were able to convince our leadership to allocate a modest $6,000 for a pilot program. Given the limited size of this allocation, we decided to cap our mini-grants at $1,000 for each proposal to adopt open or library-licensed materials in place of commercial textbooks.

Once we had secured funding, the next step was to decide on the structure of the pilot program, including requirements for applicants and grant recipients, an application evaluation rubric, a memorandum of understanding for successful applicants, and a structured program of workshops and consultations to support our initial cohort of instructors in implementing their alternative textbooks. We benefited immensely from colleagues at other institutions who had launched similar initiatives in the past and shared information about their own programs. For more details on the structure of our program, readers are encouraged to consult FSU Libraries' Alternative Textbook Grants website.

After seeking input on and approval for our proposed structure from senior leadership and colleagues, our next major task was to get the word out. This was no small undertaking, especially given the size of our university and the fact that we were launching our grant program late in the term. By the time we had finalized the program structure and created a webpage and online application form, we were midway through the Fall 2016 semester and only four months from the application deadline. This tight timeline led us to pursue an outreach strategy that focused heavily on campus-wide communication channels, as opposed to targeted outreach to individual instructors. More specifically, our communication plan included the following tactics:

- Email template and flyer distributed by subject librarians to their liaisons at academic departments
- Email to all faculty distributed by the VP for Faculty Development
- Promotion on social media (Facebook and Twitter)
- Promotion at library events for faculty and grad students

Despite the short timeline, we received seven proposals by the application deadline, and were able to fund six of them. The successful grantees were a diverse group of instructors from different disciplines and at different stages of their academic careers.

Following our selection of grantees, we sent each one a memorandum of understanding outlining the scope of the project, roles and responsibilities, and projected timelines for project completion. We also offered two workshops attended by all of the grantees—one on OERs and Open Textbooks, and another on Open Pedagogy. Finally, we scheduled individual consultations to discuss the projects in more detail and identify the kind and extent of support each instructor would require from the Libraries.

We determined that further support was required for three of the six instructors, and scheduled regular follow-up consultations over the summer of 2016 to discuss material selection, copyright and licensing, instructional design, and learning management system integration. These consultations were an excellent opportunity for us to provide personalized assistance and begin to forge meaningful relationships with the instructors. At the same time, however, they presented scalability concerns, as we quickly realized that we would not be able to sustain the same volume of consultations for a larger cohort of instructors. We are planning to move to a rotating consultation schedule for our next round of grants, giving each grantee the opportunity to meet once with each member of our

team to discuss the topics above, rather than providing a recurring series of consultations with the entire team. If additional meetings with a particular team member are required, those can be arranged as well.

With respect to the first-year impact of our program, we estimate that the six instructors who participated will collectively save our students up to $56,000 in textbook costs by the spring of 2018. This figure is based on the estimated annual headcount enrollment for the courses in question and the cost of purchasing new copies of the commercial textbooks previously assigned in those courses. This represents a return on investment (in terms of student savings) of almost 10/1 after one year, with strong potential for equal or greater savings in future years, provided that the instructors continue to use the alternatives identified. Three grantees adopted open textbooks for their courses, and three adopted a combination of library-licensed resources and free online resources, so all of the adopted course materials are available to students at no cost. At the time of writing, four of the six grantees are teaching with their alternative textbooks for the first time, so we have yet to evaluate grantee or student perceptions of the adopted materials or the grant program itself. That said, anecdotal feedback from the grantees suggests that perceptions are positive on both counts.

Our program also enabled us to make meaningful progress toward our two other goals: engaging with our instructors and building a campus community of practice around OERs. Our efforts to promote the program, for instance, have led us to engage with faculty at a range of library events and faculty meetings. During one meeting, we met an instructor who had already adopted an OpenStax textbook for his section of General Chemistry I, and who later advocated successfully to extend the adoption across all sections of the course. Since this course has one of the highest enrollments at FSU, adoption of this one open textbook could save our students more than $500,000 by the summer of 2018.

Our program also enabled us to make meaningful progress toward our two other goals: engaging with our instructors and building a campus community of practice around OERs.

In addition, each of the instructors in the pilot program has since promoted the program to colleagues, with one publishing a blog post in which she encouraged "colleagues and anyone interested to tap into this brilliant, talented, fun and eager-to-assist library team" (Dwyer Lee, 2017). As a result, our team has observed increased awareness of our grant program among both instructors and administrative units on campus. Although evidence of a burgeoning community of practice is currently anecdotal, we plan to test this hypothesis over the coming year through a systematic assessment of instructor perceptions and practices with respect to OERs.

Engaging with our Students: #Textbookbroke FSU

Inspired by the programs at the University of British Columbia and Simon Fraser University, and by our desire to follow current leaders and trends in the OER arena, we implemented a #textbookbroke initiative on our campus. We developed tabling events and created surveys to determine our student's thoughts about the cost of textbooks, hoping to gain more insight into how much they were spending on textbooks and how we could alleviate the financial strain. We held these events in multiple locations, including the main library on campus, the science library, and a popular walkway that students cross throughout the day. We gained IRB approval to use the survey, which consisted of the following questions:

- Are you a student/alumnus at FSU?

- What is your highest level of education?

- Estimate how much you spent on textbooks last semester

- Would you use an online textbook if it was free?

- Would a $30 print textbook help reduce any financial strain?

- Have you ever not purchased a required textbook due to the cost?

    ◦ If so, what college/department was the textbook for?

- Have you ever decided not to take a course due to the cost of the textbook?

    ◦ If so, what college/department was the textbook for?

The surveys were located on Qualtrics and we used iPads to present the questions. We often asked the students the questions ourselves and marked the answers on Qualtrics; this increased the speed of taking the survey and encouraged more conversation from the students, who often elaborated beyond the close-ended responses. We received ample feedback at all of our events (n=346), but the two tables inside the libraries received the largest number of responses. Although the outdoor event had significantly more foot traffic, the popularity of the libraries' events were greater due to an interactive board which allowed students to use a sticky note to write down the largest amount of money they spent on textbooks in one semester. Students placed this note on a large chart divided into five columns—STEM, business, social sciences, humanities, and other—with rows that showed the amount of money spent, ranging from $0 to $1,000+ (Table 1).
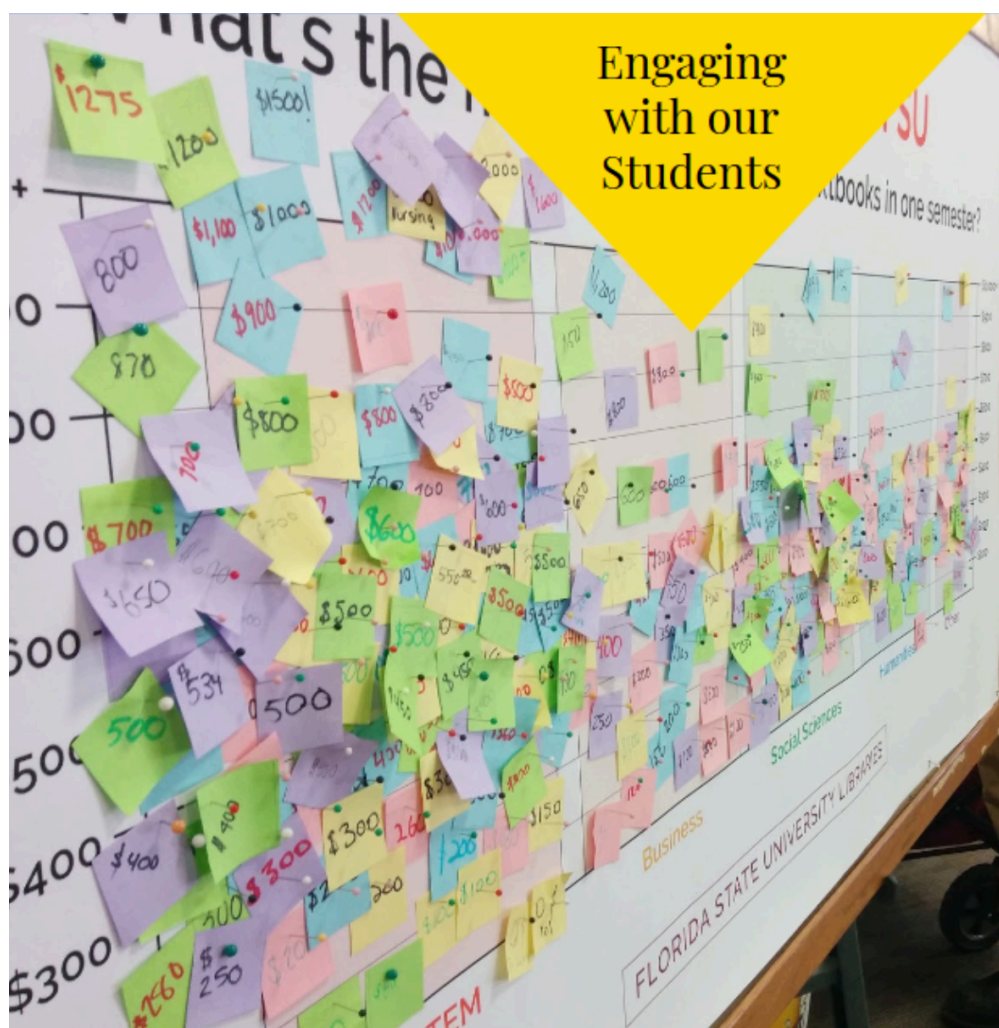
Table 1. The interactive board used at #textbookbroke events.

This interaction promoted conversation between the librarians and students, providing a insight into student's thoughts on textbook affordability.

Of the 346 survey participants, 343 were current students or alumni of the university, and the majority (n=233) had taken some undergraduate courses (Table 2). Students had spent an average of $360 on textbooks the previous semester, with a range from $0 to $2,000. Respondents with the highest amount of spending reported biology, chemistry, and nursing as the majors with the most expensive textbooks in one semester.
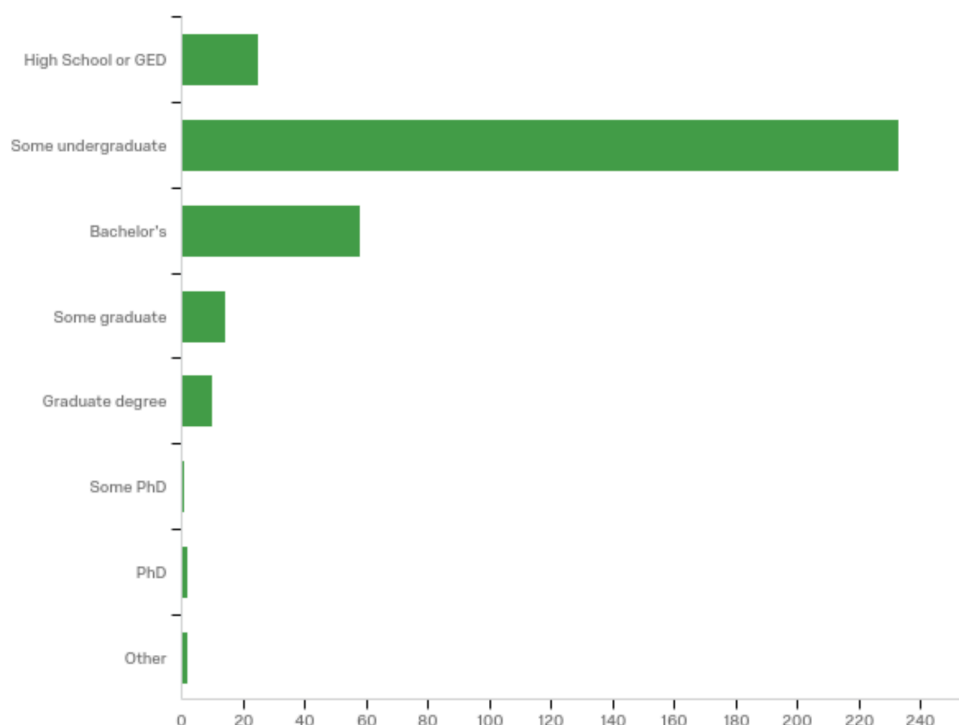
Table 2. Participant's highest level of education.

To determine how students perceived the benefits of using OER resources from OpenStax, we asked "Would you use an online textbook if it was free?" and "Would a $30 print textbook help reduce any financial strain?" Results showed that 93.37% of participants would use an online textbook if it was free, and 97.40% said that a $30 print textbook would reduce financial strain. These data supported our suggestion that the university apply for the OpenStax Institutional Partnership Program.

Our final inquiries asked if students were not purchasing required textbooks for their classes, or if they were avoiding classes because of the textbook's cost. The survey revealed that only 11% of respondents have decided not to take a course because of textbook costs, but that 72% have decided not to purchase a required textbook due to cost. This number exceeds the 66.6% of students reporting, in the 2016 Florida Virtual Campus survey (FLVC, 2016), that they did not purchase a required textbook.

Challenges and Lessons Learned

As might be expected in the launch of any new initiative at a large research institution, we encountered a number of challenges, the main one being a lack of campus-wide participation. As mentioned above, there was no OER work underway when we launched our initiative, either in our libraries or among key campus partners such as our campus bookstore, the Office of Distance Learning, or the Student Government Association. Although we made every effort to involve these partners, sending emails and setting up meetings to explain our goals and invite collaboration, we were not immediately successful. Because we launched our initiative late in the

Fall 2016 semester, many partners had already established their priorities for the academic year and had limited capacity to take on additional work, even when they were interested in collaborating. While this was somewhat disappointing, it also gave us time to focus on our two initiatives to engage instructors and students, both of which were very successful. The lack of campus-wide participation did, however, affect our application to participate in the OpenStax Institutional Partnership Program, which, despite support from our Provost, was not successful in 2017.

Other notable challenges resulted from institutional bureaucracy and policies regarding promotion and tenure. Like many large institutions, FSU has largely decentralized the governance of curriculum decisions to academic departments, many of which have curriculum committees that are responsible for textbook adoption decisions. While this decentralized model doubtless has benefits for departments and course instructors, particularly for high-enrollment, general-education courses, it made it difficult for our team to conduct outreach around our Alternative Textbook Grant (ATG) program. In many cases, we found instructors who were interested in using open textbooks in their courses, but who felt that they did not have the authority to adopt a new textbook without the support of a curriculum committee or department chair. Given the small size of our team and the fact that we launched the ATG program late in the Fall 2016 semester, we didn't have time to reach out to the relevant committees or chairs before the grant application deadline.

With respect to promotion and tenure policies, FSU places a great deal of emphasis on research output and relatively little on performance in teaching. Several faculty members reinforced this institutional belief to our team, and we found additional evidence in FSU's Promotion and Tenure guidelines (Sampson Jr, J. P., Driscoll, M. P., Foulk, D. F., & Carroll, P. S., 2016), which devote relatively little attention to defining excellence in teaching and far more attention to research. The guidelines even explicitly discourage faculty from authoring textbooks: "given the often considerable amount of time required to write a book, tenure-earning faculty should generally avoid writing a textbook." Unlike some other institutions, FSU does not have a tenure-track stream based on teaching. In light of these guidelines, many FSU instructors have expressed reservations about participating in the ATG program due to the perception that it would take time away from their research and publishing activities, negatively affecting their chances of receiving tenure or promotion.

Despite these challenges, however, the first year of our OER initiative was very successful, and our team is optimistic about future development. It is common for a new initiative to receive a lack of campus-wide participation, and we have already begun to overcome this challenge by adding new partners. Although institutional bureaucracy and promotion and tenure policies will doubtless continue to pose challenges, they are far from insurmountable. While some instructors may be discouraged from participating, there will always be innovators who are passionate about OERs and eager to participate despite the challenges. As our experience illustrates, it is often enough for a new OER initiative to seek out the instructors and stakeholders who are ready to participate and build from there. It takes time to raise awareness across campus and to change culture, but you can forge meaningful relationships with the innovators in a much shorter period of time, and these relationships can be a powerful first step toward building momentum on a broader scale.

First-Year Impact

The first year of our OER initiative led to considerable impact in the following three areas: student engagement

and savings, increased funding and support, and new partners and collaborators. In terms of student engagement and savings, our #textbookbroke tabling events drew a huge response from our students, including 346 survey responses that collectively showed the extent of textbook affordability concerns at our institution as well as strong support for open textbooks and related affordability initiatives. As noted above, we expect the instructors who participated in the first round of our ATG program to save our students $56,000 in textbook costs by the summer of 2018, a return of almost 10/1 on our Libraries' investment of $6,000 to fund the grants. Furthermore, our team has also been very pleased to see open textbook adoptions occurring outside of our ATG program, notably in FSU's General Chemistry I course. This action can potentially save students more than $500,000 by the summer of 2018.

> **The first year of our OER initiative led to considerable impact in the following three areas: student engagement and savings, increased funding and support, and new partners and collaborators.**

Following the early success of our #textbookbroke campaign and ATG program, our OER initiative received increased funding and support from several administrators on campus.

The first evidence of this came in the form of a letter of support from our Provost for our application to participate in the OpenStax Institutional Partnership program. In addition, FSU Libraries' senior leadership team increased the funding allocation for our ATG program to $10,000 for our second round of grants, and FSU's International Programs directors allocated an additional $5,000 to fund ATG proposals from instructors at extended campuses. Taken together, these funding increases have almost tripled the ATG program's initial $6,000 allocation, making it possible for us to offer a larger number of grants. The first-year impact of our OER initiative also enabled our team to raise $3,250 toward hosting an OER symposium during Open Education Week 2018, thanks largely to generous contributions from the Deans of FSU's College of Education and College of Communication and Information.

Finally, our OER initiative has grown to include several new partners and collaborators. Our monthly meetings now include representatives from FSU's Office of Distance Learning, iSchool faculty, and graduate researchers in the field of educational technology. Our newly launched Center for the Advancement of Teaching has also become an important collaborator, promoting our ATG program and related workshops for faculty through its newsletter and discussion groups. We have also made headway toward a partnership with our SGA, which has yet to participate directly in our OER initiative but has recognized textbook affordability as an important student concern and expressed interest in working with us.

Future Program Development

As our open and affordable textbook initiative continues to grow on campus, our team looks forward to advancing OER adoption on our campus through the following initiatives.

OER assessment

Since we launched our OER initiative without conducting any formal assessment of stakeholders on our campus, gathering data to support and inform our work will be an important priority moving forward. In addition to evaluating our ATG program through instructor and student surveys, we have also undertaken a campus-wide assessment of instructor and student awareness of and readiness for OERs and textbook affordability initiatives. We are also looking at institutional data to compare the cost of required textbooks with high failure and/ or withdrawal rates in specific courses, and are assisting our subject librarians in proactive outreach through comparison of the required course materials list and our library-licensed collection. Though different in scope, these projects will provide our team with valuable insights for future program development and outreach strategies.

OER symposium

In collaboration with faculty partners in the College of Education and School of Information, our team conducted a two-day symposium during Open Education Week 2018. This event was fundamental in raising awareness about the benefits of open and affordable textbooks on our campus, and sparked conversations about open options not only with instructors currently engaged or interested in alternatives to traditional textbook models but also with those new to the OER landscape. The symposium included a keynote address by a nationally-known leader in the OER community as well as hands-on workshops for faculty interested in updating curriculum and course design to align with new, affordable materials.

Coordinating on-campus OER professional development events, like this symposium, is a convenient and comfortable way to promote open education on any campus. To help facilitate the planning and promotion of similar events at other institutions, we have created an Open Science Framework project in which we will make all of our planning materials publicly available under a Creative Commons license.

Open Pedagogy discussion group

A major barrier in many open and affordable initiatives in higher education is the workload for instructors switching from traditional materials to OERs—a process that often necessitates strategic rethinking of courses, if not a complete overhaul. A successful OER initiative requires building a culture around OER use and support for a new way of thinking about teaching and learning based on open principles. The benefits of OERs extend beyond student savings: by leveraging the 5R permissions (Wiley, n. d.) that come with openly licensed resources, instructors have the freedom to tailor course materials to their course learning outcomes and increase student engagement by designing open, learner-centered assignments. "The question becomes, then, what is the relationship between these additional capabilities and what we know about effective teaching and learning? How can we extend, revise, and remix our pedagogy based on these additional capabilities?" (Wiley, 2013). Our team looks forward to hosting an open pedagogy discussion group, open to all interested instructors, to tackle these questions, work through challenges, and stay abreast of the latest developments in the field. Apart from helping us find and connect with innovative instructors, these conversations will help to ensure a sustained OER community on campus, with support for scalability.

High-enrollment courses

After the first year of our ATGs we evaluated the impact of the initiative with a goal of improving the next iteration. We quickly decided to implement targeted outreach for high-enrollment courses, and to increase the grant allocation to $3,000 for courses in the top 10% of courses by headcount enrollment. When our general chemistry course adopted an open textbook, we saw increased excitement and support from our libraries and campus administration. The savings for higher enrollment courses are impressive, and big numbers make for noteworthy publicity about a growing program. Additionally, there is an abundance of open and affordable textbook options for general education courses—the highest-enrollment courses on most college campuses—meaning streamlined workflows for instructors and OER advocates when searching for high-quality substitutions. Focusing on high-enrollment courses is a simple and effective strategy for increasing the impact of OER initiatives on any campus.

Expanding internal and external collaboration

We are determined to continue pursuing new partnerships with stakeholders at FSU and across the state of Florida. We have asked our Provost to form a taskforce of senior university administrators to address textbook affordability concerns and make recommendations for mitigating these concerns. If this request is successful, we hope it will expedite our efforts to involve our campus bookstore and relevant Faculty Senate standing committees, in addition to giving the conversation about textbook affordability initiatives greater visibility across campus. Our team is also pursuing opportunities to collaborate with partners beyond our institution, including Florida's statewide academic library services cooperative, FALSC, as well as librarians and instructional support staff at other public colleges and universities in Florida. These efforts have already resulted in a legislative budget request to support OERs and textbook affordability initiatives, which is currently being considered by the Florida State University System's Board of Governors, as well as the formation of a FALSC standing committee to coordinate statewide efforts.

Conclusion

The experience of launching an OER initiative at FSU has been extremely rewarding for our team, our partners, and the many stakeholders interested in textbook affordability on campus. Starting with a small group of four librarians in the fall of 2016, our initiative quickly implemented two successful programs to engage students and instructors, and has since grown to include representatives from key campus partners and attracted generous funding contributions from several university administrators. In approximately one year, our initiative has advanced the cause of textbook affordability at FSU not only through the direct impact of the programs we implemented, but also through the groundswell of faculty and student support arising in response.

Our experience suggests that broad campus awareness and support is not required to launch a successful OER initiative; rather, all that is needed is a few committed individuals to start the conversation and seek out innovators ready and willing to advance change on campus. With the wealth of resources shared by pioneering OER advocates across the US and globally, starting an OER initiative has never been easier, and there are a variety of proven strategies to choose from. By sharing our experience, we hope to provide both inspiration and a practical

roadmap for colleagues at campuses that are just getting started with OERs, particularly in cases where minimal funding is available to support OER program development.

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Devin Soper has served as Scholarly Communications Librarian at FSU Libraries since July 2015, overseeing initiatives related to FSU's open access institutional repository, open access book and journal publishing, OER advocacy, and copyright education. Prior to his time at FSU, Devin served as Intellectual Property & Copyright Librarian at the University of British Columbia, where he provided copyright and licensing support for instructors and course designers involved in the creation and delivery of Massive Open Online Courses (MOOCs), in addition

to collaborating on a number of projects with colleagues at BC Campus, one of the first publicly funded OER advocacy organizations in North America.

Lindsey Wharton, Extended Campus and Distance Services Librarian, is responsible for ensuring equitable access to library services and resources for all distance learning students as well as students and faculty at FSU's remote instructional sites and international programs. Lindsey serves as the chair of FSU Libraries Web Advisory Group, co-coordinates the virtual reference service, and leads library integrations within the learning management system. Before joining FSU Libraries in April 2014, she served as the Assistant Director of the Florida Keys Community College Library. Lindsey's research interests include global library services, emerging technologies, open education initiatives, and digital pedagogy.

Jeff Phillips is the Student Success Librarian at Florida State University, where he serves as the chair of the Professional Development, Research, and Travel Committee, chair of the Library Ambassadors, a personal librarian for the Center of Academic Retention and Enhancement, and the subject specialist for the departments of Mathematics, Education, and Film. Additionally, Jeff helps head the undergraduate instruction team where he is responsible for designing and facilitating library courses that teach college freshman about research and citation management.

Chapter 13 - Facilitating Culture Change to Boost Adoption and Creation of Open Educational Resources at the University of North Dakota

Stephanie Walker

by Stephanie Walker, University of North Dakota (bio)

Introduction

In 2015, the University of North Dakota (UND) had no institutional program to promote adoption, creation, or utilization of Open Educational Resources (OERs). Few faculty were using, creating, reviewing, or in any way supporting OERs. To our knowledge, just three faculty members had written two open textbooks, and they received no institutional support. The culture of OERs and Open Access was not well known or understood across campus, and no institutions in the North Dakota University System (NDUS, a coalition of 11 public post-secondary institutions in North Dakota) had undertaken widespread promotion or adoption of OERs.

Within two years, however, UND achieved a complete culture shift, with strong support for OERs integrated into the fabric of the university and into its procedures and documents, cross-campus involvement in OERs from every College, and broad financial support. This chapter outlines how we accomplished this and what we learned, and offers suggestions for others who wish to effect similar culture shifts at their institutions.

Introducing OERs at UND

Discussions of OERs had begun on campus by 2015, but the initial climate was extremely resistant. A respected senior faculty member, Dr. Tom Petros, gave an impassioned speech against OERs at the University Senate, calling them incursions on academic freedom. Dr. Petros was under the impression that the Library or senior UND Administration would force OERs on faculty, and require their usage; this has happened at other institutions. But at UND we had no intention of forcing faculty to adopt OERs. We understood how strongly faculty value the freedom to set their own curriculums, and that some consider it a fundamental tenet of academic freedom. With the misinformation circulating, however, it was clear that we had a long road to travel to change the campus climate.

Within two years, however, UND achieved a complete culture shift, with strong support for OERs integrated into the fabric of the university and into its procedures

Fortunately, we made quick progress. Dr. Tanya Spilovoy, then NDUS Director of Distance Education, addressed the North Dakota State Legislature's Higher Education Committee, explaining how textbook costs had risen dramatically, why this was a barrier to access to postsecondary education, and how OERs can help. Representative Thomas Beadle of Fargo wrote a bill (HB 1003, January 6, 2015) that allocated $110,000 to NDUS to support OERs; after some costs, this became just over $106,000. In September, 2015, UND hired a new Dean of Library & Information Resources,

and documents, cross-campus involvement in OERs from every College, and broad financial support. This chapter outlines how we accomplished this and what we learned, and offers suggestions for others who wish to effect similar culture shifts at their institutions.

Stephanie Walker. Provost Tom DiLorenzo gave her a mandate to advocate for OERs, and introduced her to Dr. Thomasine Heitkamp, a longtime faculty member seconded to the Office of the Provost for special projects, including OERs. Dr. Heitkamp and Dean Walker were to co-chair the new UND Open Educational Resources Working Group (OER WG), and began by discussing group membership. Critically, they decided membership should be as broad as possible, and involve all possible stakeholders across campus.

This was the beginning of a coalition-building strategy, which proved to be an essential factor in the development of a strong advocacy program, widespread adoption of OERs, and a complete culture shift. By drawing members from critical groups across campus, we developed a broad support base that included administrators, librarians, instructional designers, distance learning staff, staff from technological and pedagogical support units, faculty members from multiple disciplines, and students. Dr. Heitkamp had been at UND for many years, and knew who might be receptive and supportive of the group. This was vital, as Dean Walker had just arrived in North Dakota after nearly a decade in New York City. Within weeks, the OER WG included:

- Stephanie Walker (Dean of Libraries & Information Resources, co-chair);

- Dr. Thomasine Heitkamp (Faculty Member and Senior Administrator, co-chair);

- Dr. Virginia Clinton (faculty member, Psychology);

- Dr. Ryan Zerr (faculty member, Coordinator of Essential Studies);

- Dr. Dana Harsell (faculty member, College of Business & Public Administration);

- Blake Andert (student, Vice President of Student Government);

- Brandon Beyer (student, President of Student Government);

- Dr. Lori Swinney (Director, Center for Instructional Learning Technologies);

- Lynette Krenelka (Director, Office of Extended Learning);

- Dr. Anne Kelsch (Director, Office of Instructional Development);

- Dara Faul, Kristi Swartz, Jane Sims, Naomi Hanson, and Elizabeth Becker (instructional designers); and

- Megan Carroll and Holly Gabriel (librarians).

The co-chairs threw the doors open wide and didn't worry about committee size. Large committees can be

unwieldy, so we often delegated specific tasks to subcommittees. But overall, we deliberately maximized membership, believing this would lead to deeper campus-wide integration and buy-in. Also, faculty members often prefer to hear about successful teaching initiatives from other faculty—or from students who have taken the courses—rather than from librarians or instructional designers. By encouraging broad membership, we successfully achieved this campus-wide buy-in and broad adoption of OERs; faculty also appreciated hearing from each other and from students regarding their experiences with OERs.

Building an OER Program

In addition to forming a working group, we hosted and/or participated in several activities in order to begin shaping an OER program on campus. In October, 2015, Dr. Spilovoy used funds to develop a two-day OER seminar at Valley City State University for faculty and staff of NDUS institutions. Dean Walker and Dr. Heitkamp attended, with interested UND faculty and with colleagues from UND's Center for Instructional & Learning Technologies and Office of Extended Learning. One speaker was Dr. Dave Ernst, CIO of the University of Minnesota's College of Education & Human Development, Director of the Center for Open Education, and Executive Director of the Open Textbook Network. Dr. Ernst made excellent points about the effects of rising textbook costs, including the high percentages of students who don't take a course because of the textbook's price or who fail a course because they are unable to afford the textbook. The OER WG invited Dr. Ernst to speak at UND; he accepted, and spoke at an event in January, 2016. It was well advertised, and about 70 faculty and staff attended; Dr. Ernst also allowed us to place his talk on our Vimeo channel for those who couldn't attend (see https://vimeo.com/153952521 for this seminar).

Dr. Spilovoy also announced a grant program, and sent emails across NDUS asking for proposals to facilitate OER adoption. Dean Walker and Dr. Heitkamp wrote two proposals: one to support the creation of $3,000 stipends for four faculty members (in Psychology, Political Science, Sociology, and Atmospheric Sciences) to adapt their courses to utilize OERs, and another to purchase the rights to and digitize Elwyn Robinson's *History of North Dakota*, and make it openly available. The latter is used as a textbook in a UND history course and by local high schools, and is considered the definitive history of North Dakota before 1967. Dr. Robinson was a UND professor and the second State Historian of North Dakota, and UND's Archives & Special Collections unit is named after him, so it was appropriate for UND to be the institution to make the book openly available. The latter project also garnered additional support when a faculty member mentioned to Dean Walker that the Northern Plains Heritage Foundation had funds for projects promoting local history. Dean Walker approached the Executive Director, and he provided $15,000. UND Libraries also have an Elwyn Robinson fund (Dr. Robinson's sons are generous donors), and we directed $10,000 from the fund toward the project. This additional buy-in from the Northern Plains Heritage Foundation and the Robinson Fund impressed the grant evaluators. Support from multiple groups helps elevate a project during the evaluation process.

Both proposals were successful, and the OER WG began organizing faculty training workshops. In June, 2016, the OER WG offered a four-afternoon workshop series for faculty who would be adapting their courses to use OERs. The curriculum included, among other topics, brief presentations on:

- technological tools, by Instructional Designers;
- copyright and Creative Commons Licensing, by UND's General Counsel, Jason Jenkins;

- how to find and evaluate reliable OERs, by librarians; and

- retaining author rights.

The workshops included ample time for hands-on work, so faculty would have the advantage of assistance from librarians, instructional designers, technology staff, and staff with legal expertise. Our intent was for faculty to use the summer to adapt their courses and teach them in Fall, 2016. Once faculty attended the workshops, we paid their stipends. Not all faculty were able to attend all workshop days, so we also offered one-on-one assistance. In addition, librarians created online guides (using a product called LibGuides) on OERs, and later added additional guides on Altmetrics, Scholarly Communication, Open Access, and more.

> **By this time, word was spreading across campus: OERs could help financially struggling students, and funding and other support were available to help interested faculty.**

By this time, word was spreading across campus: OERs could help financially struggling students, and funding and other support were available to help interested faculty. The Mathematics Department contacted Dr. Heitkamp and expressed interest in replacing the textbooks and related materials (which cost over $400 if purchased new) for Calculus 1, 2, and 3. Math faculty brought this to their colleagues, and the Department agreed that this cost was unreasonable. Almost 1,000 students/year take Calculus 1, 2, or 3, including online students. Calculus is both a critical requirement for many disciplines, and a "barrier course" that students fail at higher than average rates. UND's Math Department was determined to help. They committed to developing materials as a department, but needed stipends; they couldn't entirely donate their time. Dr. Heitkamp convinced the Dean of Arts & Sciences, Dr. Debbie Storrs, and the Director of the Office of Extended Learning, Lynette Krenelka, to contribute $6,000 each for Math faculty stipends. Four Math professors joined our inaugural OER faculty.

With regular communications from the OER WG and faculty at other institutions, such as Dr. Ernst, and with the embrace of OERs by some of their own, faculty attitudes began shifting noticeably, as did the atmosphere at UND. The University Senate Library Committee, for example, endorsed OERs. And after the first group of faculty received stipends, adapted their courses, and implemented OERs, interest grew. We made it clear that no one wanted to force faculty to use OERs; all we asked was that they consider OERs as they would any other resources. We leave all curricular decisions to faculty, and simply offer support if they want to consider adopting OERs. After the first group of faculty implemented their OERs we tallied the savings. When it was close to $1 million, on an investment of $24,000 (not counting the more archival *History of North Dakota project*), we knew we had something.

Getting the Word Out

Stellar publicity about the program soon began to appear on campus and beyond. The University Senate Library Committee reported on our progress with OERs to the University Senate. Many faculty confessed they had been unaware of the soaring cost of textbooks, or that textbook costs presented a real barrier for many students. Our local newspaper, the *Grand Forks Herald*, heard of our work, and interviewed Dean Walker, resulting in a lengthy story. This was at a time when the state budget was in difficult circumstances, due to falling oil and farm revenues.

The positive coverage showed that UND cared about educational costs and was doing something to help. The student newspaper (*Dakota Student*) and UND's official newsletter (*UND Today*) also requested interviews with Dean Walker about OERs; she happily agreed. Liaison librarians also reached out to their departments. Good publicity was rolling in; people were hearing about our efforts.

We capitalized on this, and decided to arrange our biggest event to date. In October 2016, UND hosted a statewide OER Summit. The program remains online, at http://und.edu/academics/center-for-instructional-and-learning-technologies/oer-summit.cfm. The OER WG proved up to the task by:

- arranging a (free!) venue, in the Auditorium of the new UND Medical School building,

- securing a nationally known keynote speaker, Nicole Allen of SPARC,

- assembling a panel of UND faculty and students, who provided first-hand accounts of their experiences with OERs,

- inviting OER-using colleagues from Valley City State University to present their experiences, and

- inviting Jason Jenkins, UND's General Counsel, to share his expertise on copyright and open licensing.

During the event, Zeineb Yousif, UND's Digital Initiatives Librarian, also demonstrated progress on the *History of North Dakota* digitization efforts. UND's institutional repository (where the book was eventually housed) was not yet in place, but some tasks had been completed, including purchasing the book rights from the publisher, splitting the single giant PDF file into chapter-by- chapter chunks that could be downloaded and read on multiple readers, and making adaptations for students with disabilities. Zeineb had also begun adding links—e.g. when Dr. Robinson wrote about Theodore Roosevelt National Park, Zeineb included a link to the park website. Finally, we offered a showcase of tools, tips, and resources for faculty wanting to work with OERs, ranging from online guides to technology support to instructional design. The event ended with a wrap-up by Dr. Spilovoy and a tour of the new Medical School.

The event was free, with lunch and snacks provided. It was advertised everywhere we could post the information without charge—library lists, educational lists, across NDUS, at North Dakota schools, and beyond. The event had record-breaking attendance, with 108 people registering. In a tiny state like North Dakota, this was huge. Representative Beadle, whose foresight and advocacy had gotten us the initial funding, attended. He was thrilled with his bill's impact. We were very careful to invite Representative Beadle as well as the media—when you get political support, your representative wants to see the impact of his work! Representatives of local media, student media, and UND public relations attended as well.

Moving Forward with OER Adoptions

Overall, publicity for our program was going strong. But we also needed to keep the adoption of OERs going—and growing—or we'd risk having our success limited to a one-off project. We wanted to change the culture at UND, so that faculty automatically considered OERs when designing courses. And for that, we needed more money. Luckily, there were funds left from the initial $106,000, and in November, 2016, NDUS issued a second call for OER proposals. Dean Walker promoted this on campus, but many faculty said that while they were

interested, they were too busy to write a proposal. Dean Walker asked "If I write a draft, are you willing to edit it as you need, and then let me submit it for you? Are you willing to participate if you get the funds?" The answer to both questions was "Yes." Dean Walker wrote five proposals, and two proposals were written by others. Five submissions were funded, for courses in English, Business, Art, History, and Mathematics. One was turned down because the ROI was insufficient (too few students took that course), and another because the budget was too high. We were very pleased; we'd not expected this level of success, because UND had received most of the money allocated in the first round. As it turned out, we received the bulk of the money in the second round as well! We were told that our proposals were the clearest, and offered the greatest ROI. We began planning workshops for June, 2017, adapting them based on feedback from past workshops.

We also asked faculty in our inaugural OER group to report back, and in March, 2017, we held another OER event. Instead of a guest speaker, we offered an Open Forum featuring faculty who participated in the inaugural group. It was particularly exciting because they had used a wide range of materials to develop OERs suitable for their courses—everything from government documents to existing open textbooks to interactive tutorials to video and more. Each faculty member had interesting things to report. For example, Prof. Clinton had previously taught Introductory Psychology using a traditional textbook that cost $154. She surveyed her students, switched to an OER the next term, and surveyed the students again. They liked the OER as well as the traditional textbook, except that they said the expensive one had slightly better graphics—but they did not consider that a "deal breaker," and preferred the OER. Grade distribution was unchanged. Interestingly, Dr. Clinton noticed that far fewer students in the OER-using class dropped the course. She continues to study this, working on articles for publication. She believes the textbook cost was causing students who could not afford it to withdraw. If this is borne out in future, OERs could be a contributing factor in student retention, and help us deal with equity issues for our students. She also noticed that when she pointed out errors in the OER textbook to the publisher, they made corrections within two weeks—far better than waiting for the next edition, as with traditional textbooks. And she was able to adapt the OER, inserting additional readings as needed. This flexibility is a great benefit to faculty.

This event was also well attended, with about 70 people—and not the same 70 who came to the January event. (Many presentations from the event are on Vimeo, at https://vimeo.com/undcilt.) The Student Government President, Brandon Beyer, gave a presentation on the importance of OERs to students facing financial hardships. He then announced he was

> **... OERs could be a contributing factor in student retention, and help us deal with equity issues for our students.**

writing a bill to present to Student Government, offering to use $75,000 from Student Government Reserve Funds to support stipends for faculty to adapt courses to use OERs. Had we not included Student Government in the OER WG, we would not have received this kind of support. Mr. Beyer also approached the Provost, who contributed $25,000—giving us a total of $100,000 for OER support.

Shortly after this announcement, Mr. Beyer met with Dean Walker to work out details. When Mr. Beyer presented the bill to Student Government in April, 2017, Dean Walker attended and spoke about the impact on students. The bill passed unanimously. This was a critical point, showing that the students themselves were investing in OERs. Faculty were very impressed by this. The last views of OERs as a bad idea, and an incursion on academic freedom, were gone. We continued to emphasize that there aren't existing OERs for every course, and that OERs are simply one more tool for faculty in developing courses—but a worthy tool.

The OER WG next developed a Qualtrics site for grant proposal applications, and announced to the faculty that up to $100,000 was available for faculty stipends. We required faculty to obtain a letter of approval from their Deans, to ensure that Deans were aware of faculty activities. We also required information on the impact—the cost of other resources, the number of students, etc. We preferred courses that had large enrollments or costly textbooks, to maximize savings, but also indicated that we would take applications for courses with smaller impacts if they were in academic areas where UND was especially strong. There are many open textbooks for Introductory Psychology, for example, but not many for Petroleum Engineering, where UND has a superb program; by accepting a Petroleum Engineering application, we could "give back" to the greater corpus of OERs. We approved 13 of 14 applications, in Mechanical Engineering, Nursing, Anatomy, Sports Medicine, Business, Geology & Geological Engineering, Petroleum Engineering, Chemical Engineering, Communications, Electrical Engineering, and Biomedical Sciences. With multiple applications in some disciplines, and OERs in every College, we felt that our extensive publicity work was having an effect, and that faculty were telling other faculty about their successful experiences. In June, 2017, we again held faculty workshops, adapting them once more based on earlier feedback.

We also tallied the total "maximum savings"—how much we had saved the students, in total, from September, 2015, to the present, if we assumed students would have bought new textbooks. This is not a fully accurate reflection of savings; many students buy used textbooks, rent them, etc. As there is no way to estimate what percentage would have rented texts or bought them used, we do our tally and include the qualifier. The maximum savings we have provided for UND students thus far: $3.7 million in just two years.

Where Are We Now?

In just two years, we have achieved a major culture shift. UND is the acknowledged state leader in OERs. Senior staff from the State Auditor's Office have visited Dean Walker twice, and will be writing a report on OERs; we anticipate that it will state that this has been a worthy investment of funds and effort, and should be further supported. The State Legislature has not yet increased funds for post-secondary OER support, but has passed a bill expanding OER support to K-12 education. Dr. Spilovoy moved to a position advocating for OERs at the Western Interstate Commission for Higher Education (WICHE); Dr. Heitkamp no longer co-chairs the OER WG, but remains interested and involved. OERs are bigger than ever at UND.

The OER WG continues to hold one OER event per academic term, and is learning which are most appealing and likely to be well-attended. The Library expanded its online guides on OER-related topics, and hired a Scholarly Communications Librarian who joined the WG. Other staff joined the WG as well, and the group meets regularly and splits into subcommittees as needed. We continue casting a wide net, involving faculty, staff, and students in the WG and events. This has been critical to maintaining strong support. We keep adapting our events and workshops, and have tweaked our grant proposal form and created an FAQ, based on what we learned. We'll issue another request for grant proposals shortly. That will likely exhaust the $100,000, but we're hopeful that support from Student Government, the Provost, and the Legislature will continue.

Meanwhile, UND's culture around OERs has changed completely. Faculty are eager to participate. Every College uses OERs. Considerations regarding OERs, and support for OERs, are being added to the Faculty Handbook and Tenure & Promotion procedures: adaptation of a course to use OERs may now be considered "Teaching"

and not just "Service," and creation of a new OER may be considered under "Research/Scholarship." OERs are now considered resources like any other—there are good OERs and poor ones, and it is up to faculty to evaluate them for their courses. Tellingly, Dr. Petros—the respected senior faculty member who excoriated OERs at the University Senate in 2015—now serves on our panels and at events, advocating for adoption of OERs wherever feasible.

Keys to Our Success

What were the keys to our success? The following have been critical:

Tireless advocacy/outreach/marketing

Dean Walker was given a clear mandate to support OERs, and she uses every opportunity to do so, as do all members of the OER WG—faculty, staff, and students alike. Students and senior administration made their support clear by providing funding. We've spoken about OERs to everyone who would listen, from State Government to non-profits to local media and more. We have marketed OERs everywhere and in every way we could. We hold events at least once a term, and advertise on social media, library websites, other UND websites, local media, UND media, and more. We've also built detailed online guides (using LibGuides software) on relevant topics.

Coalition Building

The OER WG began with Dean Walker, the Dean of Libraries & Information Resources, and Dr. Heitkamp, a faculty member who was also part of Senior Academic Administration. Our first outreach was to Dr. Spilovoy at NDUS, then to various units on our campus—the Office of Extended Learning, the Center for Instructional & Learning Technologies, the Office of Instructional Development, Student Government, and, thanks to Dr. Heitkamp's professional relationships, several faculty members. We added more staff, more faculty, and other members; we turned no one down. Soon, faculty heard about OERs at every turn. When the deans began working with a University Senate Committee to revise the Faculty Handbook, Dean Walker used the opportunity to include information about OERs, and to have OERs recognized as valid academic endeavors.

> **We've spoken about OERs to everyone who would listen, from State Government to non-profits to local media and more. We have marketed OERs everywhere and in every way we could.**

Creating a Strong Support Program

The Libraries, the Center for Instructional Learning Technologies, the Office of Instructional Development, and the General Counsel all participated in workshop development. We offer strong technological, informational, and pedagogical support. Faculty do not have to locate all OERs themselves; librarians can assist. Instructional

designers and technology support staff help with technology. The availability of Legal Counsel staff has also been crucial; faculty have had many copyright questions.

Deepening Liaison Relationships

Every UND subject liaison librarian is well briefed on OERs. These librarians use their departmental ties to promote OER events, LibGuides, faculty workshops, grants, and more. Also, all units that support technology or pedagogy have members on the OER WG, and are involved in promoting and supporting OERs.

Seeking Broad Funding

We had funding from the State Legislature, the UND Office of Extended Learning, the Dean of Arts & Sciences, the Provost, the Northern Plains Heritage Foundation, and the Robinson Fund. Multiple internal and external sources of funding helped convince people that OERs are valuable and valued.

Luck/Timing

Our timing could not have been better. We had a state budget crisis, and a new Governor was elected. In July, 2016, we also inaugurated a new UND President—the Honorable Mark Kennedy, a former Minnesota Congressman. With Governor Burgum forced to make deep cuts to higher education, among other areas, to balance the budget, President Kennedy was happy to have a good news story showing that UND was aware of the difficulties faced by students dealing with higher education costs, and how we were developing ways to help. The ROI for OERs was impressive, as was student investment in the project. Sometimes, being the good news story in the midst of a lot of bad news really helps.

What Have We Learned, and How Do We Assess and Adapt?

Keep Membership Broad, but Prepare for Change

People can't commit to "forever" on committees. Dr. Heitkamp was critical to getting the OER WG launched and to its early success, but she was only seconded to the Office of the Provost for special projects. When she returned to her own teaching and research, she became too busy, especially after winning a multimillion dollar grant, to remain on the committee. Have a plan in place to replace key people, and keep committee membership fresh and active.

Sometimes What People Say They Want isn't What They Show Up for

At one point, we got feedback on our events saying that faculty wanted something more hands-on, less lecture-style. We developed an event that was half guest speaker, half hands-on. Most people came to hear the nationally renowned speaker, then left, knowing they could contact the folks offering hands-on training at their convenience.

We won't use that format again, and we're considering more brief workshops now that many faculty have general knowledge of OERs.

Make Important Things Mandatory

If you don't require faculty to attend workshops, some faculty may assume they can skip them. This can result in misunderstandings, or the development of things that aren't truly "open." We made this mistake once, and learned from it. Workshops are now mandatory for grant recipients. Also, until September, 2017, we had no institutional repository in which to deposit OERs, so while faculty were creating them, and keeping them in Blackboard, the Library did not have a copy. We now ask faculty for copies to deposit in the new UND Scholarly Commons (http://commons.und.edu). People are willing, – but it's extra work. At least one faculty member has left UND, though luckily he partnered with another faculty member who is still here and has copies of their OERs.

Develop Support Tools, and Edit and Adapt Them as You Learn

For the first two funding rounds, we wrote grants according to others' specifications. For the third round we created our own web-based form, and received many questions on it, so our Web Librarian developed an FAQ for the next round. The workshop series has also been adapted and streamlined. We built many online guides, and offer recorded Vimeo presentations (https://vimeo.com/undcilt) from faculty who have used OERs.

Integrate OERs Into the Culture and Fabric of Your Institution

OERs are now mentioned in the Faculty Handbook and in Promotion & Tenure guidelines. We have regular and widely promoted events. Every College uses OERs, and usage is spreading. Even units you might think would not be interested have partnered with us to promote OERs: our campus bookstore, for example, adapted its textbook form to allow faculty to indicate that a course uses OERs rather than traditional textbooks. We keep up with and support faculty who use OERs. When Dr. Clinton began using an OER for Introductory Psychology, Provost DiLorenzo also taught the course and used the same textbook. At a department meeting, all Psychology faculty except one agreed to try the OER—and liked it. Dean Walker contacted them the next year; they kept using it. The Math Department not only maintains existing commitments to OERs, but is planning OER usage in other courses. They have spoken about their successes with OERs, and the availability of OERs for introductory courses, at North Dakota State University, Northland Technical College, and local high schools where students take AP Calculus. High school students who wish to take UND's introductory Calculus courses can thus use the Math Department's OER textbook. High school students preparing to apply to university, and taking early college courses, can now find many courses at UND that utilize OERs, and get a "jump" on their course credits without having to pay the extra cost of a textbook. This may help boost applications from local students, an area for future study.

OERs are now mentioned in the

Faculty Handbook and in Promotion & Tenure guidelines.

Promote the Benefits

We have been able to show clear or potential benefits in many areas, including cost to students, flexibility for faculty, and student retention. We are watching to see if OERs may result in increased numbers of transfer students. OERs are being used for many introductory courses, and several are online. Some are available as "Enroll Anytime" self-paced online courses. Theoretically, a student can get through first year now without buying a textbook, and high school or college students taking online UND courses that use OERs might be enticed to enroll at UND, where they have already earned credits.

Assess, Adapt, Repeat

We have gathered feedback on events, spoken to faculty who used OERs, and worked with faculty who assessed how students did with OERs compared to traditional textbooks. We take this information and make changes as we go. We constantly adapt our tools, workshops, and guides.

In all, we have travelled a long road with regard to OERs at UND. When we began we were somewhat mired in a very traditional outlook, where commercial (and increasingly costly) textbook publishers were seen as virtually the sole option. UND had very few OERs in practice, and no institutional support to facilitate change. OERs were regarded with considerable suspicion and resistance. In just two years, we have made dramatic changes. Now, UND has a vibrant Working Group that is widely seen as the "go to" group for assistance, and that receives regular queries from interested faculty; even when there isn't a current round of funding, faculty contact us months before lectures begin, saying "I'm thinking of switching to an OER—can anyone help me find what I need?" Interest has grown every year. The Library is also seen as a source of information on related topics, such as copyright, scholarly publishing, and evaluation of resources. Publicity has been strong and overwhelmingly positive, and the WG continues to offer events, workshops, and seminars on OERs and related topics, and to avidly publicize these across campus and beyond. Students have benefited tremendously, and see the Library and the OER WG as advocates for them in this area; they also continue to advocate for OERs themselves.

The benefits have been substantial: in addition to saving students money, some courses using OERs have seen a marked drop in withdrawals, and the faculty enjoy being able to customize the text so that it truly meets their needs. Support has come from multiple quarters, including government, internal funding, UND Student Government, foundations, and donors, and this broad support has further strengthened the program. In a bit of late-breaking news, students from across NDUS, led by UND Student Government President Cole Bachmeier, just successfully convinced the Legislature to provide an additional $100,000 to further support OERs. Success breeds success.

The benefits have been substantial: in addition to saving students money, some courses using OERs have seen a marked drop in withdrawals, and the faculty enjoy being able to customize the text so that it truly meets their needs.

No longer considered suspect, OERs at UND are now strongly supported by students, administration, and faculty, and integrated into the fabric of the university—and there are indications that this support is spreading across other

NDUS institutions as well. We have completely changed the culture around OERs at UND. UND Libraries are respected for their leadership role in OERs, across UND, NDUS, and even in the State Legislature. We continue to advocate for their usage and development, and continue to adapt the ways in which we support them. OERs at UND are here to stay.

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Author Bio:

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Chapter 14 - Let's Begin at the End: How a Campus Bookstore Closure Set the Wheels in Motion for a Hybrid OER Project

Jonas Lamb

by Jonas Lamb, University of Alaska, Southeast (bio)

About the University of Alaska Southeast

The University of Alaska Southeast (UAS) is a small, open-enrollment, public, four-year university (Carnegie: Master's Colleges & Universities: Medium Programs) serving a diverse student body of approximately 3,000 students on three campuses (Juneau, Ketchikan, and Sitka) and online. Southeast Alaska is a semi-remote, rural setting, which affects our students' access to course materials and generally contributes to higher costs of attendance. The main campus in Juneau, the capital city of Alaska, (population 32,269) (AK Dep. of Labor and Workforce Development) enjoys a beautiful setting in a temperate rainforest on the ancestral lakefront lands of the Aak'w'Kwáan Tlingit, one of Alaska's many indigenous peoples, and is home to Egan Library, a regional library serving students and faculty in person and online. The library team includes a Regional Director, four faculty librarians, five full-time staff, 3–5 part-time reference librarians, and 4–6 student assistants.

Overall, our students are nontraditional, with an average age of 31. Fifteen percent are Alaska Native (University of Alaska Southeast, 2016a & 2016b). UAS has a strong student-centered focus, with student success, teaching and learning, community engagement, research, and creative expression among our core themes. UAS has been recognized throughout the state for offering programs of distinction in teacher education, marine biology, Alaska Native languages, business and public administration, and fisheries technology. Classes are taught on campus, online, and through hybrid delivery.

Let us Begin by Closing

Over the past five years, the University of Alaska system as a whole has experienced reduced state support (-14% since 2015) (University of Alaska Board of Regents, 2017) and declining enrollments (-28% at UAS since 2012). The latter can be attributed to the closure of a Professional Education Center (professional development and credit granting for K-12 educators), shifting demographics in Southeast Alaska, low college-going rates throughout the state, low unemployment rates, and a state job market that offers high wages without a college education (University of Alaska Southeast, 2017). This resulted in tuition increases as well as a system-wide review of 50 programs for elimination or suspension. As part of the review process, nearly every aspect of the University system was evaluated, and in December, 2014, the brick-and-mortar bookstore at the UAS-Juneau Campus was eliminated and replaced with an online bookstore provided by a third-party vendor.

Following this unpopular closure, the administration proposed donating the existing textbook inventory to the

Egan Library so as to reduce the closure's impact on students when they returned to campus in January. Eager to facilitate, the Egan Library agreed to add the donated textbooks to the course reserves collection, which would provide all students on campus with short-term access (three-hour loans) to the materials.

> **Prior to the bookstore closure, library course reserve holdings numbered fifty or fewer items, including a mixture of instructor-provided materials and library-owned materials ... The influx of textbooks and the intensive processing involved eventually led to an analysis and complete overhaul of course reserves workflows.**

Prior to the bookstore closure, library course reserve holdings numbered fifty or fewer items, including a mixture of instructor-provided materials and library-owned materials. The donated textbook inventory represented 200 items (new and used), with an approximate value of $10,000. The influx of textbooks and the intensive processing involved eventually led to an analysis and complete overhaul of course reserves workflows.

As anticipated, students were not prepared for the transition to online book ordering and the associated shipping time. Use of course reserves increased by 154% from Fall, 2014, to Spring, 2015, largely due to the expanded availability of textbooks. The initial enhancement and expansion of course reserves marked the beginning of library-driven efforts to reduce student costs by addressing textbook affordability and access.

In the spring of 2015, at the annual conference of the Association of College & Research Libraries (ACRL), I learned that many other campuses were implementing programs to encourage use of open educational resources (OERs) and library-licensed digital content as alternatives to expensive commercial textbooks. Ironically, I was at the conference to present on the Digital Public Library of America, which has now grown into a major OER repository.

After the conference I returned to campus with new energy and vision for building upon our accidental venture into the realm of textbook affordability. The Egan Library was then in the midst of a program review, and by the end of the summer two new affordability initiatives were identified by library leadership as strategic priorities and were endorsed by the Institutional Review Committee (IRC). These initiatives, the Alt-Textbook Project (affordable content and OER) and Scholarworks@UA (open access institutional repository), would reduce barriers to attaining course materials for students and provide a centralized, open-access portal to UA faculty scholarship.

Since 2015, Egan Library OER efforts have grown into the UAS Alt-Textbook Project, building on components of the North Carolina State University Alt-Textbook Project and the University of South Florida Textbook Affordability Program. The project was initially awarded Academic Innovation funding from the Provost's Office for a pilot faculty OER workshop, and now includes these components;

- **Faculty development**: Training, consultation, and support in areas of OERs, OA scholarly publication, and other scholarship of teaching and learning topics through collaboration with a newly established Center for Excellence in Learning and Teaching.

- **Library reserves**: In addition to traditional faculty-driven placement of print materials in library course reserves, library staff work from semester book adoption lists to proactively identify and place

library-owned materials on reserve.

- **Ebooks for the classroom**: By faculty request and through proactive collection development, the library acquires required course texts when available in unlimited user ebook formats from our preferred vendor. This service is promoted to faculty by liaison librarians and discussed any time faculty requests for materials are received to identify whether the item will be used as a required course text.

The Problems with Textbooks

The problems with traditional textbooks have been well documented. The average annual textbook cost for college students most frequently cited is $1,200 per year. UAS students are encouraged to budget $1,400 for books and supplies. Based on UAS cost of attendance data, books and supplies are comparable to 26% of tuition, and for less-prepared students can be an unanticipated cost.

Locally, in addition to the cost of textbooks, the problem of timely access has been exacerbated by the transition from a brick-and-mortar bookstore to an entirely online vendor with a record for slow delivery. Our students often add/drop courses at the beginning of the term, and the lack of a local bookstore leads to substantial delay in obtaining materials for courses added after the start of term. The 2014 report *Fixing the Broken Textbook Market* noted that 65% of students had decided against buying a textbook for at least one class because it was too expensive—an alarming figure. Conversations with UAS faculty indicated their awareness of the issue; in some cases they had begun to rethink their course material selections to accommodate students. A recent survey of UAS faculty, however, revealed that cost was only the fourth most important factor considered (University of Alaska Southeast, 2016c) when selecting course materials. Quality, comprehensive subject coverage, and currency preceded cost as factors when selecting materials, despite a growing awareness of financial barriers facing students.

For over ten years our campus had been wrestling with a variety of measures targeted at improving student retention. Averaged over the last five years, the retention rate for first-time, full-time, degree-seeking students is 59%, significantly below the UA system average of 67% (University of Alaska, 2018). Eliminating financial barriers to course materials through affordable content and OER policies, however, has yet to be considered as a retention strategy. Interestingly, the UAS-Sitka campus was awarded a Title III grant in 2015 for their project "Complete to Compete: A Holistic Approach to Student Success for Alaska Native and High-Need Students," which includes OER adoption as a strategy. I've been consulted by the campus on faculty development, strategies for facilitating and incentivizing course conversion, and assessment design, and am eager to see the benefits to these high-need student populations.

Recognizing that successful completion of developmental math courses impacts retention of under-prepared, high-need students enrolled in these courses, the UAS Math department experimented with a new approach to providing course materials. One hundred used copies of a previous edition of the course text (current edition, $100) were purchased ($4/book) and provided through semester-length library loans at no cost to students on the first day of the course. This minor investment by the department eliminated a significant barrier to student success. While further data is needed to determine the impact of this model on student completion of this course, it's difficult to imagine that free access on day one would not benefit learning outcomes. Unfortunately, this service hasn't yet been replicated in higher-level math courses. Math courses at UAS have some of the highest enrollments, making them ideal for conversion to OERs.

Faculty Development | Pilot Workshop

With a strong correlation between the cost of attendance and student success, and the negative impact of rising textbook costs on the overall cost of attendance, free and low-cost textbook alternatives (open textbooks, OER, and affordable content) are an effective strategy for student success.

With a strong correlation between the cost of attendance and student success, and the negative impact of rising textbook costs on the overall cost of attendance (Bell, 2012; Irving & Roche, 2015), free and low-cost textbook alternatives (open textbooks, OER, and affordable content) are an effective strategy for student success. Despite a growing body of evidence, UAS had not, as mentioned above, considered using an affordable content initiative as a retention measure until the Alt-Textbook Project.

The concept for the project, a component of the Egan Library Teaching and Learning Program, was first developed through the academic program review process. The project's strategic vision is to provide faculty development and advocacy in order to further increase awareness of OERs and the innovative teaching and learning opportunities these tools can facilitate. The project also aims to support faculty experimentation with OERs, and promote the open sharing of scholarship to remove barriers to knowledge and to foster innovation. The program review process highlighted how the evolving openness in higher education and the sub-initiatives of open access and OERs have been among the top trends in academic libraries since 2014 (ACRL, 2014 & 2016). At the completion of the Egan Library Program Review, the project was endorsed and recommended for enhancement by the IRC.

Capitalizing on the IRC recommendation, I applied for and received a small Academic Innovation Fund (AIF) award from the Provost's Office to fund a pilot faculty development workshop introducing OERs and licensed library resources as alternatives to textbooks (i.e., providing course materials at no cost to students). Prior to the workshop, a survey was distributed to faculty to assess baseline awareness and use of OERs. With permission, the survey replicated the questions from *Opening the Curriculum: Open Educational Resources in U.S. Higher Education, 2014.* Findings were used to gauge baseline faculty awareness and familiarity with OERs and to inform the design of the pilot workshop (held Spring, 2016). To introduce the benefits (in terms of student affordability and academic flexibility) of using OERs, survey results were also shared with workshop participants, at presentations made to faculty at Convocation, and at departmental meetings. Compared to faculty participating

in the Babson national study in 2014, UAS faculty surveyed in 2016 were more aware of OERs. Seventy-five percent (n=34) had some degree of OER awareness at that point in time compared to 34.1% (n=2,100 Babson).

Prior to development of the workshop, we had considered becoming a member of the Open Textbook Network (OTN), primarily with the idea that OTN staff would be better equipped to provide the faculty development workshops. After all, I was still learning the landscape of OER use in higher education. Membership costs, however, proved beyond the scope of the foundling initiative, even after discussing a potential consortial membership with the Office of Innovations & eLearning at the University of Alaska Anchorage.

Five faculty recruited from the survey participated in the pilot workshop, and represented construction technology, special education, English, and economics. In the first one-hour, hybrid session, they were provided an introduction to OER concepts, repositories, and efficacy research resources. These concepts were also contextualized alongside student costs. Baseline information about each participant's current and typical course loads, enrollments, and textbook costs were collected. Faculty were offered a choice of two incentives for participating in and completing workshop activities: $250 merit bonus payment or a $250 Egan Library collection credit for purchasing unlimited access ebooks to be used as affordable content options for required course texts. In this way, the Academic Innovation Funds awarded to the project were passed through to faculty. Despite the modesty of these awards, four of these faculty have become champions for campus affordable content efforts.

In the second half of the session, faculty were given an independent assignment in which they were asked to identify, review, and assess three OERs in their field and identify one scholarly article focused on the efficacy of OER use in higher education classrooms. They were provided with a review rubric (BCcampus OpenEd) and began collaboratively searching for resources with assistance from the facilitator. In the second session, participants shared the OER they'd reviewed, as well as their annotated scholarly articles. Participant reviews and annotations were compiled and shared online .

Participants reviewed the following resources:

- Comprehensive Individualized Curriculum and Instructional Design: Curriculum and Instruction for Students with Developmental Disabilities/Autism Spectrum Disorders edited by Samuel Sennot and Sheldon Loman.
- Core-Econ (CORE Economics Education)
- The Economics of Seinfeld by Linda Ghent, Alan Grant and George Lesica
- The Fundamentals of Construction Management by Abimbola Olukemi Windapo
- Leading with Cultural Intelligence (Saylor)
- Plankton Dreams: What I Learned in Special Ed by Tito Rajarshi Mukhopadhyay
- Principles of Economics (OpenStax)
- Writing in College: From Competence to Excellence by Ami Guptill et. al. (Open SUNY)
- Writing in College: A Short Guide to College Writing by Joseph Williams and Lawrence McEnerney. University of Chicago Writing Program.
- Exploring Perspectives: A Concise Guide to Analysis by Randall Fallows

- Writing for Success by University of Minnesota Libraries Publishing.

In presentations and info sessions I am sure to share this outstanding resource that employs fair-use of video clips hosted at Critical Commons, "The Economics of Seinfeld." Using this site as an example of OERs helps illustrate how OERs support innovative pedagogy and transformative re-use of copyrighted material—and can get people laughing.

Faculty Development | OER Presentations & Consultations

Since the initial pilot workshop, the majority of faculty development in this area has been through one-hour information sessions, individual consultations, invited presentations at school and departmental meetings, and convocation events. Unfortunately, after two years of outreach, I haven't yet reached the level of engagement needed to shift the direction of this development from the practical, overview level to the pedagogical.

By and large, the most significant progress has been made through informal conversations and consultations with faculty who've had their interest piqued at presentations. One presentation to School of Education faculty, at the request of a pilot workshop participant, has helped build a network of faculty champions and early adopters. These faculty serve as the ideal advocates for driving cultural change in education. After all, they are training Alaska's future K-12 teachers and educational leaders, who have the potential to integrate OERs into their own classroom practices as a result of their experiences as students.

> By and large, the most significant progress has been made through informal conversations and consultations with faculty who've had their interest piqued at presentations … These faculty serve as the ideal advocates for driving cultural change in education.

At Faculty Convocation 2017 I presented on the Alt-Textbook Project alongside the student editor of the school newspaper. The paper ran a story on the project in the spring of 2017, which caught the attention of student government and led to passage of a resolution of support for the project. The student editor shared personal accounts of her struggles to pay for her education, even as a self-described "highly-functioning, self-supporting student." She equated the most recent cost of her textbooks with student wages. As a student working a part-time campus job, she would need to work 20 hours to pay for her $180 accounting textbook. In comments to the President of the University and elsewhere, she also suggested that the savings realized by students with an institutionalized, policy-supported shift to OERs could be used to mitigate the impact of recent annual and mid-year tuition increases.This presentation caught the attention of several faculty in the Management and Public Administration department. One faculty member was eager to share that he'd been textbook-free in many of his courses for several years, using articles from professional and peer-reviewed collections. This case illustrates the silos that exist on many campuses and can prevent synergistic efforts from aligning. I've since met other faculty who have stopped using commercial textbooks for a variety of reasons (cost, endless editions, aggressive publisher marketing) but who weren't aware of the growing trends of openness in higher education.

Library Reserves

Students have embraced the expanded course reserve service, borrowing around 1,000 items each semester (Spring 2015–Fall 2017). The average price of the donated textbooks was $85, with 18 valued at over $100. A conservative estimate of student savings, assuming 1/3 (1,666 to account for repeat use by unique users) of these checked out items (5,000) were purchased by students for $85, is $141,600. Because the donated materials were a one-time gift, these substantial student savings unfortunately do not translate to funding for library collections.

> **Students have embraced the expanded course reserve service, borrowing around 1,000 items each semester.**

The donated items primarily supported frequently taught, lower-division, on-campus courses, with some outliers from upper-division courses. Many of these texts are used in two course sequences (ie Chemistry 1 and Chemistry 2) offered on an alternating semester schedule. As the donated materials quadrupled the size of our course reserves collection, a major reconfiguration of the available reserves stacks behind the circulation desk was required.

After two years, many of the donated titles are being superseded by new editions or dropped in favor of new materials. The library acquisition budget is insufficient to purchase replacement textbooks. At the end of each term, however, more and more students and faculty are donating their personal textbooks to the library, supplementing and expanding the collection with some new titles and with newer editions of dated titles.

We are investigating a revenue sharing option that could designate a portion of commision earnings from online textbook sales. This revenue would be used to update the library textbook collection. Currently this revenue supports administrative functions of the campus textbook voucher program through the Financial Aid office.

In addition to significant up-front labor for processing the donated materials, the current location of these reserves behind the circulation desk, along with the steady stream of users, have created a labor-intensive retrieval workflow. Self-service reserve models are being investigated.

Ebooks for the Classroom | Library ebooks

Beginning in the fall semester of 2016, a portion of the library acquisitions budget typically used for faculty purchase requests and general a la carte ebook purchases was committed to support of a new service that was promoted to faculty as "Ebooks for the Classroom." These resources, while not free, represent affordable content for students. This is one way UAS faculty can address the problem of textbook cost and increase student access to learning materials (with no waiting for books to arrive).

The library is committed to acquiring requested ebooks for classroom support if they are available electronically for institutional purchase from a library vendor in a favorable licensing model (unlimited users or concurrent use). If a limited user option is the only model available, we consult with faculty prior to purchase. In anticipation of high demand for this service, policy states that priority may be given to courses with the highest enrollments. Turnaround time for delivery of access URLs for these resources ranges from a few hours to a few days. In some

cases, the requested materials are available in existing ebook collections; this creates a greater impact without additional purchases, returning greater value for these subscriptions.

Return on Investment

By conservative estimates, UAS faculty electing OER or affordable content (ebooks for classrooms) have saved students $34,753. For every program dollar spent on these materials, students saved $8.31. This is in addition to the savings created through expanded library course reserves. The financial benefit to students tends to receive the most attention in discussions of textbook affordability efforts, so I've worked to emphasize these savings in talking points.

Student Savings Impact | UAS Alt-Textbook Project 2016-18

updated 6/17/2018

Egan Library & Departmental Costs	$4,181.25
Student Savings on Materials	$37,553.00
Student Savings per program 1$ spent	$8.98

$0.00 $10,000.00 $20,000.00 $30,000.00
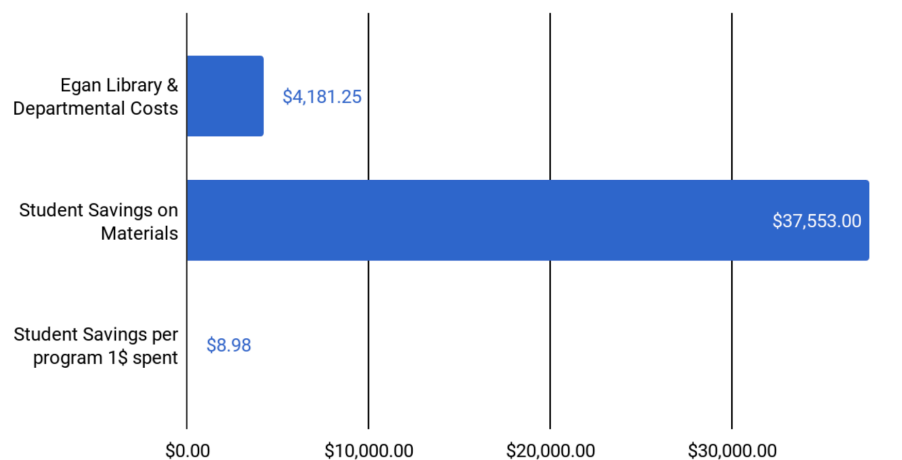
Figure 1: Student Savings Impact

I believe the economic benefits of OERs will help develop campus buy-in for adoption and conversion of a variety of OER materials. However, as the use of OERs increases, I would like to expand the scope of our efforts to include outcomes-based measures from the Open Education Group's COUP framework, outlined below. This level of impact assessment would require new partnerships with the Office for Institutional Effectiveness, the Dean of Enrollment Management, the Chancellor's Strategic Enrollment Task Force, and faculty using affordable content. These partnerships would enable access to student and enrollment data needed for further research, and any significant changes revealed could aid in the development of institutional policies supporting affordable content work, and open up avenues for institutional and external funding. Potential areas of investigation related to the use of affordable content and OERs include changes in:

- The percentage of students receiving a C or better
- Rates of completion

- Drop rates

- Enrollment intensity

- Persistence

- Attainment of progress milestones (e.g., first 15 credits)

- Graduation rates

Next Steps

I frequently refer to our campus affordable content and OER efforts as grassroots in scope. My intent is not to diminish their impact, but to acknowledge a lack of formalized goals, objectives, philosophies, guidelines, requirements, and timelines. Like many initiatives and programs at small institutions, the Alt-Textbook Project is driven by a few faculty champions (primarily myself and those who have attended my talks or participated in workshops, information sessions, or individual consultations). While some of the appeal of working on textbook affordability is rooted in raising awareness of issues in open education (which can be done without funding), there is a degree of frustration and a limit to what can be accomplished without dedicated budgetary support.

When possible, resources from the library acquisitions budget have been approved and reallocated to make the E-books for the Classroom initiative possible. For this to be a sustainable effort, new funding or a more permanent designation of budgetary resources is needed. Efforts will be first made to secure external funding, as our library acquisitions budget has been cut by 27% since 2016.

In the coming year I will pursue two institutional funding opportunities. First, I will lobby for additional revenue from the campus Strategic Enrollment Task Force on the basis that textbook affordability efforts are an effective retention strategy. Additionally, I plan to apply again for funding from the UAS Academic Innovation Fund (AIF) and to a newly established University of Alaska Faculty Initiative Fund ($1 million provided by the University), focusing on affordable content efforts and prioritizing the following goals:

- improving access to services in support of student success

- enhancing tools and techniques for student learning and retention

- developing new and creative instructional pedagogies.

- collaborating with other UA institutions (Anchorage, Fairbanks) to replicate affordable content efforts statewide.

Funding would be used to:

- purchase library licensed ebooks requested by faculty for classroom support

- purchase additional required print textbooks for reserves in high enrollment and/or high cost courses

- support faculty with publishing resources, like editorial support and Pressbooks platform access, and stipends for adoption/authoring of OERs.

As the AIF fund is capped at $2,000 per applicant per fiscal year, I will work with our first faculty author to identify expectations for compensation and support for his contributions, and if necessary work with additional authors to apply for AIF awards in the future. Collaborating with a faculty author to create and publish our first open textbook will be the next project milestone.

Beyond securing funding, I'm interested in working with student government, the Faculty Senate Curriculum Committee, administrators, and the Registrar to explore inclusion of OERs or low-cost designations in our course schedules so that students can make informed decisions on course enrollment based on complete course costs (tuition, fees, and course materials).

In addition to these efforts to expand the influence of the project, we will continue to provide faculty development in areas of open access, OERs, and affordable content, assist faculty in identifying and evaluating potential low- or no-cost materials to replace commercial texts, and build campus partnerships to measure the impacts of the work.

Lessons Learned

There are a number of lessons learned during the development of our program that may be valuable to others considering a similar effort.

One size doesn't fit all. Certain subjects, primarily in the humanities and literature, are under-represented in the selection of open textbooks available. While sufficient coverage for these subjects is available via other OER content types, I've observed that faculty perceive textbooks as the easiest OER type to adopt. A lack of open textbooks for some subject areas might make this work more challenging in some cases.

Consider the cost. Faculty consultations which reveal a lack of subject area coverage have raised awareness of the affordability problem and led to emphasis on cost consideration when selecting commercial course materials. These consultations may also plant the seed for future conversations about a wide range of affordable content options.

Course preparation time is precious. Faculty appear more likely to convert a new course rather than one in which they have an investment and history and have based existing curriculum on a commercial text. Unfortunately, the existing courses tend to have high enrollment, with multiple sections and instructors, and adoption of OERs could have a major impact on student cost.

> **Though it feels like I've long been a lone champion on campus, it's only been two years and I'm beginning to make ripples and find allies. Those of us working in this arena are working against a legacy of commercial publishing and the significance**

> **placed upon key textbooks. Even small changes can have an impact and lay the groundwork for future changes.**

Change making is slow. Though it feels like I've long been a lone champion on campus, it's only been two years and I'm beginning to make ripples and find allies. Those of us working in this arena are working against a legacy of commercial publishing and the significance placed upon key textbooks. Even small changes can have an impact and lay the groundwork for future changes.

Conclusion

While the closure of a bookstore is not the ideal beginning to a story, that controversial decision on our campus set the wheels in motion for culture change at the University of Alaska Southeast. The impact of the Alt-Textbook Project extends beyond reducing student cost-to-completion, initiating necessary conversations about teaching and learning, equity, and information privilege.

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Chapter 15 - The Open and Affordable Course Material Initiative at Penn State

Julie Lang, Joseph A. Salem, Jr., and Jennifer Sparrow

by Julie Lang (Penn State), Joseph A. Salem, Jr. (Michigan State), and Jennifer Sparrow (Penn State) (bios)

Introduction

The formal open and affordable course material initiative at Penn State was launched in February, 2015, when Provost Nick Jones created a university-level Open Educational Resources (OER) Task Force. Members included representatives of the Penn State World Campus, the University Libraries (UL), Teaching and Learning with Technology (TLT), faculty, and student government. The task force was chaired by Barbara Dewey, Dean of University Libraries and Scholarly Communication.

The Task Force was charged with helping to systematically implement OERs in support of teaching and learning, and with increasing student access and affordability—key items on the President's agenda. Three specific outcomes were specified: proof-of-concept pilots of OER adoption, an investigation of consortia in support of OERs and affordable course content, and development of a plan for making open and affordable course content available at Penn State.

The Task Force completed its work over the subsequent 18 months, consulting widely and presenting on open and affordable course content throughout the university. Notable accomplishments included two semesters of pilots and data collection, a focus on open and affordable course content at the TLT Symposium in 2016 and in TLT-sponsored faculty development programs, and an OER Summit hosted by the UL during Open Education Week in March, 2016, that highlighted the work of the Task Force and work already underway at Penn State. The summit was a good indication that the Task Force's work had been successful, as over 100 faculty and staff participated either online or in person.

OER Task Force Findings

One key takeaway of the OER Task Force was that that significant work was already underway at Penn State. Notable programs include the John A. Dutton e-Education Institute, which has a long history of creating OERs in the College of Earth and Mineral Sciences, and the Office of Digital Learning (formerly the e-Learning Institute) in the College of Arts and Architecture, which converts courses materials from textbooks to faculty-created mixed media.

We also found high levels of satisfaction with OERs among the faculty and students who participated in the

proof-of-concept pilots, and a strong interest in and need for a multi-faceted approach to access and affordability, with OERs part of a larger strategy. And we discovered that Penn State was uniquely able to scale open and affordable course content adoption and related savings due to two advantages—the Commonwealth Campuses, and its significant investment in instructional design.

One of our most significant findings was that, although faculty interested in transitioning their courses to open or more affordable course content options were well supported through available instructional design or librarian expertise, these services and expertise were not easy to find, and there was no formal way to market them. There was also a lack of centralized leadership. Due to the very decentralized nature of Penn State and to its geographical distribution (24 campuses across the entire state), the Task Force identified strong partnerships at the University Park campus and throughout the Commonwealth as a significant need.

One of our most significant findings was that, although faculty interested in transitioning their courses to open or more affordable course content options were well supported through available instructional design or librarian expertise, these services and expertise were not easy to find, and there was no formal way to market them.

Both the UL and TLT repeatedly emerged as units working in support of open and affordable course content and innovations in digital pedagogy. With strong partnerships and an administrative presence on the Commonwealth Campuses, each agreed to dedicate a position and resources to lead the university's effort. Julie Lang, an instructional design lead already working in strong support and partnership at the Commonwealth Campuses, agreed to be the OER Lead in TLT, and an Open Education Librarian position was created in the spring of 2017, and filled in August of that year by Amanda Larson.

Additional Task Force recommendations included leveraging Penn State's Unizin membership and joining OERu and the Open Textbook Network as early consortial partners to support access and affordability; creating a faculty development and incentive program; leveraging library-licensed resources in courses; developing a strategy for hosting locally-created OERs; and developing a university-wide strategic plan for OERs/affordable course content. The report of the OER Task Force is available at http://oer.psu.edu.

This chapter describes the collaborative approach to supporting course affordability at Penn State, as well as select initiatives that have advanced open and affordable course content.

To implement the recommendations of the task force, an OER Working Group was added to the Penn State strategic plan structure in early 2017. All three authors participate in the Working Group, and help advance open and affordable course content initiatives in their daily roles as well.

This chapter describes the collaborative approach to supporting course affordability at Penn State, as well as select initiatives that have advanced open and affordable course content. Although not completely unique, Penn State's program is fortunate to have the support of the Provost and several committed partners, and the visibility of being included in the university's strategic plan. We hope that our colleagues at other institutions will find it useful to read of the success and challenges of such a well-supported program.

Collaborative/Comprehensive Approach to OERs

Building a Program – Networks and Projects

In 2014, Dr. Barron, president of Penn State, issued his priorities for the university, which included increasing affordability for students. Faculty and staff recognized that related efforts needed to leverage the university's rich resources, and extend beyond the work of individual faculty members.

OER Coordinator

In the Fall of 2016 we intentionally began building our program, shifting an existing position into a full time position supporting OERs, and changing the position title from Instructional Designer to OER Coordinator.

Julie Lang had previously worked with Penn State Campus faculty and staff on shared degree programs—programs offered across geographic locations so that students can complete a degree without moving to another campus. Because her work assignments provided many opportunities to collaborate and develop relationships across campus locations, Julie was well positioned to work with the instructional design community across the Commonwealth to recruit, develop, and support faculty in the adoption, adaptation, and authoring of OERs so. Since one of the Coordinator's primary roles is this collaboration with faculty, it is useful to consider a few successful collaborations to date.

One early collaborator was a faculty member who authored two open textbooks for her Spanish I and II courses, receiving technical support from two instructional designers at her local campus, and replacing the expensive online homework system students were required to buy. The faculty, instructional designers, and Coordinator collaborated throughout the process, sharing their work using Pressbooks.

One Earth Science instructor used a number of open resources freely available online, incorporated interactive activities using H5P, a free and open-source content collaboration framework based on JavaScript, and delivered the content to students in an organized ebook via Pressbooks. She received positive feedback from her students, who had previously complained about the difficulty of locating the various resources included in her online course.

One senior faculty member, who attended a faculty development session on access and affordability, was intrigued at the thought of saving his financially strapped students the cost of a textbook, and adopted the open textbook *Statistics* from OpenStax. He checked in at a regional faculty development event and reported that all students had the book on the first day of class because it was freely available, and he heard fewer excuses when the first homework assignment was due. At another campus, one of the local instructional designers introduced a faculty member to the Coordinator, and they discussed the issue of a course text going out of print. They eventually solved the issue by adapting open resources in Pressbooks, incorporating H5P content to help students check their reading comprehension.

These collaborations show how key relationships can lead to successful projects, and illustrate the infrastructure

and expertise we made available in order to support our faculty. To further this support, we also created Pressbooks training materials for faculty and staff, along with resource guides on using low-cost content provided by the library.

We also organized online meet-ups with faculty who wanted to discuss the best pedagogical approaches to using OERs. These meet-ups were a place for instructional designers and librarians to point staff who were exploring OERs. They also allowed college and campus instructional design units to see the work being done and explore how they could customize materials to the meet the needs of faculty they were supporting, and provided faculty involved with OERs from the beginning to use the training documentation to discuss their work with peers during meetings and conferences.

Projects were formed out of these conversations. During the 2017 Teaching and Learning with Technology (TLT) Symposium, for example, three Spanish faculty from three separate locations approached a faculty member who had authored an open textbook, asking about collaborating on open resources for a higher-level course. And two math instructors from two different locations approached the OER Coordinator about adopting OpenStax books and adapting a book to include some of their own resources.

In addition to the work with campus designers, the OER Coordinator has had opportunities to work with faculty and staff at University Park, Penn State's largest and main campus. Instructional designers at University Park are employed within academic units. At the College of Earth and Mineral Sciences, for instance, which has been offering open online courses for many years, the instructional designers supporting these courses were very receptive to learning how to create an entire online open course, from licensing to faculty buy-in. Another valuable resource at University Park (although it serves all faculty and staff throughout the campuses) is the Schreyer Institute for Teaching Excellence (SITE). The OER Coordinator worked with an instructional consultant from SITE on the local ID2ID program (a professional development initiative that matches up instructional designers to work on self-selected projects and collaborate on professional development activities). They developed a face-to-face training session for faculty who were getting started with adopting, adapting, and authoring OERs, and presented the materials they created in an all-day event for faculty who had received seed grants from the office of General Education to develop integrated courses. This allowed the OER Coordinator to engage with University Park faculty—often, due to their research agendas, the most difficult audience to reach.

Open Education Librarian

As part of its commitment to lead the open and affordable course content program at the university level, the UL created the position of Open Education Librarian in early spring of 2017 and successfully filled it with a start date of August, 2017. This is a tenure-track faculty position reporting to the Head of Library Learning Services, the foundational teaching, learning, and student engagement department within the UL. The goal for the position is that it will co-lead the open and affordable program with Julie Lang, the OER Coordinator in TLT.

This position is responsible for building partnerships and creating strategies to develop, assess, and maintain services to integrate OERs and affordable course content into the curriculum. A significant focus is on partnering with faculty, librarians, students, and instructional designers to create, adapt, and adopt open and affordable course

content at the course and program level. The position is also responsible for setting the strategic direction for open and affordable course content initiatives throughout the UL.

Amanda Larson is the current Open Education Librarian, and has already been successful in developing partnerships, with TLT in particular. She has also elevated the national profile of Penn State on open and affordable initiatives, serving as inaugural SPARC Open Education Leadership Fellow, coordinating Penn State's participation as a charter member of the Open Textbook Network Publishing Cooperative, and serving as a member of the Open Textbook Network Advisory Board.

Collaboration of the OER Coordinator and Open Education Librarian

The OER Coordinator and Open Education Librarian are complementary positions; each requires specialized knowledge, but includes opportunities for collaboration and shared work on many projects.

The OER Coordinator contributes knowledge and expertise in using technology for open publishing, content creation, and instructional design, consulting with faculty to transform their courses to accommodate affordable and open content. She is responsible for assigning and overseeing OER Support by the TLT Instructional Design Team, including production support staff members, multimedia specialists, and programmers, and serves as the project manager for the adaptation and authoring of of open content. The Open Education Librarian provides knowledge and expertise on open licensing, open publishing, and open pedagogy, as well as library resources on OERs and low-cost course adoption, adaptation, and project authoring. Working together, they give faculty support and guidance not only on providing affordable course materials but on delivering pedagogically sound courses that provide a high-quality learning experience.

Workflow

Our early strategies focused on educating faculty and identifying low-hanging fruit for some early projects. Once we had a variety of projects, we began to focus on creating a successful workflow and establishing best practices for our campuses/institution.

With any collaborative project it is important to establish project goals and timelines from the very start. During the first meeting with faculty we work on defining their goals. What are they trying to do? Do they want to replace a textbook that students must purchase with an open textbook? Is that even possible? Sometimes open textbooks do not exist for higher-level courses and niche subject areas. In that case, we

With any collaborative project it is important to establish project goals and timelines from the very start. During the first meeting with faculty we work on defining their goals.

consider replacing the textbook with open resources from a variety of open content repositories, and discuss how to share the content with students. In Penn State's work, OERs are any type of educational materials available to

the university community with little or no cost. We therefore point faculty to library resources and to publishers who have agreed to provide materials at a cost of fifty dollars or less per student.

We next discuss the project's timeline. Adoption of existing materials takes the least amount of time. We recommend that the faculty choosing this option examine their course goals and lesson objectives to make sure these are in alignment with the new open textbook being used for the course.

Adaptation is a longer process, and there are a number of reasons faculty might choose it. An open textbook might, for instance, contain extra chapters not needed for a course; we then use Pressbooks to import the desired chapters. In addition, faculty can write additional content to cover material not addressed in the imported chapters. They might also want to use open resources from a variety of sources, and we can import and combine these into a single resource in Pressbooks. When there are no useful open textbooks, we begin to explore OER repositories such as Merlot and OER Commons. Finding resources is usually not a problem, and we can often find several high-quality resources in formats ranging from Word documents to online interactive simulations. Organizing and rating the resources, however, can become problematic, and take a lot of time. We developed a spreadsheet to help faculty track what they find and describe how it might help students to meet the course goals and lesson objectives.

For authoring an open textbook, the first step in our workflow is the creation of a general table of contents. While every page needn't be thought out, the faculty member should have an idea of the topics for each chapter book before they start creating content. Typically, the table of contents is created in a collaborative document such as a note in a Box folder or in a Google Doc. This allows the faculty member and instructional designers to view and comment and to ask questions about the topics.

Once the table of contents is complete, we start creating that structure in Pressbooks. This can be done by faculty or student production assistants. We have hired three undergraduate production assistants to help faculty publish original open content. The majority of faculty projects have been designed and developed in Pressbooks, with faculty members writing content in a Word document and uploading chapters into Box folders. The students then take the content and import it into Pressbooks. The faculty can easily view the content by going to a URL, and can leave comments for the student production staff—a Pressbooks feature that cuts down on emails between faculty and student production staff, thus saving a great deal of time.

Textbook content for some projects is widely available, and student production staff can assist faculty in searching for open resources to replace high-cost materials. One project for a Kinesiology course on stress management, for example, used some of the many free and open resources available online for this popular subject area. A student production staff member was assigned topics connected to lesson objectives, and placed the URLs and brief synopses of resources in a Box note for faculty to explore and respond to with comments, questions, and feedback; the student then imported selected resources into Pressbooks.

Student production staff have also been incredibly helpful creating H5P content within Pressbooks. Pressbooks is based on the WordPress platform, which offers an H5P plugin that makes it easy to create self-check items such as multiple choice, drag and drop, and embedded videos with questions. Faculty indicate in Pressbooks where they would like the interactive content to be created, student staff use the plugin to create that content, and faculty then provide feedback and can request modifications or changes.

Leveraging the Penn State Membership in Unizin

The Unizin Consortium contains many of the same institutions that are a part of theBig Ten Academic Alliance (BTAA), and Penn State's OER Coordinator is a member of the Unizin Affordable Content Group. In the past year this group has helped pilot an e-reader called Unizin Engage, which allows members to offer students published materials at a significant discount. We are also working on best practices for using Pressbooks. Both the Affordable Content Group within the BTAA and the Unizin Teaching and Learning committee include faculty and staff who are not only highly knowledgeable and skilled in the adoption, adaptation, and authoring of OERs, but are very approachable and eager to answer questions or suggest helpful resources.

One of the year's highlights was a Content Creation Camp co-sponsored by BTAA and Unizin. Penn State was well represented, with faculty serving as two of the three discipline team leads. The initiative arose from Ohio State's realization that content question banks were a missing piece in the successful faculty adoption of OERs. Published materials allow faculty to access a wide array of quiz and exam questions, but when traditional textbooks are replaced with open resources, those question banks are lost. The camp, held at the Big 10 Center in Chicago, was an effort to encourage cross-institutional collaboration among faculty in three general education subject areas: medical biology, macroeconomics, and sociology, and the Penn State faculty were excited about the opportunity to collaborate with faculty in their disciplines. During the camp they learned more about creating high-quality questions, and determined the further work needed when they returned home.

Each team was asked to create a 1,000-question test bank, with each of the 3,000 questions following sound design principles, tied to 25 item-writing guidelines, and reviewed by members of that team and a psychometrics expert. Questions were made available, at no cost, for download and import into course management systems. Ohio State conducted a survey of camp participants, and reported that 100% felt that facilitators were engaging, the agenda well-organized, and the environment conducive to learning.

It was exciting to speak with faculty after the event, and hear their enthusiasm and praise of the Ohio State organizers. The camp opened their eyes to the possibilities that exist in creating open content with collaborators, and showed them that they're not alone in their quest to provide high-quality open content to their students.

Penn State continues to work with Ohio State on this initiative, and met with the organizing team in early December, 2017, to discuss the best ways to move forward with the overall initiative as well as the technology required for faculty to create questions and provide feedback.

Creating Strategic Faculty Development Initiatives

One professional development goal for the OER Coordinator, derived from task force recommendations, is to design, develop, and deliver an OER faculty development program. During the Fall 2017 semester, the Coordinator met with instructional designers and with the OER librarian to discuss how to support faculty in adopting, adapting, and authoring OERs. The Coordinator also researched best practices in facilitating faculty development in OERs within higher education, and reviewed programs at other BTAA and Unizin member

institutions. This work continued into the Spring Semester, with the first faculty development and incentive program offered during the summer of 2018 and using the following metrics for assessment:

- Did faculty implement OERs into their courses after attending the program?

- Did faculty who attend the program follow up with questions or consultations?

We will also conduct a faculty survey/interview after the program to gather feedback and find out what, if anything, is missing that would be helpful to include in future programs.

Faculty engagement is key to project success.

Faculty engagement is key to project success. For this project, we were able to leverage the successful model developed by TLT over several years of emerging project development. TLT provides both broad and deep support for faculty-driven curricular projects, including instructional design, faculty development, instructional technology, and support for research in the scholarship of teaching and learning (SoTL). These in-depth partnerships can last a semester or longer, and the resources dedicated to these projects vary depending on technical and curricular support needs. The history of these faculty engagements is available at the Faculty Fellows website.

For this OER development initiative, TLT was committed to a multi-semester engagement with faculty, with support including an instructional designer, technology support staff, a graphic designer, and a copy editor. Instructional design and technology support were provided by full-time staff, available through a shift in personnel after several projects were completed. Graphic design and copy editing were done by student wage employees, in positions funded out of an emerging projects budget.

This structure followed the Faculty Fellows model of support—both broad and deep—that TLT has provided in the past, with a comprehensive set of agile and adaptive resources for different project needs and timelines. It also allowed the team to address any changing demands for services.

Faculty recruitment started with TLT leveraging existing relationships across the 24 Penn State campuses, and reaching out to faculty who had participated in faculty development workshops on Shared Programs, E-Learning, and Blended Learning. TLT also put out a call for proposals that included an outline of the range of supports available to faculty, including instructional design, technology, copy editing, and graphic design. Proposals were evaluated not only for the content that would be covered, but for the impact OER materials could have on courses with large enrollment and multiple sections across campuses.

Throughout the process, the research group within TLT collected data on the process itself and the impact of OERs on student learning. Students in courses using OERs were surveyed on their use of OER materials, whether they preferred them to traditional textbooks, the ease of use, and the perceived impact on learning. Students reported they were neither more nor less distracted when using an ebook versus a traditional textbook, and frequently noted the benefit of not having to carry a heavy book around campus. Overall, students were pleased with the experience, felt it had a positive impact on their learning, and were particularly happy with the reduced cost and first-day access.

Faculty engagement has grown as we offer more services and events, and as the strategic planning process makes the open and affordable course content program more visible.

Creating a Central Online Presence for OERs

One of our biggest challenges has been to communicate the OERs and opportunities available at Penn State. The OER Task Force developed a website—https://oer.psu.edu—to serve as a clearinghouse for all open and low-cost initiatives and materials at PSU, showing initiatives in progress, promoting upcoming events (the 2016 OER Summit, for example), and serving as a place for instructional designers and librarians to direct faculty for advice and support.

The OER Coordinator took over maintenance of the site after the Task Force Report was accepted, and she and the new Open Education Librarian have planned several improvements, including:

- A Faculty Showcase highlighting the work of faculty throughout the Commonwealth in adopting, adapting, and authoring low-cost and open course materials.
- Videos of faculty describing why they decided to adapt, adopt, and author open resources, and of students discussing the positive impact of faculty decisions to commit to affordable course materials.
- Faculty reviews of instructional materials we have developed on finding and adopting open resources.
- Additional resources to help faculty adopt and adapt materials, with places in which faculty can post reviews.
- Links to faculty-authored openly licensed content.

We are also planning improvements to the licensing page, including the development of online modules for intellectual property instruction.

Challenges

Although the open and affordable program has made significant progress over the last three years, we have encountered some challenges. Currently, for example, there is no centrally supported/structured initiative in place to incentivize faculty to adopt, adapt, and author open resources. During the summer of 2017, the OER Working Group charged with implementing OER Task Force recommendations partnered with the Office of General Education to support faculty who were developing courses to meet new program requirements and who wanted to make those courses open or affordable. While that partnership is anticipated to continue, a standalone faculty development and incentive program is under development for the summer of 2018.

Because the Open Education Librarian's appointment did not start until August, 2017, the Online Learning Librarian, Subject Librarians, and Copyright Officer took on the work of addressing copyright and licensing questions. This made the librarian's transition more challenging, as several initiatives were well underway and well developed when she began.

In some disciplines, textbook decisions are linked to agreements with particular publishers, which stymies the creation and adoption of OERs for high-volume, high-cost textbooks. Several publishers also have direct-to-faculty arrangements, also a challenge for implementing new initiatives. Our Working Group includes representatives from the university bookstore (Barnes & Noble), with which we have a strong partnership. We are seeing the development of a widespread preference for all vendor relationships related to course material to be coordinated by the bookstore; this would help simplify the materials being assigned.

Successes

Despite these challenges, several of our initiatives have found early success. The Pressbooks implementation through Unizin, for example, has resulted in several textbook resources. Notably, one colleague has been teaching from the textbook that she authored for Spanish I, and is working on another for Spanish II.

For the fall of 2017, UL piloted ebook licensing of academic and university press books assigned for World Campus courses. Course material adoptions were reviewed and titles meeting library collection development criteria were identified, licensed, and added to each course through the course reserves system. For the fall pilot, 164 ebooks were licensed in 140 courses, providing a potential $383,937 in student savings for an investment of just over $20,000 in licensing.

Also in the fall of 2017, TLT and UL piloted a first-day access program using the Unizin Engage platform. Seven faculty members participated, with the 233 students in their nine courses receiving course materials through a first-day access model allowing them to opt out of payment; in return, the courses received deep discounts of approximately 70%. Access fees for the pilot programs were covered by Penn State, and first-day access was assessed both financially and as it related to student success. In the spring of 2018, the pilot was expanded to include the Barnes & Noble platform, with Barnes & Noble filling the role of content coordinator and, eventually, price negotiator.

Following the Task Force's recommendations, Penn State joined the Open Textbook Network (OTN) in 2017. The OTN training event was held during Open Access Week in October, 2017. Separate sessions for faculty and for support staff were held, as well as a lunch with student government leadership. At least 50 faculty participated in the session either in person or online.

Next Steps and Lessons Learned

Our next priorities, both in our daily roles and as members of the OER Working Group, will focus on moving select initiatives from pilot phase to scale and then to sustainable programs. First-day access, ebook licensing, and faculty incentive programs are among our top priorities for transitioning from pilot to program. To support Penn State's strategic plan, one of our general strategies for scalability is to align our work on open and affordable course content with emerging initiatives supporting the plan's Transforming Education goals.

Throughout our work, we have repeatedly been told that our most important task in gaining acceptance and trust around the use and production of OERs is to develop positive relationships. At some point, we have each met

naysayers—faculty who have told us, flat out, that OERs will never work. Opening the lines of communication around what is possible in open pedagogy has, however, turned many critics into partners, and increased their level of commitment and time. With the right support, even the busiest person working with the most complex subject matter can find a way to adopt, adapt, or author open resources in a realistic amount of time.

Additional Readings

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Julie Lang is the Open Educational Resource Coordinator for Teaching and Learning with Technology (TLT). Julie works with faculty, instructional designers, and librarians to advance the adoption, adaption, and authoring of open content to benefit students at Penn State and beyond.

Joseph A. Salem, Jr is the former Associate Dean for Learning, Undergraduate Services and Commonwealth Campus Libraries at Penn State. In this role, he was responsible for the teaching and learning program in University Libraries and Access Services, both of which play central roles in support of open and affordable course content adoption and creation. He served as a member of the Penn State OER Task Force and led the OER Working Group charged with advancing recommendations from that task force as part of Penn State strategic plan implementation. He has published and presented on open and affordable course content. Joe is now University Librarian at Michigan State University.

Jennifer Sparrow is the Senior Director for Teaching and Learning with Technology (TLT) where she leads a team of learning innovators. TLT collaborates across the entire institution to transform teaching and learning. The work is grounded in the values of: accessibility for all learners, reliability and credibility of all work, and strong partnerships with faculty, students, staff and vendors that enable new ventures in teaching and learning. Jennifer champions the following: innovation in teaching and learning with technology, strategic opportunities for faculty development, the advancement of flexible, active learning spaces, and research in the scholarship of technology-enhanced teaching and learning.

Affordable Content Models

Chapter 16 - Inclusive Access: Who, What, When, Where, How, and Why?

Cheryl Cuillier

by Cheryl Cuillier, University of Arizona (bio)

In the college textbook landscape, inclusive access programs are expanding rapidly. This chapter explores the evolution of inclusive access and the model's possible advantages and disadvantages, considering perspectives of publishers, campus stores, faculty, students, and open educational resource (OER) advocates. Using the University of Arizona (UA) BookStores' inclusive access pilot as a case study, I also share the lessons we have learned. UA anecdotes come from 2017 interviews with Cindy Hawk, Assistant Director of the UA BookStores; Mark Felix, Director of Instructional Services in the Office of Instruction & Assessment; Management Information Systems Professor Bill Neumann; and Valeria Pietz, eLearning and Multimedia Services Team Director in the Eller College of Management.

While the details may vary by publisher, vendor, retailer, or institution, inclusive access generally works like this: Students receive access to digital course materials on or before the first day of class. Content is usually linked in the campus learning management system (LMS). Access for enrolled students is free during a brief opt-out period at the beginning of the course; if students opt out of buying the inclusive access content by the deadline, their access disappears. If they do not opt out, access continues and they are automatically charged for

> **While the details may vary by publisher, vendor, retailer, or institution, inclusive access generally works like this: Students receive access to digital course materials on or before the first day of class.**

the content. Because opt-out rates tend to be low, publishers say they can afford to offer volume discounts at substantial savings ("as much as 70 percent" [Dimeo, 2017, Michael Hale section, para. 8]). Student access to purchased materials ends at a length of time negotiated with the publisher.

These programs are known by a variety of names. Publishers McGraw-Hill Education, and Wiley use the term inclusive access, as do content delivery providers VitalSource and RedShelf. Macmillan calls its digital discount program Macmillan Learning Ready. Pearson referred to the model as both ALL-INclusive and Digital Direct Access. Unizin dubbed it the All Students Acquire model. The Mizzou Store at the University of Missouri calls it AutoAccess. At San Diego State University, the program goes by Immediate Access. Hinds (Miss.) Community College calls it Instant Access. Follett named its platform includED, and Barnes & Noble College uses the term First Day. According to Ruth (2017), programs are also referred to as "day-one access," "digital discount," or "enterprise solutions" (para. 3).pearson

To reduce confusion, I will refer to the model throughout this chapter as inclusive access (the name of the UA BookStores' program). I acknowledge that this term is controversial. According to Nicole Allen, Director of Open Education for the Scholarly Publishing and Academic Resources Coalition (SPARC), "inclusive access" is a misnomer: "It's the opposite of inclusive, because it is premised on publishers controlling when, where

and for how long students have access to their materials, and denying access unless they pay for it" (as cited in McKenzie, 2017, Inclusive or Exclusive? section, para. 1). Advocates of open textbooks, which are freely available online and allow customization and perpetual access, say "inclusive access" is a more fitting moniker for OERs than for digital commercial content. Compared with traditionally copyrighted materials from publishers, OERs offer expanded capabilities and possibilities, according to David Wiley, Chief Academic Officer of Lumen Learning (2017). "OER broadens access in a way that is actually inclusive," said Rajiv Jhangiani (2017), a University Teaching Fellow in Open Studies and psychology professor at Kwantlen Polytechnic University. "The OER approach enhances access and agency in a manner that serves social justice and inspires pedagogical innovation" (para. 5).

No matter the name, the model of first-day access to commercial digital content is clearly gaining traction with publishers, college stores, and faculty.

Case Study: UA BookStores

The UA BookStores began piloting inclusive access in Fall 2016. Growth has been tremendous, with a nearly tenfold increase in the number of participating students over the next year. In Fall 2017, 4.5% (450) of the UA's 10,000 sections connected to course sites in our D2L Brightspace LMS used inclusive access (this figure differs from the number of courses in Figure 1 because some courses had multiple sections). Over three semesters, the UA BookStores' estimates for total student savings exceeded $2 million. UA students have until the course's add/drop date to opt out of purchasing the digital content; the percentage choosing not to buy the content through inclusive access has ranged from 3.9% in Spring 2017 to 7.6% in Fall 2017.

semester	# courses	# students	opt-out rate	estimated savings
Fall 2016	7	2,151	4%	$111,000
Spring 2017	21	5,324	3.9%	$291,000
Fall 2017	95	22,128	7.6%	$1,671,400

Figure 1: Inclusive access at the University of Arizona.
Data from UA BookStores. Estimated savings are based
on comparisons to new print prices.

At the UA, inclusive access is used on a textbook-by-textbook basis, and faculty are given the option to participate. By Spring 2018, the UA BookStores had inclusive access agreements with nine publishers and two platforms (RedShelf and VitalSource). Technology from Verba, which was acquired by VitalSource in 2017, is used for tracking opt-outs, delivering courseware, and other functions, and Verba is considered a separate integration from an IT standpoint. Price negotiations with these publishers and vendors are handled by the UA BookStores, although sometimes faculty negotiate as well. (In other inclusive access models, publishers may negotiate directly with the institution, cutting the campus store out of the process [Esposito, 2017]).

As a campus-owned entity, the UA BookStores give profits back to the UA community by supporting campus organizations, initiatives, and scholarships (2017, "How do we do more?" section). The BookStores partner with the UA Libraries on textbook affordability initiatives, including the use of OERs and library-licensed ebooks (see This Chapter for more details). OERs and inclusive access are not mutually exclusive. OpenStax, for example, makes its open textbooks available through inclusive access via VitalSource and RedShelf (Ruth, 2017, para. 1).

Inclusive Access on Other Campuses

Other universities were early pioneers of inclusive access. According to Straumsheim (2016), Indiana University (IU) began piloting its eText initiative in 2009 (para. 2). The program has grown 50% year-over-year, been part of 2,600 course sections, and saved students an estimated $3.5 million in the 2016–17 academic year alone, said Brad Wheeler, Vice President for IT (as cited in Indiana University, 2017, para. 2 & 8). In 2013, Western Kentucky University was among the first institutions in the nation to start an inclusive access program (Angelo, 2018, p. 23). The UC Davis Stores at the University of California, Davis, and the Mizzou Store at the University of Missouri both began using inclusive access in 2014. Digital textbooks are now used by about 17,000 UC Davis students per term, and since 2014 inclusive access has saved students nearly $7 million compared to the price of new print textbooks, said Jason Lorgan, executive director of Campus Recreation, Memorial Union and UC Davis Stores (as cited in VitalSource, 2017a, para. 3). University of Missouri students have saved $5.2 million through its AutoAccess program, and each student enrolled in an AutoAccess class saves an average of $68.13 per course, according to the Mizzou Store (2017, 0:23).

Growth of inclusive access has been greater at independent—rather than leased—college stores, said Mike Hale of VitalSource and Tim Haitaian of RedShelf (as cited in McKenzie, 2017, The Role of Campus Stores section, para. 5). According to the National Association of College Stores, 23% of independent college stores had inclusive access programs in place for 2017–18 and another 32% said they were considering adopting a program (as cited in McKenzie, 2017, The Role of Campus Stores section, para. 4). Inclusive access is also expanding at leased stores operated by Barnes & Noble College and Follett. Patrick Maloney of Barnes & Noble College said the number of campuses using its First Day program doubled in the past year (as cited in McKenzie, 2017, The Role of Campus Stores section, para. 5).

Major education publishers are engaged in inclusive access as well. Representatives from Cengage, Macmillan Learning, McGraw-Hill Education, Pearson, SAGE Publishing, and Wiley all attended the first-ever Inclusive Access Conference in 2017, sharing information about their various models.

Evolution of Inclusive Access

The evolution of the inclusive access model can be attributed to a number of factors. In a blog post on publisher Wiley's website, Ruel (2017) said that the model evolved from a combination of "regulatory change, publishing technology, and extensive collaboration" (Why Now? section, para. 1). According to Wheeler, other factors in the model's growth include maturation of the smartphone and tablet markets, and a growing sense that faculty and students are now more comfortable with digital course materials (as cited in Straumsheim, 2016, para. 6). As K–12 schools and entire school districts (like the Vail School District near the University of Arizona) switch from print to all-digital course materials, more students will enter college expecting online access.

"Technology has given students new ways to obtain information," said Straumsheim (2017). "The rental and used book markets have cut into publishers' bottom lines. Open educational resource providers have sprung up to offer free or affordable alternatives to traditional textbooks" (para. 3). "Publishers have been forced to reassess their business model," said the Student Public Interest Research Groups (PIRGs). "Raising costs to make up for lost

revenue has only furthered the problem, causing more students to opt out of purchasing books entirely" (2016a, p. 9). In a 2016 survey of more than 22,000 students from Florida's public colleges and universities, 66.6% reported not purchasing a required textbook, up from 63.6% in 2012 (Florida Virtual Campus, 2016, p. 10).

Pearson's Tim Peyton said it was no secret that publishers like Pearson had made textbooks too expensive and had seen sales drop as a result (as cited in McKenzie, 2017, para. 2). Market pressures on textbook publishers have been evident in financial results. Pearson, the world's largest book publisher, posted a 15% decline in sales in 2016 (Milliot, 2017, para. 1). Revenue also declined in 2016 for McGraw-Hill Education, Wiley, Cengage Learning, and Macmillan parent company Holtzbrinck (Milliot, 2017, rankings chart). In January, 2017, Pearson's stock price took a record tumble, and Chief Executive Officer John Fallon said one of Pearson's plans for boosting its digital revenue in the U.S. higher education division—Pearson's biggest and most profitable—involved "working with more institutions to sign up large blocks of students" [inclusive access] (as cited in Penty & Heiskanen, 2017, para. 2 & 11).

Regulatory Change

While various forms of inclusive access existed before 2015, McKenzie said "the inclusive-access explosion appears to have been precipitated by a 2015 Department of Education regulation, which enabled institutions to include books and supplies in their tuition or fees" (2017, A Win for Publishers, Discounts for Students section, para. 1). The rules went into effect July 1, 2016. According to the regulation, the cost of books and supplies can be included as part of students' tuition and fees under three different scenarios (Berkes, 2015):

1. If the institution has an arrangement with a book publisher or other entity that enables it to make those books or supplies available to students below competitive market rates, provides a way for a student to obtain those books and supplies by the seventh day of a payment period, and has a policy under which the student may opt out of the way the institution provides for the student to obtain books and supplies.

2. If the institution documents on a current basis that the books or supplies, including digital or electronic course materials, are not available elsewhere or accessible by students enrolled in that program from sources other than those provided or authorized by the institution.

3. If the institution demonstrates there is a compelling health or safety reason. (U.S. Government Publishing Office [GPO], 2016, §668.164[c][2])

In the first scenario, the opt-out requirement is a minimum. Some programs use opt-in instead. In Florida, state statute requires an opt-in provision for programs like inclusive access (Florida Legislature, 2017, section 5). The campus store at California State University, Fullerton, decided to have students opt in rather than opt out so that the store could offer the program to students even when there was not faculty buy-in (Angelo, 2018, p. 24).

Benefits of Inclusive Access

The potential benefits of inclusive access for students, faculty, publishers, campus stores, and academic units are varied. For students, for example, there can be dual financial benefits: potential cost savings and the ability to

use financial aid to pay for course materials. At the UA, inclusive access content is charged to students' Bursar accounts (unless they opt out) and students can then cover the cost with financial aid. Previously, when required to purchase a textbook directly from a publisher website (outside inclusive access), students needed to pay with a credit or debit card, which some do not have. When buying required course materials through the UA BookStores, students also save 6.1% on sales tax.

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Inclusive access can offer other benefits to students as well, including time savings. As the parent of two college students, I have seen my own children expend time and energy comparison-shopping for lower prices (occasionally ending up with the wrong books or waiting weeks for mailed shipments). Some platforms, like those from VitalSource and RedShelf, have built-in annotation tools for highlighting and adding notes. Inclusive access materials may also include adaptive learning technology with personalized, interactive tools.

According to the Association of American Publishers (2016), multiple studies from education publishers have found that digital course materials result in better grades, higher retention rates, and improved learning. In research done by San Diego State University (SDSU)'s Social Science Research Lab, most surveyed students felt that participating in the Immediate Access Program benefited them academically, creating greater understanding of the material, higher engagement, and better preparation for tests and quizzes (Erhorn et al., 2017, slide 37).

For faculty, day-one access means that they can assign readings and homework from the first day of class, without waiting days or weeks for students to acquire the course materials (or waffling about whether to buy them at all). UA Professor Bill Neumann believes day-one access helps with student retention (personal communication, August 28, 2017). First-day access is especially important on campuses that use the quarter system or with courses that run just a few weeks. Every student has equal access at the beginning and the class can get off to a faster start.

Other benefits for faculty can include homework tools and learning analytics. Inclusive access products that provide test banks or do auto-grading can be time savers for busy faculty. According to RedShelf (n.d.), faculty can use RedShelf Analytics to see how students interact with ebook content, gain insight on learner engagement, and help identify at-risk students (Affordable. Accessible. Achievable. section). We have not surveyed UA faculty to see if they are using the learning analytics or find them useful. This data collection can be a double-edged sword, as I discuss in a later section.

For publishers, the appeal of inclusive access is economic. "For publishers with struggling print businesses, the inclusive-access model is a lifeline," said McKenzie (2017, para. 2). In contrast to textbook rentals

> **For publishers, the appeal of inclusive access is economic.**

or sales of used textbooks, publishers earn money on every sale of inclusive access content. With low opt-out rates, revenue streams from inclusive access are likely to be more predictable. "Education publishers invest tremendous resources into the creation of textbooks," said Hale (as cited in Dimeo, 2017, Michael Hale section, para. 3). It is estimated to cost an average of $750,000 to create the master copy of a college textbook, according

to Esposito (2012, para. 7). Once publishers create a textbook, however, digital reproduction costs are minimal compared to those for printing.

For campus stores, the financial benefits of inclusive access programs include higher sell-through rates and lower overhead. Unlike print textbooks, the digital inclusive access content does not need to shipped, warehoused, shelved, or returned to publishers if unsold. No square footage is required for display or storage, allowing the store to use space differently for new products or services. Labor expenses from receiving, unpacking shipments, stocking shelves, and boxing up returns are now reallocated to managing the inclusive access program and other new services. Given the low opt-out rates, revenues from inclusive access courses are more predictable. "My opt-out rate is below 2%, so I know within 2% what my revenue for a course will be based on enrollment, and I have a pretty good idea what the enrollment is going to be," said Scott Broadbent of Western Kentucky University's campus store (as cited in Angelo, 2018, p. 27).

For programs or degrees with a single "all-inclusive" cost, inclusive access can be advantageous. At the UA, the Eller College of Management has become a wide adopter of inclusive access. Programs such as Eller's Evening MBA and Online MBA, which provide all ebooks and course materials to students as part of the total program cost, use only inclusive access, saving the college money.

Concerns about Inclusive Access

Because of the newness of inclusive access programs on many campuses, the unfamiliarity to first-time users, and the complexity of integration with vendors, publishers, university systems, and LMSs, there are bound to be bumps in the road for the inclusive access model. At the UA, we have encountered technical difficulties, some user confusion, and the need for a great deal of manual work.

Technical Difficulties

In a survey done at SDSU, 11% of students reported technical issues with the Immediate Access Program (Erhorn et al., 2017, slide 32). The UA has experienced a number of glitches with inclusive access, particularly when using a publisher for the first time. Unbeknownst to the UA BookStores, faculty, or students, for example, several publishers required students to click on the ebook during the free-access period in order to activate the content. If students did not opt out but also did not open the content by the opt-out date, they lost access even though they had been charged. (Some students discovered this the night before a midterm.) Access had to be manually activated by UA staff.

On one publisher's website, students were prompted to buy the ebook directly from the site. Students who did so but did not opt out of inclusive access got billed for the course's inclusive access version as well. The publisher's price was higher than the inclusive access price, so the UA BookStores helped students obtain refunds from the publisher, and we now ask publishers to remove website prompts for direct sales to students.

Individual access codes for students also were a logistical headache. They sometimes resulted in delayed access for students, and took a great deal of staff time to resolve, so the UA BookStores now request no codes or a single class code. "Ultimately, we are looking for the best experience for the students, and so the least complicated way

to access the content the better," said BookStores' Assistant Director Cindy Hawk (personal communication, July 3, 2018).

> **For campus store personnel, LMS support staff, and instructors or program managers who deal with multiple course sites, setting up, managing, and troubleshooting inclusive access can be an extensive and time-consuming process.**

For campus store personnel, LMS support staff, and instructors or program managers who deal with multiple course sites, setting up, managing, and troubleshooting inclusive access can be an extensive and time-consuming process. Instructors, program managers, or instructional designers need to take action in the course site to set up the inclusive access links. This crucial step is difficult to automate at the UA. In at least one course, it was discovered about three weeks into the class that the link had not been set up properly in our LMS, so students had been unable to access the ebook. As inclusive access programs scale up at institutions, this could be an increasing challenge—it is one thing to monitor a few course sites, but quite another to check on hundreds or thousands.

The accessibility of digital content for people with disabilities may also be a concern, depending upon platform features and compatibility with adaptive technology such as screenreaders or text-to-speech software. Accessibility issues are not unique to inclusive access, however (see This Chapter for more details).

Potential Confusion

With inclusive access still fairly new at the UA, the term remains unfamiliar to some students and faculty. Students have come to the UA BookStores looking for the textbook *Inclusive Access*, confusing the program's name with the title of an assigned book.

With multiple vendors and publishers in use at the UA, students must learn to navigate a variety of different proprietary systems and platforms. Post-class access to content (if allowed) may be confusing as well. At the UA, students lose access to course sites after the first month of the next major semester (e.g., in February for Fall/ Winter courses). If student access to inclusive access content has been negotiated to last longer than one term, but the class has ended, students need to remember the platform or publisher website on which the ebook can be found and how to get there. They may need to create an account on the other system (or remember the account they created). Verba uses publisher websites, while with RedShelf it depends whether instructors are using an ebook alone or an ebook plus homework system. If there is only an ebook, the RedShelf platform is used; with an ebook plus homework, both the RedShelf platform and publisher website are used. So while publishers/vendors may technically allow extended use of inclusive access content, access complexities may prevent students from even trying.

At the UA, ebook linking also varies by vendor. Verba uses the publishers' technologies as the means of integration, and direct linking to chapters is possible. In RedShelf and VitalSource, linking takes students to the entire ebook. This has frustrated some faculty accustomed to organizing weekly readings by chapter. RedShelf does offer a hybrid solution, but it involves adding RedShelf and publisher links to the course site. These

variations in linking lead to an inconsistent user experience for both faculty and students, which is not optimal for teaching or learning.

Opt-Out Challenges

A variety of opt-out challenges exist when implementing an inclusive access model. Although Department of Education regulations usually require the ability to opt out of inclusive access, opting out may make it impossible to succeed in a course. If a digital courseware package is the only way to complete assignments or take exams, students really have no choice but to buy it. Another issue at the UA is that opt-out periods vary, depending on course length. In a UA winter session course that only lasts a few weeks, for instance, students get just three days to opt out.

Adding to administrative complexity, opt-out functions work differently, depending upon the platform. With Verba and VitalSource, the opt-out integrates with the UA's PeopleSoft system. With RedShelf, the opt-out is through Learning Tools Interoperability (LTI) in D2L Brightspace. This means that UA students face different processes for opting out of inclusive access. With content from Verba and VitalSource, the opt-out button is located in the UA BookStores' textbook portal for students (see Figure 2); it's not available in our LMS, where students primarily work and access the provided content. For RedShelf content, a different opt-out process is handled through the LMS.

The UA has a detailed handout for students on how to opt out of the various platforms, while the UA BookStores have set up an FAQ site with a dedicated email address for help. Faculty are urged to explain inclusive access on the first day of class and provide information in the syllabus. Students receive multiple email reminders about opt-out deadlines. During the pilot phases, the UA BookStores have been flexible with students who have changed their minds about opting in or out after the deadline, but as the program grows and matures there will be less flexibility.

Figure 2: View of a required inclusive access textbook from the UA BookStores' textbook portal for students.

Unless institutions make the opt-out process easy and clear, students who want to opt out may have difficulty doing so. Some institutions actively discourage students from opting out. Jhangiani (2017) noted that "at institutions like Post University the opt-out terms are more than restrictive; they are punitive" (para. 3). Post students who opt out "will not be eligible for an extension on course assignments while they await arrival of their course materials," which they must buy elsewhere (Post University, 2017, para. 3).

Digital Divide

Most inclusive access models provide only digital content. If students prefer print, own a device that is not compatible with the vendor/publisher's proprietary system, or have no device on which to read the online content, they must pay extra for a print version. Self-printing may be an option, but unless an institution has negotiated with publishers to allow students to print as many pages of the digital textbook as they want (as Indiana University does [Straumsheim, 2016, para. 23]), printing may be limited. Self-printing limits for inclusive access textbooks can vary by publisher and even by title. This is the case at the UA.

In a 2017 survey of provosts and chief academic officers by the Campus Computing Project, two-fifths of respondents said that campus efforts to go "more digital" or "all digital" were impeded because many students do not own the devices they need to access digital content (Green, 2017, p. 3). Inclusive access is meant to provide all students access to course materials from the first day of class, but this goal is not accomplished if students lack the necessary technology.

Unavailable or unreliable internet connectivity poses another challenge for students trying to use digital content. With VitalSource, ebooks can be downloaded and read offline if a student has the Bookshelf app (VitalSource,

2017b). Offline reading is also possible with RedShelf, but there may be limitations on the number of days and the percentage of the book that can be accessed offline (RedShelf, n.d., FAQ: How do I access Offline mode?).

Also of concern is a lack of perpetual access to inclusive access content. Time limits such as 180 days may be problematic for courses that span more than one term or for students who need the content to study for cumulative exams (e.g., to be a Certified Public Accountant).

Level of Cost Savings

Given that five major publishers control 80% of the textbook market, and that students are a captive market with zero choice about which textbooks are assigned to them (Student PIRGs, 2016b, p. 1), there are concerns that publishers (whose shareholders expect profits) will increase inclusive access prices once faculty and institutions are hooked on the model. At the 2017 Inclusive Access Conference, Tom Malek of Pearson Education said he believes publishers will start "competing like crazy" on inclusive access pricing and that OERs will be a stabilizing factor. Others are skeptical. "[The price] may be lower now, but there are no safeguards against prices skyrocketing all over again," said Allen of SPARC (2017). A math professor at the UA told me that the price of inclusive access content in her course has steadily crept back up over three semesters; while savings are now minimal, she still considers the day-one access an advantage.

According to Department of Education regulations, publishers only need to offer inclusive access materials "below competitive market rates" (U.S. GPO, 2016, §668.164[c][2]). Jhangiani (2017) said inclusive access pricing "represents an arbitrary discount off the (arbitrary) price of a new hardcover textbook (often more than the average student currently spends)" (para. 3). Pricing is not transparent, and cost savings depend upon the negotiating skills of campus stores and/or faculty. While discounts on some titles have been substantial at the UA, and negotiating power may increase as more classes move to inclusive access, other discounts have been paltry. In the UA's Fall 2016 pilot of inclusive access, one digital textbook was discounted a mere $2 by the publisher—a savings of 3%. The UA also has found that prices from the same publisher can vary, depending on which platform is used.

Faculty may be unaware that they can negotiate on pricing with publishers, or may be reluctant to do so. This is not the case with UA Professor Neumann, who leverages a large class size and multiple textbook choices "like a 500-pound gorilla" when negotiating pricing with publishers (personal communication, August 28, 2017). Neumann teaches MIS 111, the biggest class on campus. With about 1,500 students each semester, he tells a publisher "this is the price I want"—if a publisher is unwilling to go low enough, Neumann has three or four other textbook options to pursue (personal communication, August 28, 2017). Faculty "have to be willing to walk away from publishers," Neumann emphasized (personal communication, August 28, 2017).

Concerns about Data Collection

While publishers and vendors tout the benefits of inclusive access's analytics in terms of enhancing student learning, the practices surrounding this data collection raise a variety of concerns about information ownership, control, security, and usage. In librarianship, protecting user privacy and confidentiality is a core value (American

Library Association, 2004, para. 4). The federal Family Educational Rights and Privacy Act (FERPA) also protects the privacy of student education records.

At the 2017 Inclusive Access Conference, RedShelf co-founder and Chief Executive Officer Greg Fenton said, "We can tell you everything to a super creepy level" about student usage of inclusive access materials with the platform's built-in analytics. At a 2017 EDUCAUSE session titled "The Wicked Problem of Learning Data Privacy," Jim Williamson of the University of California at Los Angeles said that learning analytics may be "well-meaning" but they also pose challenges: "What happens when students get stereotyped [based on their data] and how do you handle outliers?" (as cited in Johnson, 2017, para. 10–13). In her Hack Education blog, Audrey Watters (2017) cited a range of data concerns with educational analytics: discriminatory tendencies in algorithmic decision-making, possible "weaponization" of data against students (regarding immigration status, for instance), data insecurity and breaches, and questions about the systems' accuracy and effectiveness. "There are major ethical implications of these sorts of analytics in education," said Watters (2017, Algorithmic Discrimination section, para. 3).

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According to Billy Meinke, an OER Technologist at the University of Hawaii at Manoa, vendors' and publishers' end-user license agreements (EULAs) for inclusive access need to be far more transparent (2018a, 2018b). On behalf of their students, institutions need to hold publishers and vendors accountable and ask: Who owns the resulting data from students' use of inclusive access content—the publisher/vendor or the institution? Which personnel on campus have access to the data (faculty? advisors? the campus store?) and for how long does this access last? Where will student data be stored? How will data security be ensured? How will data and analytics be used by publishers and vendors? Can data be sold to a third party? "These are our students, and we need to ensure that publishers are not putting their personal information at risk," Meinke asserted (2018b, para. 7).

Dangers of Reliance upon a Single Vendor

There are a number of reasons to avoid relying upon a single provider for content—academic freedom, the right of faculty to select course materials (Franke, n.d., p. 3), and the fact that a lack of competition could result in higher prices. "Limiting faculty to one particular publisher or conglomerate of publishers is certainly an issue," said Jhangiani (as cited in McKenzie, 2017, Unrestricted Choices section, para. 1). Faculty (or academic units, in the case of multi-section classes that adopt the same textbook) should be able to choose the best course materials to meet class learning objectives, regardless of publisher.

Another risk with using a single vendor is that the company could suddenly go out of business. This happened in 2016 when a startup company called Rafter, which offered an "all-inclusive materials solution" for print and digital textbooks, abruptly shut down (Young, 2016). More than a dozen small colleges that had been using Rafter's service were left scrambling to find an alternative (Blumenstyk, 2016, para. 1). Officials at Avila University received just two days' notice that Rafter was ceasing operations (Young, 2016, para. 13).

Recommended Best Practices

After piloting inclusive access for three semesters at the UA, BookStores' Assistant Director Hawk said, "We (along with the publishers, and faculty) are still learning a lot, and are working to streamline the process better so it's more scalable. At the moment, there is still a lot of manual work on all parts of the program, as well as small technological bumps" (personal communication, October 6, 2017). When setting up an inclusive access program, Hawk and Debby Shively, Assistant Vice President of Entrepreneurial Services, recommend:

- Addressing the challenges outlined in this chapter.
- Targeting courses that:
- Have high enrollments (for higher impact and more leverage in price negotiations).
- Are offered online (so students have instant access to the course materials).
- Require textbooks and use them extensively throughout the term (required textbooks that courses never use = angry students).
- Use expensive textbooks with low sell-through.
- Use adaptive learning technology such as Connect, MindTap, or ALEKS (inclusive access offers better pricing).

Having faculty actively engage students with inclusive access content during the free-access period (for best opt-out decision-making). Clearly and repeatedly explaining inclusive access to students, and sending multiple reminders about opt-out deadlines and procedures.

Other Considerations

In its brochure "Inclusive Access: Your Ticket to Unstoppable," Cengage (n.d.) advised institutions also to consider:

- State regulations around course fees [at the University of Arizona, the state Board of Regents must approve any new class fee above $100].
- How to get buy-in from leadership.
- Who can oversee the implementation and faculty training.
- Communication strategy for rolling out the model to students and instructors.
- Variety of materials requiring access.
- Campus technology capabilities.
- Process for overcoming obstacles.
- Methods for evaluating the results post-implementation. (p. 7)

Conclusion

This chapter has attempted to take a balanced look at inclusive access, its evolution and growth, and the model's potential advantages and disadvantages. I agree with Temple Associate University Librarian Steven Bell (2017a, 2017b, 2017c) that, as part of the broad "textbook affordability spectrum," inclusive access can be viewed as a step in the right direction. Cost savings and day-one access clearly benefit students. If free resources are unavailable, or if faculty prefer commercial publishers' course materials, significantly discounted inclusive access content is preferable to having students pay higher prices or struggle (and possibly fail) to pass courses without the required materials.

Publishers benefit from the model's low opt-out rates, sometimes-minimal pricing discounts, and collection of student data. I see possible advantages for students, faculty, and campus stores as well. I do have reservations about the model's long-term pricing, short access periods, use of proprietary systems, and the impact of any technological glitches upon faculty instruction and student learning. I am also concerned that "opting out" of inclusive access may not be a viable option for students: If a digital courseware package is the only way to complete assignments or take exams, students really have no choice but to buy it.

Campus partners need to work collaboratively with vendors and publishers to improve inclusive access functionality and terms of use. With student success as a common goal, we can all join forces to make course materials more accessible and affordable.

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by Brad Zurcher, Unizin Consortium (bio)

Introduction

Textbooks are expensive. The price of commercial textbooks continues to rise (87.5% in the last decade), exceeding the rate of inflation by more than 3.5 times (Bureau of Labor Statistics, U.S. Department of Labor, 2016). And while evidence suggests that the rise in actual student spending has plateaued (Association of American Publishers, 2017), a simple search of social media around the beginning of a term will show that price does not meet perceived value—especially in August, when new freshmen discover the actual cost of course materials.

The concept of All Students Acquire has been growing in acceptance and adoption over the last decade (McKenzie, 2017). This chapter gives an overview of the model, compares it to other content acquisition models, and establishes its pros and cons.

Review of Affordability Programs

Retail Rental Programs

Bookstore rental programs are designed to reuse the same copy of a title over multiple terms. A student goes to the bookstore or website, obtains a copy of the book, and uses it for the duration of the rental period; as long as the student returns the book to the retailer in a reusable condition, the transaction is complete. The idea behind rental is that if multiple students use the same copy, the acquisition price of a new copy can be shared rather than paid in full by one person.

With prices typically 50-70% lower than those of new copies (compared to retail used, which averages 25% off the list price), and thus very appealing to students, this program works well for the retailer, who will start seeing profits on an individual book during the third term. Students like this option not only for the lower price but because it avoids the roulette game of buyback, where, for example, the student in front of them in line gets $45 and they get $7, simply because the bookstore has hit their quota of copies needed. As long as a student returns the copy in a usable condition, there are no additional fees.

Tuition-Based Rental Program

While similar to retail rental programs, tuition-based programs include content price in the student's course fees. In exchange for assurances that content will be used for a number of terms, the margins for these programs are often lower; prices are thus typically lower for students than those of retail rental programs.

Students often appreciate this type of program because of cost savings and the ease of acquisition. Because the rental price is included in their fees, they need only register for a class and pick up the content from the bookstore or some other entity (or receive via mail if they are remote). There are no out-of-pocket expenses, which students and parents appreciate, and there is no time wasted shopping for the best possible price. It is a simple two-step process.

Retail eText

The purchase of digital versions of textbooks is another growing option for students who want to lower their cost of obtaining texts, and who are comfortable using a computer or tablet as a reading device. Discounts can vary greatly by publisher and by the length of access; larger publishers with higher print list prices tend to discount more heavily than smaller publishers with relatively lower list prices. Depending on an eText's subject and publisher, the title may be rented for a specific length of time or perpetually.

While growing in popularity with students (National Association of College Stores, 2017), the digital option still accounts for only a small fraction of textbook purchases. But as the number of physical copies continue to decline, so should the prices for digital textbooks, making them an increasingly appealing option for students.

Unintended Consequences – Economics

The programs mentioned above, and others like them, succeed in lowering the cost to students as compared to the price of the new print list price at a specific moment in time. The problem with a snapshot, however, is that it fails to fully take in its surroundings.

> **Used and rental options ultimately contribute to the rising cost of textbooks. While bookstores and retailers see revenue on the transactions of rental copies, publishers do not.**

Used and rental options ultimately contribute to the rising cost of textbooks. While bookstores and retailers see revenue on the transactions of rental copies, publishers do not. When an introductory statistics textbook, for example, is rented six times, the publisher receives royalties only on the initial order. After that first term, they see nothing. The retailer, however, can add margin to the rental price for each and every transaction. This to-student acquisition option achieves the goal of lowering the price of that piece of content at that time for that particular student, but it also incentivizes publishers to produce content that is not rentable or to produce more and more unnecessary new editions. These new editions, and website access available only with the bundled purchase of a new title, help publishers ensure

higher unit sales over the life of an edition, in turn ensuring that more students are paying for new content rather than used and thus resulting in a larger average cost of acquisition.

Rental and used-book programs can also contribute to the rising list prices for all content. The creation of content has a fixed cost; Whether a textbook sells 5,000 units or 50,000, the costs of producing that content are largely the same. And the demand for new textbooks is largely inelastic. There is little incentive, for example, for a student to purchase new rather than used simply because a new copy's list price has moved from $315 to $310. This works in the other direction as well, but with benefit to the seller. If a publisher changes the list price from $315 to $320, this potential $10 difference between lowering the price $5 and raising the price $5 will result in roughly the same number of units sold. The already high price of content plus the dwindling number of new units sold ensure that the publisher can continue to raise the price of content on a regular basis without affecting market share and unit sales. In addition, used and rental prices are typically a percentage of the new list price, so when publishers raise the price for a new copy, the price will also go up for used and rental copies of the same content.

Unintended Consequences – Academic

Along with increasing the price of content, used and rental options also incentivize students to show up to school unprepared. While freshmen may assume they have to buy all required materials for their courses, and have to purchase new copies, many upperclassmen only purchase content after they have gone to class to determine if the book is really needed.

Student unpreparedness is a phenomenon with broad reach; 65% of students have made the conscience decision **not** to purchase required content for a course, with 94% of these students knowing that the decision would be likely to have a negative impact on their grade (U.S. PIRG Education Fund and The Student PIRGs, 2014). Again, a simple social media search around the start of a term provides anecdotal proof that students are willing to do just about anything to avoid paying for content, and are willing to give strong voice to their opinions on textbooks.

Economics, when boiled down, is really just a study of how humans respond to incentives. The used and rental textbook options have created incentives for publishers to continue raising the price of content and for students to avoid acquiring that content. These options may lower content costs during a particular semester, but they have the opposite effect over the long term, and they contribute as well to the phenomenon of student unpreparedness.

All Students Acquire Model

One way to address these issues is the All Students Acquire (ASA) model. This model has many different names from many different sources: Inclusive Access, Institutional Sales, B2B, 100% Sell Through, IncludED, and more. Inclusive Access is the most common name, but these two words have a way of implying, incorrectly, that the content has a level of openness or superior accessibility. With these concepts so important in higher education, the name can create confusion. All Students Acquire, in contrast, accurately describes the business model, and does not lend itself to misinterpretations.

ASA is essentially a form of enterprise purchase—a familiar concept in higher education IT and in teaching and

learning circles. ASA delivers digital content to all students registered for a specific course and section. Adopted content is often delivered through the learning management system (LMS) via LTI (bypassing a login page, which ensures that users do not need to manage an additional set of credentials), and students receive access to the content on or before the first day of class. Content is purchased directly by the institution, which then typically adds the price to students' bursar bills.

Strengths of the ASA model

Affordability

ASA offers several advantages over traditional content acquisition models, with affordability receiving the most attention. Publishers are willing to heavily discount their content in exchange for sales of content to the full class. Because the difference in unit transactions is so significant (100% of enrollment vs. 20-30% in a student choice model), publishers can afford to discount heavily and still see flat to higher revenue.

ASA also helps institutions address affordability by enabling additional payment options, including financial aid. Eighty-three percent of students receive financial aid (National Center for Education Statistics, 2016), yet only 30% (U.S. PIRG Education Fund and The Student PIRGs, 2016) use this aid to purchase course content. This means that more than two-thirds of our students purchase content using only cash or credit. Including content fees in the bursar bill allows students to use their scholarships, grants, and student loans to acquire course content.

> **ASA offers several advantages over traditional content acquisition models, with affordability receiving the most attention.**

Preservation of Academic Freedom in the Selection of Course Materials

The ASA model does not have to be administered and required at an institutional level. Many institutions where instructor choice over course materials is paramount have implemented eText programs where instructors opt-in. Institutions that require ASA participation will often see an advantage over opt-in institutions when it comes to negotiating prices, as they are able to guarantee a certain level of revenue for the publisher. But as more faculty learn about the advantages of ASA, and as the program continues to grow, the comparative negotiating power of institutions that do not support instructor choice will decline.

Data

Digital content distribution also creates unique opportunities for data collection and analysis. With all students in a course using the digital content, ASA platforms can deliver demonstrably superior datasets compared to platforms where students opt in or acquire content on their own. ASA data can be a valuable asset for calculating the cost of attendance, informing course design and teaching practice, and providing new data for academic research.

Institutions have long bemoaned the need to purchase academic research articles and journals they themselves have produced. The issue of data generated on ASA platforms is similar. These data should be made available, free of charge, to the institution by the platform provider.

A word on data privacy and data application. The use of data from content platforms and from LMSs, Student Information Systems (SISs), and the myriad of teaching and learning technologies is a sensitive issue that, like politics and religion, can quickly divide a room. Promoting data as a strength of ASA assumes that institutions can do a substantial amount of good with data, data platforms, and business intelligence. With that said, in no way are we condoning or condemning specific use cases or disseminating full and effective policies. Our intent is only to identify some of the potential opportunities. How data is utilized, and to what extent this use is communicated to students and the public, is up to each institution.

Content Consumption and Advising

ASA data can help create a better learning experience. When made available in real-time or near real-time, for example, these data can be used by instructors to measure student preparedness before a class session. Instructors can also review student consumption of the content in association with exam scores to help assess the effectiveness of their teaching, and use these data to guide content adoption in the future.

ASA data can also be used by advisors, in conjunction with LMS and SIS data and data from other sources, to identify students who may require additional support or tutoring.

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Student usage data also has tremendous potential application for students themselves. Allowing students to compare themselves to others using the course materials, whether to peers in their section/course or to a larger group of students, may drive those with a competitive spirit to increase their efforts in order to keep up or surpass their peers. This competitiveness can be a strong supplement to other motivations offered by the instructor. In addition, these data could also be used in badging or gamification applications.

Instructional Design (ID)

Instructional designers can build better courses with ASA data. Integrating analytics into the process of course design is not a new idea; institutions around the world have been incorporating analytics into their ID practice for years. In its 2016 Horizon Report, for instance, the New Media Consortium recommended incorporating learning analytics and adaptive learning (2016). ASA makes it possible to assess digital learning by using a combination of data from the delivery platform and student results on related assignments/quizzes/exams. By looking at course content usage data, instructional designers can better assess the efficacy of content and methods, seeing how interaction with a learning object plays into student results.

Institutional research and academic research

Data generated on digital platforms through ASA also allow institutions to include course content usage, tied to learning objectives (when so designed), in decision-making that can lead to better university performance and, ultimately, to higher retention rates. Institutional researchers have identified withdraws and student retention as significant factors in the overall cost of education. Nearly every higher education institution wants to reduce student turnover. The data generated on digital content platforms utilizing ASA adds tremendous insight to an important variable for student success, itself a key component in student turnover.

ASA data also have value to academic researchers studying the art and science of teaching and learning. ASA data is far more reliable than self-reported data from users, which to this point have been the only data available to researchers.

Data-Assisted Affordability

The data derived from ASA distribution create additional opportunities to build systems that can help lower the cost of education.

Imagine an application that takes usage and event data from a course content platform, combines these data with learning objectives, adds anonymized exam results over time from the LMS, considers the price of the learning object, and computes a measure of effectiveness of the materials and the price paid for that effectiveness. The computed data could then be compiled into a database of learning objects that accounts for both price and effectiveness. This database would make it possible for instructors or course designers to look through the learning objects for a particular objective and hone in on those that deliver the best results for the lowest relative price. Such an application would not directly affect the price of a particular piece of content, but would contribute to lowering of the price of content and thus help with affordability goals.

Advisor interaction with the data can also help lower the cost of attendance. If advisors can more effectively and accurately identify and help potentially at-risk students, the institution should see fewer courses being failed or dropped, which should lead to fewer withdrawals from the institution. Greater retention means fewer resources devoted to replacing departing students, which should lead to greater maximization of capital and resources, ultimately contributing to a lower cost of attendance.

Risks and Weaknesses of ASA

While the ASA model is becoming more widely adopted and accepted, it is not without drawbacks.

Principal-Agent Problem is Not Addressed

The Principal-Agent Problem is an economic term describing a decision maker in a financial transaction who is not the consumer paying for the decision's result. In terms of course content, this can be seen with instructors designating content as "required" even if it would be more appropriately listed as "recommended"—a decision

that results in unnecessary student spending. Many of those who fight for more affordable content point to the fact that faculty who require students to purchase textbooks have little incentive to choose less expensive content. While data can be used after the fact in efforts to help instructors consider the price and efficacy of assigned content, the ASA model does not address the issue of who ultimately chooses the content students must acquire.

Course Fees

The ASA model requires institutions to recoup content costs by adding fees to student accounts. With state legislators and student newspapers scrutinizing the costs of education, new fees that make it appear that attendance costs are rising can be problematic, even though the discounts secured by ASA use are in fact lowering those costs.

Additionally, some institutions and systems have policies in place that prohibit the inclusion of new fees or require approval from the board of trustees. ASA can be a difficult sell in such environments.

Resistance of Transition to Digital

Many instructors resist the idea of transitioning from print to digital course content. They may distrust student use of computers in the lecture hall, or not be interested in learning new teaching technologies in their very limited spare time. Whether the decision to implement ASA is institutional or optional, in these early days there are more instructors who will fight the transition than support it.

Resistance to digital is not just limited to instructors. While extremely comfortable using technology in their personal and social lives, today's students are still skeptical of the reading experience on a device when the reading is academic and weighty rather than personal and short.

I have seen this resistance in my own experience managing a campus bookstore. One semester, for instance, a student came to me incredibly concerned that the textbook adopted by one of his instructors was only available new for more than $250, and he was unable to find used or rentable copies. I offered him a digital copy of the text for around $100, letting him try the platform on my computer before making the purchasing decision. After about five minutes, he told me that the platform was great and he had no doubts that digital was the future, but he would rather spend the money on a new text. He then took the new copy to the cashier and paid full list price, even after saying that price was the most important part of his purchasing decision.

It is expected that students will continue to become less resistant to digital learning materials. With K-12 students being introduced to digital materials earlier in life (deNoyelles and Raible, 2017), students are beginning not only to be comfortable with digital, but to expect it as they progress in their academic career. This offers hope for the future, but a level of resistance to digital is still an issue to address today.

It is expected that students will continue to become less resistant to digital learning materials. With K-12

1,000 to Approve, One to Kill

ASA must be institutionally supported on a campus. Whether being implemented universally or as an option, it may require approval of the provosts, deans, faculty senates, registrars, bursars, Teaching and Learning groups, bookstores, libraries, IT, helpdesks, student governments, accessibility/disability services offices,

students being introduced to digital materials earlier in life, students are beginning not only to be comfortable with digital, but to expect it as they progress in their academic career.

and more. ASA often requires an up vote from some or all of these constituents, yet it can take just one person to shut the whole project down if they see something objectionable. Many potential concerns, like those referenced above, are nearly universal, while others can be campus-specific.

Co-op for Success

Any institution and any provider can offer ASA and derive strong benefits from it. But ASA offers a unique opportunity—specifically for school systems, state systems, and academic consortia—to take the benefits to another level. Imagine what can happen when a large state system like SUNY or Ivy Tech combines this purchasing model with its own expertise and scale.

Operational Scale

Some ASA operational functions demand local, "boots-on-the-ground" effort. Faculty recruitment, for example, requires a level of trust that would be hard to replicate from a regional office. But other ASA functions lend themselves well to a collaborative effort on behalf of the institutions represented. Two great examples are the creation of marketing/publicity materials and training for faculty and students. Both are necessary for the establishment and growth of a robust digital initiative using ASA, and both are often standard enough that individuals could drive them on behalf of many institutions.

Drive Price Down Further by Aggregating Scale

The size and scale of a group of institutions allows specialists to negotiate on behalf of the group, which in turn creates the potential for superior pricing. The potential of larger unit sales moves commercial content creators and platform providers to offer lower and lower prices. The more institutions represented at the bargaining table, the better the discounts.

Larger Data Sets

Institutions working together can also combine data. Data provided and shared by a system or consortium of 20 institutions become a robust dataset tying content to price and outcomes.

Improve Access to Other Features or Services

The size and scale of a system or consortium can create a stronger influence on commercial content and products. A group of institutions working together is far more effective at advocating for change than a single organization. With accessibility, for instance, the burden of ensuring that all students have the same access to content and features typically falls on the institution, but it is an issue best addressed during the creation and design phase. A group of institutions loudly broadcasting the same message and prioritizing an issue will be more effective than individual institutions doing the same.

Birds of a Feather

Common problems often have common solutions. When jumping into the world of digital content and ASA, it is important to find others who have traveled this same road, as they are an invaluable resource to those just starting down the path. Likewise, having a group of administrators from different institutions all starting at the same point is helpful in facing the common problems of taking a project from pilot to program. Membership in a system or consortium affords built-in opportunities to network with colleagues who understand the issues presenting themselves and can help resolve them quickly and effectively.

Summary

Textbook expense has resulted in a variety of programs and options aimed at helping students save money. But while used and rental options are less expensive, they often have unintended economic consequences that contribute to the rising costs of course materials. The ASA business model solves a number of needs (affordability, day-one access, behavioral and outcomes data) and provides benefits for students, institutions, and publishers alike. While there are potential roadblocks in the adoption of this model, it does provide an opportunity for institutions to band together in their efforts to make content more affordable for their students.

Conclusion

Instituting a digital content initiative that takes advantage of the ASA model is a growing trend across higher education, and shows no signs of stopping. While ASA has its own set of issues, it is better positioned to have a more positive effect on content affordability than any other commercial solution. In addition to the immediate effect on affordability, it promises to continue to bring the price of commercial content down as more and more units are transacted. These short- and long-term benefits, combined with the potential benefits of data-driven decision making at a course and institutional level, promise to lower the price of content as well as the overall cost of attendance.

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Brad's mission is not insignificant: to fix the broken commercial content market in a way that is fair to institutions,

students, and content creators. He is carrying out this mission by working with Unizin and its member institutions in support of their digital content initiatives.

Brad graduated from Olivet Nazarene University with a BA in Marketing. In his free time he enjoys playing/watching sports and traveling with his two hilarious kids and his amazing and amazingly tolerant wife.

Chapter 18 - Indiana University's Affordable E-text Model and Strategies to Increase Impact Beyond Savings

Serdar Abaci and Anastasia S. Morrone

by Serdar Abaci and Anastasia S. Morrone (both from Indiana University)
(bios)

Introduction

Hyperinflation in overall college costs and in textbook prices in the last decade is no secret, as demonstrated by extensive coverage in several major news reports. High textbook prices are deterring students from buying required textbooks or taking courses that have high-priced textbooks. The cost of textbooks, in other words, gets in the way of learning, and derails students from degrees they want to pursue in college.

Many universities and even state systems (Acker, 2011) are trying to lower the cost of textbooks for students. Indiana University (IU) started a pilot e-text program in 2009 to make publisher/commercial content more affordable. The program is based on an inclusive access model, addressed in more detail in the previous two chapters of this book. After a successful pilot phase, the IU eTexts Program moved into full production. As of March, 2018, it has served close to 200,000 students in over 9,000 course sections, and saved them more than $13 million in textbook costs. In this chapter, we explain the Indiana University eText model, the research efforts behind the program, support for faculty and students, and the factors behind the program's success.

Indiana University's eText Model

When it started as a pilot in 2009, the Indiana University eTexts program had four primary goals:

1. Lower the cost of course materials for students

2. Provide high-quality materials of choice for faculty

3. Enable new tools for teaching and learning

4. Shape the terms of sustainable models that work for students, faculty, and authors

These goals have served us well. We continue to maintain them, and have been very successful in meeting them. As we continue, we have added a fifth goal of continued program growth—both in the number of participating publisher/vendor partners and in the number of faculty/students/classes using at least one e-text through this program. We also want to take full advantage of the research opportunity provided by the captured data. This will help us inform best practices for teaching and learning with technology, and contribute to the research-driven conversation regarding student engagement with digital reading materials.

Several distinct components of the IU eTexts program contribute to its success:

1. Publisher agreements
2. Workflows for ordering textbooks
3. Outreach efforts
4. Focus on a universal e-reader
5. Cost savings
6. Offerings beyond publisher content

Publisher Agreements

IU has contracts with more than 30 publishers, ensuring significant cost savings. IU is also a founding member of the Unizin consortium, a group of like-minded institutions with a common goal of enhancing learning success with digital technology and resources. As an early adopter of a university-wide affordable eText program, IU has shared its knowledge and experience with the consortium and other member institutions. As a result, the consortium is now able to offer similar publisher contracts and prices for its member institutions.

IU's agreements with the publishers involve an inclusive access model, through which all students acquire day-one access to a digital version of the textbook (Straumsheim, 2017). Course instructors have the option to choose an eText for their courses. Once an instructor opts in by submitting an order request, all enrolled students are assigned the eTextbook by default. Each student's bursar account is charged the corresponding e-text license fee and e-reader license fee, and they get access to the e-textbook(s) on or before the first day of class.

IU's agreements with the publishers may differ from those of other institutions in that they allow unlimited printing of e-textbook pages (up to 50 pages at a time). If students prefer a bound copy, they can order one for a nominal fee. In addition, per IU's agreement, student access to e-textbooks does not expire after the course is over. Students maintain access as long as they are enrolled at Indiana University.

> **IU's agreements with the publishers may differ from those of other institutions in that they allow unlimited printing of e-textbook pages (up to 50 pages at a time). If students prefer a bound copy, they can order one for a nominal fee.**

In IU's e-text model, students may elect to opt out of the e-text fees for a class, providing three eligibility criteria are met:

1. The exact same ISBN must be legally available elsewhere,
2. They must have never accessed the e-text, and
3. They must submit their request within 30 days of enrolling in the class.

When students register for a course, they see whether it has an e-text. They can opt out of the e-text at the class registration phase, but are discouraged from doing so. IU actively discourages opt-outs through both student and faculty education. In the online opt-out request form, students are required to read a series of statements explaining

the academic risks of opting out, such as losing access to additional content their instructor might provide in the e-text, and losing the ability to interact with their classmates and instructor within the e-text itself. On the faculty side, teaching and learning support staff are working to teach faculty how to make effective use of e-texts, so it is less likely that students will opt out.

As campus bookstores are typically involved in selling physical textbooks and have contractual agreements with publishers and universities, these terms need to be revisited, and potentially re-negotiated, for bursar-billed models for digital course materials.

Workflows for Ordering Textbooks

We mimic, as much as possible, the traditional textbook-ordering models familiar to faculty. We set and advertise an ordering "window" for each upcoming term, corresponding to the academic calendar. We expect faculty to submit their orders before students begin to enroll for the term, in compliance with Higher Education Opportunity Act recommendations. This allows us to include an automated notation of the e-text requirement in the Schedule of Classes and in the registration system, for students to see as they plan and enroll for the term.

Because the IU eTexts program is not affiliated with the university bookstore, we built our own ordering tool for faculty, imitating many of the familiar features of the bookstore application. This tool is open to faculty (and to select school and departmental staff members who submit orders on behalf of faculty) during the ordering window. A catalog view of available titles is always available for faculty who wish to plan ahead and view offerings. The tool also permits the electronic routing of requests for those schools and departments who wish to track, monitor, or collect e-text ordering data for internal purposes.

After an order is submitted (and, if necessary, approved), most of the remaining preparatory work is done administratively, behind the scenes. This includes automated student notations, billing, communication of the order to our publisher partners, completion by Unizin of the title setup in the Engage e-reader platform, faculty notification when the title is ready to be accessed and prepped, and enrollment calculation and reporting.

Outreach Efforts

Outreach is a multi-pronged effort at IU. The IU eTexts Program has one dedicated staff member, a Principal Business Analyst and Faculty Consultant. This position serves as a central point of contact and liaison for all project stakeholders, including but not limited to the central IT organization, faculty, students, publishers, registrars, and bursars on the eight IU campuses.

Consulting with faculty (whether they are long-time users of e-texts, just beginning to consider the option, or in between) is, easily, more than half of this person's daily tasks. Outreach efforts take multiple forms, including a Canvas project site that serves as a repository and reference for all things related to the initiative such as announcements, ordering deadlines and step-by-step instructions, and preparation tips. In addition, regular email announcements remind faculty and staff of the coming ordering window. Campus visits are highly productive and valued efforts. The consultant visits each of IU's eight campuses at least once each term, offering a day-long workshop for any faculty members who wish to learn more about IU's e-texts program. The day includes general

informational sessions as well as tailored training on specific issues or topics, depending on faculty, departmental, or school requests.

In addition, IU offers consultants in teaching and learning centers on each campus, as well as a group of instructional designers. There are also a few IT sub-units whose staff can communicate with faculty about the program. All of these staff are familiar with the initiative and help with outreach efforts, often working in tandem with the dedicated IU eTexts staff.

Outreach activities also take place at higher levels. The Learning Technologies executive team regularly communicates with campus leadership (i.e., provosts/chancellors and deans) to report the positive results and request their help in getting the message to more faculty. Formal and broad communications through university-wide channels are also a part of this effort. Finally, the publishers themselves help with outreach efforts. Sales representatives regularly work to transition their new and existing faculty clients to e-texts, often working in tandem with the Principal Business Analyst and Faculty Consultant.

Finally, IU has created channels through which to share information about its eTexts Program with people outside the university. IU eTexts (etexts.iu.edu) is a public-facing website, offering information for both faculty and students, as well as for anyone who wishes to learn about our program. It serves as an information hub for all news related to e-textbooks. In addition, we share our research findings in the research section, along with relevant research literature.

Finally, IU has created channels through which to share information about its eTexts Program with people outside the university. IU eTexts (etexts.iu.edu) is a public-facing website, offering information for both faculty and students, as well as for anyone who wishes to learn about our program.

As eTexts at IU became more successful, we began fielding questions from our higher education colleagues who were considering a similar solution to their schools' textbook conundrum. In an effort to share insights and lessons from our e-text model with the higher education community, we recently published a free ebook eTexts 101: A Practical Guide. The book's first section relates the story of how IU developed and implemented its eTexts program, the second offers perspectives from several publishers who have participated in the program, and the third provides reports from other universities on work they are doing to address the textbook issue.

Focus on a universal e-reader IU uses a single e-reader platform for its e-text program, providing a unified e-reading experience for our students. Provided by the Unizin Consortium, the Engage e-reader is a publisher-agnostic platform that integrates with the Canvas learning management system (LMS). The platform includes the following features for student users: Search Bookmark Highlight text Annotate the highlighted text (and create tags) Ask the instructor a question (convert annotation to question) Add page notes (without highlights) Share notes and highlights with instructor and classmates Read offline by downloading the content to your device The Unizin Engage e-reader also provides features for instructors,

allowing them to share notes and highlights with students, interact with students within the e-text through the question and answer feature, and use reading and engagement analytics to evaluate student- and class-level reading and markup usage. Cost Savings

Publishers offer significant cost savings in exchange for the promise of nearly 100% sell-through rates. The formal savings calculation reflects the difference between the "print list price" and the negotiated IU e-text price for the publisher content. As of March, 2018, IU student savings on textbooks amount to $26,612,485. We do, however, recognize that many students do not pay the full list price for paper textbooks when they purchase online, buy used copies, or recoup some of their costs by reselling their texts after the semester is over. An article from the New York Times highlights that actual student spending on course materials, including textbooks, was about half the actual cost of the textbooks and related course materials (Carrns, 2014). We therefore divide the calculated savings by two and report that total as a more accurate representation of student savings. Consequently, we claim that our students have saved more than $13 million since IU's e-texts program started in the spring of 2012.

Offerings Beyond Publisher Content

While IU's e-text model is driven primarily by publisher content, it is not limited to this content. Instructors may choose to deliver their own content (e.g., faculty-created, fair use, OER, etc.,) through the Engage e-reader platform and take advantage of its interaction and data analytics features. The platform can deliver content in many formats, including PDF, Word, PowerPoint, and Excel. Unizin is currently developing the next version of Engage, which will also offer multimedia content via ePUB format.

Data on Reading Behaviors and on Experiences of Faculty and Students Using E-texts at IU

Beyond providing course-based reading and engagement analytics for instructors, use of a single reading platform for all e-textbooks provides opportunities to analyze rich data on student reading behaviors. Here we summarize our research findings regarding faculty and student experiences and look at what they mean for teaching and learning with e-texts.

Instructor Engagement with E-texts

As researchers at IU, we published an EDUCAUSE Review case study in early 2015, investigating the effects of instructor engagement with e-texts on student use of e-texts (Abaci, Morrone, & Dennis, 2015). Self-reported data on e-text usage was collected from students during the pilot phase of the program, and indicated that, overall, students whose instructors actively used e-texts (i.e., shared highlights, annotations, and notes) read, annotated, and reported learning more from e-texts than students whose instructors did not actively use e-texts.

Based on these findings, we identified and interviewed instructors who were using e-text markup features (i.e.,

highlights, annotations, page notes) in order to understand their motivations and how they use e-texts in their teaching. In addition to the cost savings, instructors gave four reasons for adopting e-texts:

1. Guaranteed access to e-texts by all students when the semester starts

2. Ability to share highlights and notes with students directly on the e-texts

3. Ability to use e-texts more effectively during class time

4. Ability to view student engagement in readings

Instructors in our study used shared highlights and notes to communicate with students about the reading materials. Use of these interactive markup tools can help both in-class activities and outside review and study for exams. The data confirmed that when instructors engage with e-texts, so do their students. In other words, instructors play a key role in adoption and effective use of e-texts for learning by modeling active e-text use and creating meaningful interaction around the content.

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Student Engagement with E-texts

Following up on our earlier research and having access to universal e-reader data such as page views and markups, we turned our attention to actual usage data to gain a deeper understanding of student and instructor engagement with e-texts at IU. We published another case study in EDUCAUSE Review, reporting on e-textbook usage by undergraduate students in residential courses between 2012 and 2016 (Abaci, Quick, & Morrone, 2017). The usage data include page views and use of markup and interactive features such as highlights, notes, questions, and answers.

This study showed that, in a typical week, students access their e-texts more after 5 pm Monday through Thursday, indicating that they use e-texts mainly as a self-study resource. In a typical semester, students read or viewed pages more in the first four weeks and less in later weeks. Highlighting was the feature most used by students, while interactive markup features were used minimally. We also found that higher engagement with e-texts (reading and highlighting) correlated with higher course grades: high-performing students (A and B grades) read and highlighted significantly more than average-performing students (C grades), who read and highlighted significantly more than poor-performing students (D and F grades).

Faculty and Student Use of and Experience with E-texts at IU

In the fall of 2016, we conducted a university-wide Learning Technologies survey using a random sample of all students, faculty, and staff. The survey's purpose was to assess awareness and use of specific teaching, learning, and collaboration services/technologies provided by University Information Technology Services. Twenty-five percent of the faculty sample and 10 percent of the student sample from three different campus profiles (Bloomington, Indianapolis, and regional campuses) responded. The surveys each included a section on e-text

use, asking respondents if they used an e-text, whether they were aware of markup and interactive features, and what they liked most and least about e-texts.

Faculty Use and Experience

Of the 222 faculty who responded to this section of the survey, 52 percent found it very or extremely important that every student in their class have the correct version of the required textbook on the first day of class. Only 25 percent had used an e-textbook through IU's e-texts program. Among these previous program participants, nearly half (n = 24) taught one course with an IU e-text. Previous users of e-texts were also asked if they were aware of the features offered by the e-reader platform. More than half of these faculty knew they could make their own notes within the e-texts (60%) and access their e-text offline (55%), and nearly half (45%) were aware that they could see and answer student questions within the e-texts.

The faculty who indicated previous use of e-textbooks through IU's e-texts program were asked to comment on what they liked most and least. Thirty faculty commented on their positive experience. The major themes emerging from these comments included low cost of the e-textbooks, convenience, inclusive access to e-textbooks (all students acquire), and markup and interactive features of the e-reader platform. Twenty-seven faculty also commented on what they liked least about their experience. Their responses did not illustrate in any major theme; rather, they highlighted a variety of concerns including students' dislike of the e-texts and mandatory e-text fee, faculty's own preference for paper textbooks, navigation or having to scroll on a page, and slow page load.

The faculty who reported no e-textbook use through IU's e-texts program were asked to comment on barriers keeping them from using e-texts and on incentives that may encourage them to use e-texts in the future. The majority (66%) commented on the barriers, and several themes emerged. Thirty-six faculty noted that they haven't used e-texts because they do not require traditional textbooks for their classes or because e-texts would not work for their particular courses. Eighteen faculty indicated that they did not know anything or enough about IU's e-texts program to consider participating. Sixteen faculty who knew about the program noted that their textbook choices were not available in the e-text catalog. Other notable comments included preference for paper textbooks (n = 8), cost of e-texts to students (n = 7), and not being able to keep the e-texts forever as a reference (n = 6).

When asked for one thing that would encourage them to use IU e-texts in their classes, 87 faculty made comments but 11 showed no future interest. Comments from those who showed interest mainly asked for title availability (n = 18), lower cost or still better prices (n = 15), and more information on or sample use of e-text (n = 14). Other notable comments included departmental buy-in, more time to explore e-texts, and adding online homework apps to e-texts.

Student Use and Experience

Forty-eight percent of the student respondents (n = 875/1,816) indicated that they had taken at least one course that used an e-text. As a follow-up question for these students, we asked if they were aware of the interactive and markup features of the e-reader platform. While 57 percent of respondents knew that they could take their own notes within the platform, only 33 percent realized they could ask their instructors questions within the platform. In addition, only 40 percent were aware they could read their e-text offline, even when not connected to the Internet. These numbers indicate room for improvement in terms of increasing awareness of the e-text platform features.

We also asked students who have used an e-text to respond to two open-ended questions regarding what they liked

most and least about their experiences. A total of 379 students commented on what they liked most; a total of 376 students commented on what they liked least. These comments were coded by two of the authors with 95 percent inter-rater reliability. Several themes emerged from the positive and negative comments (Figure 1).
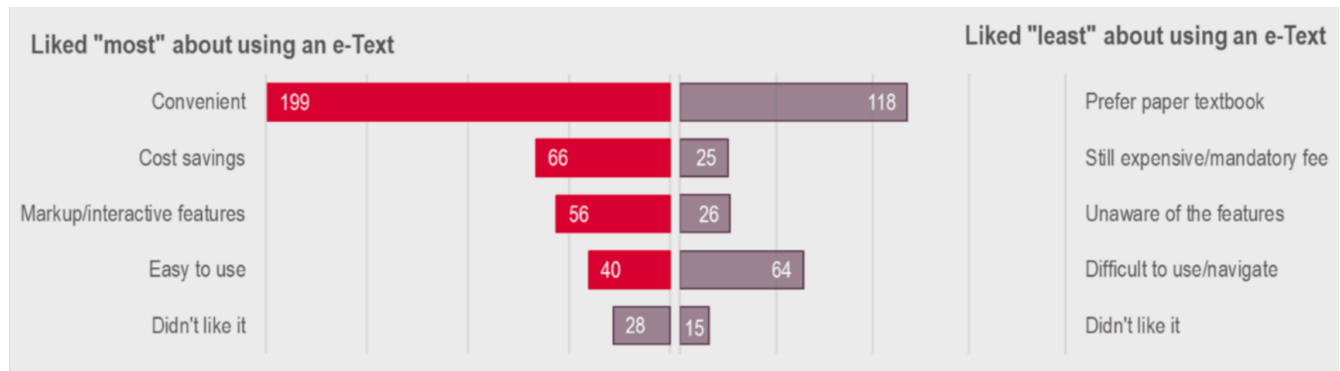
Figure 1. Thematic analysis of student comments

Nearly 200 students noted that they liked e-texts because of convenience, particularly not "having to lug around a physical textbook" and having an e-text "accessible at any time." In contrast, 118 students preferred physical books over digital books, noting that they still "like physical books" or "prefer to read on paper versus on screen for studying." As noted earlier, students have the option to request a print-on-demand copy of their e-texts through IU's e-texts program.

Sixty-six students expressed that they were pleased with e-texts because the program helped them save on their college costs. Therefore, "low cost" and "affordability" were appealing. On the other hand, 25 students argued that e-texts are still expensive, or they did not like having to pay a mandatory e-text fee once their instructor signed up for an e-text. Another comparable theme between likes and dislikes was the lack of understanding about markup and interactive features of the e-reader platform. Fifty-six students praised the features as contributing to their positive experience. Comments referenced "ease of searching," "adding self-notes," and "important information is highlighted." By comparison, 26 students wrote negative comments such as "can't write in" or "can't add note or highlight," which indicated a lack of awareness of the markup and interactive features. Had they known about these features, they might have had a more positive experience.

Regarding another theme, 40 students indicated they found the platform easy to use, while 64 students found it difficult to use or navigate, particularly when flipping back and forth through the pages. Finally, 43 students explicitly stated that they did not like e-texts, without offering a reason.

Educational modules to Promote Effective Use of E-texts for Teaching and Learning

Based on findings from self-reported data (Abaci, Morrone, & Dennis, 2015), we suggested earlier that there is a need for faculty professional development regarding the effective use of e-texts in classes. Our findings

from e-reading data confirm that students are more engaged with e-texts when their instructors use e-texts more effectively. The survey data summarized above suggest that some students who have used e-texts through IU's e-texts program may not be aware of all of the features the Engage e-reader offers. Because lack of awareness might be a barrier to engaging with reading materials to their full capacity, in the summer of 2017 we created a small module to educate students about the features of the Engage e-reader. While the module was created as a stand-alone course in IU's Canvas LMS, instructors are able to easily integrate it into their course site in Canvas, if they choose to do so. The module was designed to take 15 minutes, includes both textual and video instructions, and consists of the following pages:

Page name	Description
What you will learn about e-text	Introductory page to the module
Accessing and navigating the e-text platform (Engage)	Explains and shows how to launch the Engage e-reader and navigate within an e-textbook: zoom in and out, turn pages, jump to chapters or pages, and search for a particular term or phrase.
Interacting with your e-text	Explains and shows how to add highlights and notes on selected text, and notes for a specific page.
Interacting with your classmates	Explains and shows how to share notes with other members of the class.
Interacting with your instructor	Explains and shows how to turn highlighted notes into questions to instructors.
Accessing your e-text offline	Explains and shows how to read e-textbooks offline either by downloading the book to a device or using printed copies.

Table 1. Educational module content

Factors Behind Success of the IU eTexts Program

When we embarked on the IU eTexts initiative, we knew that its success would depend on several factors—the first being whether we could lower textbook costs to help make college more affordable for students. This required working with publishers to help them understand that a model in which all students acquire the e-texts—even at substantially lower costs—would not reduce their profits and, in fact, had the potential to increase profits because the used book market would no longer be needed. Today, publishers no longer have to be convinced of the value of an inclusive access model, and many now widely promote this kind of model.

Faculty Choice

When we are asked about pushback from faculty about e-texts, the response is always clear: one key to our success is that the program has always been completely voluntary. Faculty are free to choose whether to adopt an IU e-text. If they choose not to use an IU e-text, they simply order their course materials through the university bookstore process.

Another key to the program's success is to make sure faculty wanting to adopt an e-text have a wide range of

publisher choices, so they can adopt the high-quality materials that work best for their class. We did not want a scenario in which faculty could choose from only a few publishers. We currently have more than 88,000 titles available from more than 30 publishers. We also provide the option for faculty to choose an open educational resource (OER) e-text by selecting that text through the ordering portal. These texts are drawn from OpenStax and the University of Minnesota's Open Textbook Library. There is no cost to adopt an OER e-text and no cost for use of the Engage reader.

Early Introduction of the Program

When we began the program, we spent a great deal of time meeting with faculty groups, student groups, advisory committees, faculty councils, and so on to tell them about the program and answer their questions. We also conducted open town hall meetings and invited interested faculty, staff, and students to attend. Some of the most gratifying meetings were those with student government organizations on the Bloomington (IU Bloomington) and Indianapolis (IUPUI) campuses. Student leaders were eager for ways to help students save money on textbooks, and they viewed the IU eTexts program as a way to accomplish that goal. They became strong advocates for the program, which bolstered our early efforts in raising awareness. On the faculty side, some initially had concerns that there would be a university or campus mandate to use an e-text, but when they learned that participation in the program was entirely voluntary, these concerns were alleviated.

Improving Teaching and Learning Through New Tools

A key advantage of IU's e-text program is the use of a standard e-reader, the Unizin Engage platform. The Engage platform enables faculty and students to use and share annotations, highlights, and page notes in ways that simply are not possible with a paper textbook. As faculty become more comfortable with the platform, they are increasingly using these markup tools to extend the discourse with their students within the textbook itself. At the same time, it has also become clear that both faculty and students need additional support to effectively use the Engage reader features. The educational modules described earlier are intended to meet this need by conveying best practices in the use of e-texts for both faculty and students. The effective use of e-texts and the Engage reader has the potential to transform the educational experience for both faculty and students by making the reading experience engaging and interactive.

In summary, the IU eTexts program has provided a successful model that puts choice in the hands of the faculty, saves students millions of dollars, and provides new tools to enhance teaching and learning. It also gives us access to rich data sets, analysis of which provides key insights into teaching practices and student reading behaviors, and in turn improves learning outcomes. You can find more details about the IU eTexts program in our recently published free ebook "eTexts 101: A Practical Guide."

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Chapter 19 - Building on History: Providing Affordable Course Content at the University of Wisconsin-Stout

Robert L. Butterfield

by Robert L. Butterfield, University of Wisconsin-Stout (bio)

Introduction

The University of Wisconsin-Stout is one of the thirteen four-year campuses of the University of Wisconsin System. Founded by Senator James Huff Stout in 1891 as the Stout Manual Training School, Stout serves approximately 9,500 students studying in 48 undergraduate and 23 graduate degree programs (University of Wisconsin-Stout, 2017). Programs at Stout range from a large Art and Design program to video game design, vocational rehabilitation, engineering, hospitality and tourism, and education.

Innovation is a key characteristic of the Stout community. The university's mission and method drive a desire to provide an education that is "hands on, minds on." A great example of this is Stout's designation as "Wisconsin's Polytechnic University" in 2007 (University of Wisconsin-Stout, 2017). As a polytechnic, Stout offers its students a combination of applied learning coupled with a strong liberal arts education. The applied learning approach is supported by an environment that provides more lab spaces than classroom spaces.

Another way Stout differs from a traditional higher education campus is that it is a "laptop" campus. Every on-campus undergraduate student is issued a laptop, preloaded with the software students will need to pursue their studies. Each laptop is refreshed every two years, and a student can purchase the computer upon graduation.

Innovation, however, does not come without preparation. UW-Stout has dedicated itself to a robust practice of strategic institutional planning, which is practiced from the bottom up and the top down. Stout strengthens itself by encouraging input from all stakeholders, whether they be external, faculty, staff, or students. The culmination of this dedication to successful planning resulted in the university being the first higher-education institution to be awarded the Malcolm Baldrige National Quality Award in 2001.

One of the strongest and most unique innovations at Stout, however, is a program created specifically to serve students: the UW-Stout Textbook Affordability Program. Implemented at the university's founding, it has endured in one way, shape, or form for well over one hundred years. This chapter provides an overview of Stout's historic textbook rental program, describes the development of a digital resources program to augment the print rental system, discusses the inclusion of the university's open educational resource (OER) program, and, finally, provides insight into how Stout has melded these elements into a comprehensive affordability program.

The Textbook Rental Program

From the school's inception, Stout's founding father, James Huff Stout, understood the importance of affordability. He committed not just to providing an opportunity for young people to earn an education, but to their success afterward. This is very much in evidence in his plans for the Stout Manual Training School:

> "I will place upon the school grounds, in a place designated by the Board of Education, a building of proper kind and size, furnished with all of the equipment necessary for the instruction of classes of boys and girls in the subjects included in the first year in a course of manual training. I will also pay the salaries of the necessary teachers, the cost of all necessary materials and supplies, and all of the contingent expenses for three terms, or for a time equivalent to three school terms, except such a part thereof as shall be paid by five hundred dollars, which is to be provided by the Board of Education." (UW-Stout, 2017)

This approach continues to guide Stout's approach to affordability.

The textbook rental program was established in 1910, when approximately 25 textbooks titles covered the entire curriculum and the average cost per book was about $1.24 (Unknown, 1910). Funds to support the purchase of textbooks were provided through the library collection budget until, in the 1960s, student fees began to be collected for purchasing textbooks. In 1977, a full-time coordinator was hired to lead the library's Rental Resource Service (Jax, 1977), the predecessor of the Instructional Resources Service (IRS) now operating the campus affordability program.

This approach has created a unique relationship between Stout and its bookstore. The provision of curricular content remains an institutional responsibility, while the college store, still an important part of the campus community, acts as a "spirit" store and provides other essentials such as school supplies, technology peripherals, and licensed merchandise.

IRS, a unit of the University Library, has one purpose: ensuring the affordability of curricular content. IRS provides most of the curricular content for both undergraduate and graduate students, whether they are taking courses on campus or at a distance.

This is truly a student program. All fees relating to textbooks must be approved by the Stout Student Association, and the IRS director must regularly report back to the students on the state of the budget. Students can directly question how their money is being spent and ask questions regarding curricular content, and IRS continually seeks and accepts student feedback on

The Textbook Affordability Program at Stout is completely funded by the student fee—currently $17.18 per credit for undergraduates, or about $412.32 per year. This amount is based solely on the number of credits taken, not on the number or price of resources assigned to a course, and provides students access to about $1,500 worth of content per year, including print textbook rentals, digital textbooks, access codes for adaptive learning platforms, and many other types of content.

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IRS staff consists of a director, who is also the assistant library director, a digital resources specialist, an acquisitions specialist, and a part-time assistant who works on affordability projects. Because it is a student program, students have a big part in operating the unit. The staff includes fifteen student workers to sustain operations, along with many volunteers who provide valuable assistance in book check-out and returns during peak seasons.

Staff development and cross-training are crucial. The small IRS staff not only purchases and prepares content, but provides a range of related services to students and faculty—operating, for example, the campus digital resources program and the OER program (described below), conducting e-textbook familiarization training for students and faculty, providing digital resource helpdesk support, and assisting with several functions associated with accessibility. Ninety-two cents of every dollar collected from the student fees goes into purchasing content.

Several challenges in recent years have limited the effectiveness of print rental as the lone means of providing a comprehensive affordability program. First, the continual increase in the cost of print textbooks has made a print rental system difficult to sustain. Rising costs for content mean having to constantly consider fee increases. Secondly, the used book market that has traditionally provided a means to mitigate cost is not as vibrant as it once was. Publishers are doing all they can to limit the number of books available in this market, and the number of rental programs has increased exponentially, creating more demand on the stunted market. These programs range from campus-operated programs like Stout's to those run by for-profit companies selling or renting used books directly to students. The competition for content, often coupled with the need to purchase single copies of books from a variety of sellers in order to collect enough inventory, makes acquisitions slow and unwieldy and further complicates the process of cost mitigation.

Also complicating the effectiveness of the print-only rental system is the continuing battle surrounding print versus digital. Publishers have made no secret of their desire to move from print to digital. Providing new options for delivering and interacting with content, digital resources are also challenging print in the classroom, with many faculty members at Stout wanting this wider variety of tools. In addition, because there is no investment in physical inventory, digital resources are much easier to replace, and negate the need for the long adoption periods traditionally used with print textbooks to reduce cost.

This cultural shift from print to digital content has raised many questions about whether the Stout rental program can survive in the Digital Age, including: How can we increase the variety of resources available in the print rental program? How will students and faculty feel about a shift from print to digital? Can digital be incorporated as part of the rental program? If so, can the program remain cost-effective? These questions were answered with the campus digital resources program, named the University Textbook Transition (UTexT) Program.

The Digital Resources Program

Prior to the beginning of each fall term, Stout hosts an engagement session for all faculty, staff, and students. It is a vital part of the strategic planning process, and informs the direction of the strategic goals for the following year. In 2011, faculty and staff raised an issue that would have great impact on the campus textbook affordability program: they pointed to the growing need to provide a wider range of tools to support classroom instruction. This created the impetus over the next year for the creation of the Stout digital resources program.

The chancellor charged IRS with researching and developing a means for adding digital options to the existing textbook program, starting with a pilot program introducing digital materials into a limited number of courses. This pilot was intended to explore the best way to provide a wider range of content in support of the Stout curriculum and, at the same time, remain true to the Stout tradition of providing students with very low-cost curricular resources. IRS was also tasked with creating a whitepaper exploring the rationale for moving to digital resources and laying the foundation for the early stages of the program. The results of these early steps became the UTexT Program.

The first step in meeting this charge was the creation of the Digital Resources Committee, which focused on providing an effective support system for adopting, circulating, acquiring, and maintaining digital resources. This support system was deemed essential in providing both students and faculty with a higher level of comfort and confidence in using the new resources.

The committee included the associate provost, the chief information officer, the learning technology services director, the purchasing coordinator, the Dean of Students, the director of Stout Online, the Disability Services Coordinator, the Library Director, the Bursar, the Registrar, faculty representatives from all colleges, student senate representatives, and IRS staff members. They collaborated to develop the initial pilot, and became an indispensable team that continues to contribute to program success. In 2015, they also provided the model for a task force to support a sustainable OER program.

The pilot was based loosely on the Internet2/Courseload/McGraw-Hill pilot conducted earlier in the spring 2012 term with five large universities (Howell, 2012). Content was limited to one digital textbook, but no restrictions were placed on the choice of publisher. Stout also partnered with a digital reader platform that was accessed directly through the campus learning management system. Five faculty members volunteered to participate, and the pilot encompassed digital resources being used in eight sections of five different courses containing 189 students.

The Digital Resources Committee established a set of enduring goals meant to guide the program:

1. To enhance student learning using emerging technologies;

2. To utilize innovations in technology to further the Stout polytechnic mission;

3. To provide a program that is efficient and cost-effective;

4. To make it possible for instructors to design and modify required content;

5. To provide an adaptable program that would continue to meet course content requirements well into the future; and

6. To be able to meet the needs and expectations of students exposed to advanced learning technologies in the K-12 environment. (Butterfield & Thomason, 2012)

The pilot was a success and has been duplicated in succeeding terms, with growth in digital content continuing at a rate of 15% to 25% per semester. As of the fall 2017 term, digital resources account for about 50% of all curricular content used at UW-Stout. This success, however, did not come without growing pains.

Obstacles in the Introduction of Digital Resources

The first obstacle to introducing digital resources involved navigating a stakeholder culture that was very grounded in print. It was necessary from the beginning to speak to the concern of "I just prefer print." The voluntary nature of the digital program helped assuage faculty concerns, and providing exceptional support for the early faculty adopters was key. Faculty then became instrumental for spreading the word to colleagues and contributed to the program's rapid growth.

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Faculty also believed at first that students needed permanent access to the digital materials. The long history of the textbook rental program indicated, however, that in most cases students are willing to relinquish their textbooks as soon as they are done with them. This is supported by the success of rental programs like Stout's that circulate textbooks in a quasi-library fashion, and by textbook buyback programs at college bookstores across the country. To alleviate faculty concerns, procedures have been established through vendors and publishers to offer long-term access or print-on-demand options, but at Stout these are rarely requested.

Five years of using digital course materials at Stout has also helped change the perceptions of students, who now seem much more comfortable with digital resources. Some still express a desire for a print resource, but the number has declined drastically from the early days of the program, and these students are assisted on a case-by-case basis.

At the start of the program, both students and faculty often lacked the skills or confidence to recognize the full potential and inherent qualities separating digital resources from their print counterparts. IRS has worked closely with the Learning Technology Service and the Nakatani Teaching and Learning Center to guide faculty in effectively using digital resources, and students can rely on a host of online, face-to-face, and classroom training opportunities to assure they are comfortable using the assigned resources.

The successful implementation of digital has also been hindered by publishers themselves, many of whom still adhere to hold-over policies from the print era. Restrictive digital rights management, frequent edition changes, the bundling of ebooks with additional premium content, and the restriction of content access to short (usually 180-day) durations of time have discouraged faculty members from adopting digital resources. Publishers have also been reluctant to offer disaggregated content, restricting ability of faculty to customize content to meet their course objectives.

Pricing also continues to be an issue. The need to purchase a copy of each digital resource for every individual in every class, rather than being able to procure a single print book that can be circulated, has resulted in a higher cost structure in a system like Stout's, especially in large lecture-type courses. Publishers also tended to cling to the older pricing models used for print textbooks.

The increase in access codes for adaptive learning platforms and publisher homework solutions has been an additional obstacle to digital implementation. Students were often charged additional lab or technology fees, or required to purchase these items out-of-pocket. In 2013, Stout's IRS was asked to provide feedback on the possibility of incorporating these materials. It was determined that IRS would purchase the codes as part of the rental program, using bulk purchasing and negotiation to assure the lowest cost. This allowed many required course fees for this material to be eliminated.

The final obstacle to full digital implementation has been accessibility. Publishers are doing a better job of providing accessible content and products, but there is still a long way to go. Stout has developed a team approach, using the resources of IRS, Learning Technology Services, Stout Online, the University Library, and the Disability Services Office to assist in providing necessary accommodations and doing everything possible to assure day-one content access for all students and faculty. Ideally, publishers would provide accessible content, and accommodations would not be necessary.

While the transition to digital at Stout has not always been easy, it has proceeded successfully despite the obstacles, providing access to a much wider range of tools for the classroom and opening more avenues to learning, and doing so with only a moderate increase to student fees. It has also provided the groundwork for the initial phases of the new OER program that promises to help sustain the Stout Affordable Textbook Program.

The Open Educational Resources Program

Finding new ways to mitigate cost and provide affordable content requires constant effort, along with thrift, efficiency, aggressive negotiation, and the willingness to consider every available opportunity. One avenue to savings that requires very little debate, however, is a free textbook.

The open educational resource (OER) movement has provided a unique and valuable means for Stout to add quality, low-cost materials to its content arsenal. These resources not only provide low-cost or free materials to select courses, but allow savings to be realized across the program as they are shifted to mitigate the cost of commercial resources. Stout's OER effort was added to the Instructional Resources Service in 2015.

The Stout Open for Learning and Value in Education (SOLVE) Program began with a grant proposal in August, 2015, requesting modest funding from the University of Wisconsin System to support the initial phase of the

SOLVE Program with the intention of "providing innovative and cost-effective educational resources that support faculty academic freedom and advance student learning" (Butterfield & Johnson-Schmitz, 2016a).

The grant provided about $14,000 to launch the SOLVE Program, covering the initial steps of joining the Open Textbook Network, providing an OER workshop for faculty and staff, giving incentives to faculty to review an open textbook, and incentivizing adoption of an OER in four classes. This initial phase resulted in over $10,000 in savings in the four pilot courses. (Butterfield & Johnson-Schmitz, Textbooks, 2016b)

Our previous work on the Digital Resources Program saved us a great deal of time and effort when establishing the OER program, since we had an approach in place to managing and supporting digital content. One of our most effective approaches was to create an OER task force; members provide direct support in discoverability, technology, accessibility, and usability, and serve as the primary conduit between users and content.

The Instructional Resources team is the glue that binds the program together. Members are responsible for all operational aspects of the program, for assuring that the necessary collaborations occur to support the curriculum, for educating and communicating with all stakeholders, and for advocating for OERs at UW-Stout. This campus group is unique in that its main responsibility is to advocate for the lowest cost content possible for the students.

The initial gains of the SOLVE Program have been modest. The adoption of OERs has continued on a voluntary basis, but we have not yet initiated a formal recruitment process. Even without active recruitment, however, the SOLVE Program has resulted in almost $100,000 in savings since the summer term of 2016, illustrating how one huge benefit of free content is that even small efforts can result in significant savings.

The next phase of the program is slated to begin in 2018, with more individuals being trained to support, advocate for, and promote OERs at Stout. It isn't enough to simply provide open resources. It is necessary, in addition, to invest in opportunities to ensure a sustainable program.

One approach will be to work more closely with students, increasing their awareness and encouraging them to advocate for the adoption of OERs. Their voices are critical in changing perceptions and developing a campus-wide culture of affordability. Their stories of being helped by affordability efforts have much more impact than explanations of dollars saved.

The OER movement is alive in Wisconsin and gaining strength, but more is needed to help sustain our affordable content efforts. OER creation and adaptation, especially, require expertise and resources that smaller campuses may not be able to sustain on their own. Small and large campuses alike need to work in concert to assure that OERs remain a viable and sustainable. That is why IRS is becoming a vocal advocate outside of UW-Stout, working to forge collaborations with fellow system schools, technical schools, two-year campuses, and high schools to find ways to work together and lighten the load. Sharing both the work and the acquired knowledge is critical to the OER movement.

We have no doubt that this approach will be as successful for OERs as it has been for the digital program. Providing exceptional support and collaboration, involving students, and advocating for OERs on and off campus will carry the day. We have set a goal of saving students $1 million dollars by the year 2020.

The Comprehensive Affordability Program

The real success of the Stout affordability approach is a result not of one program, but of the three combined. Blending the textbook rental, digital resource, and OER programs has resulted in an affordability triangle that limits cost and greatly expands the number of resources available for students and faculty. Affordability, however, does not come easily, and we've found that many strategies are necessary to assure that costs are kept low:

Communicate

Because this program is entirely student-funded, communication with the students is critical. Stout's IRS operates under the assumption that the student is the "boss." Students must approve any fee increases. so it is imperative to keep them informed and part of the process. Every effort is taken to keep student government apprised of IRS operations and to solicit feedback for program improvement.

It is equally important to communicate with administrators, keeping them up-to-date on the importance of affordability in recruiting and retaining students. This program would not be successful without the strong support of the Stout administration.

Negotiate

Assertive negotiation with publishers and vendors is also a critical aspect of mitigating costs in the program. We consider them partners and not antagonists in the quest for affordability. Their goal is to make money, while the Stout program's goal is to provide the lowest possible cost for content to the students. These views are not mutually exclusive. Stout's approach has been to recognize this dynamic and negotiate with the understanding that both parties are looking for the best deal. Effort is placed on finding the best middle ground and working toward success for both sides.

Collaborate

In affordability efforts, collaboration takes many forms. Sometimes it is as straightforward as using collaborative purchasing to lower cost and increase access. The University Library and IRS have found several ways to split the cost for resources while advancing both ideals. Collaboration is also a means to share labor and expertise between campus units and external stakeholders. IRS, Learning Technology Service, the Nakatani Teaching and Learning Center, Stout Online, and Disability Services have all collaborated to solve problems and increase service and access.

Find Affordability Wherever it Lives

This is the "all other" category in providing affordable content. We use every possible effort to limit cost: from constantly reviewing workflows for maximum efficiency to requesting free shipping with every order. Thrift is a huge asset in making an affordability program sustainable. With overhead at a minimum and a staff actively

searching for every way to limit cost, Stout is very proud of being able to commit over 90% of every dollar collected from the students toward purchasing content. We have also taken the step of combining IRS and the library collection development department, further concentrating our efforts to expand access and reduce cost for both areas.

Take Your Time, Make a Plan, Find Your Superheroes

Pinching pennies and making smart business decisions, however, are not the only ways to ensure sustainable affordability; many intangible elements also contribute. One question often asked about the Stout Affordability Program is whether it "is scalable and exportable?" The answer is a definite "yes." Comprehensive affordability is a marathon, not a sprint. Stout's program has been saving students money for over a century, and has at its core a holistic, flexible approach that allows the use of all possible tools.

Not every adventure begins with a map, but all successful ones begin with a plan. This is true in building an affordability program. As a Baldrige award winner, UW-Stout remains invested in planning strategically for success—a tradition that helps make the affordability program possible. Strategic planning provides a scaffold for guiding and assessing operations. It is an active process that allows the program's structure to adjust, grow, and prosper, and provides a map with many possible routes to success rather than one, single static picture.

We have also learned that growth needs to be incremental. Providing affordable content is costly, and requires patience. Rapidly initiating a program effective for all students would require a large amount of money. Growth should be managed so that undue burden is not placed on support elements or on students. It has taken Stout a long time to develop its program, and it is unlikely that our comprehensive and sustainable approach would have been as successful if growth had been too rapid. It comes down to finding a starting point and using that to build a system that will support future growth.

Stout has also been cautious of "putting all its eggs in one basket." In their haste to provide an affordable solution, many institutions decide to adopt just one approach. Rapid adoption of rental models, "all inclusive" models, or 100% open programs is initiated to provide quick relief. We have found that more than one solution is often necessary to provide a comprehensive and flexible program that allows both growth and flexibility and that meets the needs of faculty and students. Stout has elected to adopt many approaches to reduce student cost, which allows the program to continue to reimagine itself when tested by change.

Building a program also requires superheroes—an individual or group with responsibility for the program. The superhero not only drives day-to-day functions, but provides enthusiasm and commitment. Our superheroes push our program forward even when some may waiver and want to give up; they provide the spark to attack problems and find inventive solutions for limiting or eliminating cost. IRS staff see affordability as a state of mind. They are true advocates for the students, believing that to fail the program is to fail the people they serve.

Finally, it is essential to always, always remember who an affordability program is for. The Stout program does not exist to be a recruiting tool (although it is) or a means of retention (although it is). It exists to save each Stout student more than $4,000 during an average four-year academic career. This is the ultimate indicator of success.

Summary

The University of Wisconsin-Stout has been an advocate of textbook affordability for more than a century, with its textbook rental program beginning in 1910. Crucial to the program's success has been its ability to adapt, as demonstrated in our move to add digital resources, access codes, and other materials to the "rental" system circa 2012. Open educational resources have also been added to the Stout affordability arsenal to provide quality content while controlling cost. These efforts have culminated in a comprehensive affordability program administered by the institution and providing a variety of quality content in support of Stout's curriculum. The effectiveness of this program comes from a staff dedicated to finding any way to keep cost low, a supportive administration, and the fact that this is completely a student program.

Conclusion

Affordability in higher education is not a simple problem to define. According to one expert, "college affordability is not so simple as identifying what the sticker price of a college education is, how much money people have available to pay for it, and the amount of financial aid students and families qualify for to help defray the cost. How much anyone can afford to pay depends on the value of what they are purchasing" (Baum, 2017). Affordability encompasses a long list of contributing factors, of which textbook affordability seems a relatively small problem. Why, then, has UW-Stout dedicated the resources and time to this issue?

The answer is that textbook affordability can give direct and significant support to the student. Saving on textbooks may seem small when viewed against the rising cost of tuition and higher education costs. When a program like Stout's can save a student upward of $4,000 over his or her academic career, however, it begins to have real impact on that student's ability to complete a degree. These dollars can then be repurposed for other living needs that do not disappear when a person is attending college, like food, transportation, and clothing. It also nurtures a culture of equity and affordability that informs an institutional view in supporting students across campus.

The Stout textbook affordability program is unique, yet not exceptional. Its success does not come from a single, catch-all approach to reducing cost, but from a systematic method that searches for affordability "wherever it lives." This method thrives because it is supported by a group of individuals dedicated to textbook affordability and supported by administration. The most important element to success, however, is that this program belongs to the students. This program has served the Stout students for a century and, with innovation and hard work, it is sure to serve them for decades to come.

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Robert Butterfield has been the Director of Instructional Resources for the University of Wisconsin-Stout for the last six years. Instructional Resources is responsible for operating the campus textbook rental, access code, digital resource, and open educational resource programs for UW-Stout. These programs are university operated and completely funded by student fees. He has over 30 years of business, operational, and leadership experience in the military, retail and academic library realms. Bob is passionate about providing quality, affordable learning materials to all students.

Chapter 20 - University of Wisconsin - River Falls: A Textbook Rental and Hybrid Approach to Instructional Content

Amanda Moeller and Cory Whipkey

by Amanda Moeller and Cory Whipkey (both from University of Wisconsin-River Falls) (bios)

Introduction

The University of Wisconsin-River Falls (UWRF) is part of the University of Wisconsin System, which, as of the fall of 2017, consists of thirteen comprehensive universities and thirteen smaller campuses that primarily provide two-year programs (Campuses, 2017). UWRF currently enrolls approximately 6,000 undergraduates and 400 graduate students.

UWRF has several unique programs and facilities that attract students, including the second-largest dairy science program in the country. The university places a strong emphasis on undergraduate research, internships, and practical applications of classroom learning. Students in the dairy science program, for instance, work on two campus farms to train service animals, provide milk products for ice cream (created on campus by our Food Science and Technology students) served in the cafeteria, and prepare horses for public sale. Teacher education, business, and the sciences are other popular majors on campus.

Since its inception in 1874, UWRF has approached affordable instructional content in unique ways. Instead of purchasing textbooks, students at UWRF pay a textbook fee each semester. For the 2017–2018, academic year, the fee is $80.64 per student (the original textbook fee in 1874 was $1.00 per semester). This

> **Instead of purchasing textbooks, students at UWRF pay a textbook fee each semester.**

allows students access to the textbook library, which contains about 2,500 unique titles and 100,000 items. Here they can check out the instructional materials they need for each class they take. Students' savings could reach as high as $4,500[1] during their time at UWRF. This figure does not factor in additional interest on student loans they might need to repay after they graduate, as many students use loan funds to pay for books. It is because of this historical legacy that the program can continue to grow and thrive. Our current inventory is valued at over $7,000,000.

Given the unique and diverse student populations at UWRF, saving students money on textbooks is an important effort in supporting academic success. Nearly half of UWRF students are first-generation college students, and three-fourths receive financial aid. It is rare to meet a student who is not working in some capacity, and it is not

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1. Using the College Board estimated cost of $1,200/year for Instructional Materials, $1,200 minus $161.28 for the textbook fee equals $1,039.00/year' this number, multiplied by 4.7, the average time to degree, equals $4,883.30

unusual to hear of students balancing multiple part-time jobs in order to meet their financial need (an average of $8,826 per year). Many students work on the family farm during weekends and academic breaks or commute to campus from a farm (Knowledge Powers, 2017). By paying $80.64 per semester for access to textbooks, UWRF students are saving an amount similar to what they would earn through a $1100 student work study position salary each year. Financial concerns are a major factor influencing student retention; one-fourth of students do not return for their second year (Drews, 2017).

The UWRF textbook program is also unique in that it is administered through the library rather than the campus bookstore. The primary mission of our bookstore is to provide texts for graduate classes, lab manuals and other supplies for undergraduate classes, and merchandise. The Textbook Services Manager reports to the Library Director and works closely with the Director and librarians to increase affordable access to instructional materials for students. This collaboration with the library allows the textbook program to evolve to meet the needs of today's students while keeping the textbook fee low.

In the past, the textbook rental program was able to stay viable through the purchase of used textbooks and through instructors using the same textbooks for multiple years. However, with increased inflation on textbooks along with changes to the forms in which instructional content is delivered, the low textbook fee is becoming stressed. The need to stretch budgetary dollars, and the new management of Textbook Services, have created opportunities for us to partner with the library to take content that has already been acquired and licensed and make it available for instructional use. This chapter examines the positive outcomes of this partnership for both Textbook Services and the library through increased savings, increased use of licensed library resources, and the use of Textbook Services to connect instructors to other library services. It also examines the challenges our program will face in the future, and approaches we will take to keep it solvent, saving students thousands of dollars during their course of study at UWRF.

Building Collaboration

The first step taken by Textbook Services to begin a closer relationship with the library was to simply express the need for such a relationship. When the new manager started in June, 2015, he recognized the lack of integration between the units. Prior to working at UWRF, he oversaw course reserves and collection management at the College Library at UW-Madison, working with a heavily-used course reserve collection of over 1,500 titles. This experience prompted him to integrate our library in new ways, creating better communication and opportunities for librarians and library staff to work more closely with Textbook Services. Several strategies were implemented to create closer collaboration, and the need for more integration and cooperation was stressed to the Library Director, who understood and agreed. One of the struggles in creating a stronger relationship was space—more specifically, the lack of shared space., as the library and Textbook Services are located in different buildings, limiting the opportunities for day-to-day interactions.

Also, in the past, only librarians and the Archivist performed liaison work with academic departments. In the new environment of collaboration, the Textbook Services Manager became the library liaison to two departments, with duties that included ordering library materials, instruction, and specialized reference consultations with faculty. He was eager to learn the procedures, practices, and faculty needs in taking on these duties, and also worked an occasional weekend reference shift. An appointment on the Communications and Activities Committee provided

him greater insight into library operations and created several opportunities to work with the library to promote open educational resources (OERs). The library also supports Textbook Services through involvement on the library Strategic Planning process and support for conference attendance. These liaison interactions helped build relationships and more effectively communicate the needs of Textbook Services to other librarians, and helped change the perception of the Textbook Services Manager from a person who simply orders books to one with knowledge and expertise regarding instructional content.

Increased integration has also occurred as library staff have become more involved with Textbook Services and with instructional content. The librarians have benefited from the manager's expertise working with publishers, from his insights into the academic needs of students, and from his knowledge of changes in academic emphasis that impact the ordering of materials for the library collection or for department outreach. Library staff, including the Director, have also worked at Textbook Services during book issue and return, taking shifts to help students check out textbooks at the beginning of a semester and return them at its conclusion. Finally, several librarians attended the manager's presentation at the 2017 E-ffordability Summit at the University of Wisconsin-Stout, where he described his experiences working with faculty to educate them on open resources and the opportunity these resources present.

The second phase of the increased collaboration between Textbook Services and the library has been the increased use of licensed library materials for instruction. A new Electronic Resources librarian started in July, 2016, and immediately began to partner with Textbook Services in the promotion and use of licensed library resources as instructional content. This partnership focuses on two areas: the use of library ebooks as either core or supplementary instructional material, and partnership between the library and Textbook Services to purchase additional licensed content that gives instructors access to more materials for use as textbooks.

Starting in the Spring 2016 semester, the Textbook Services budget was under extreme pressure. As requests for new books came in and costs mounted, the manager looked to the library to help alleviate some of the cost. Many of the requests were for scholarly or popular monographs already held by the library in ebook form. Working with instructors and the library, Textbook Services was able to save thousands of dollars that semester by using library ebooks. Only ebooks available for purchase with an unlimited simultaneous user license were considered for course use.

Two electronic resource collections already available to UWRF Library users greatly reduced overall costs. The first, Badgerlink, is a state and federally funded collection for Wisconsin residents that includes important resources for college students such as the Academic Search Premier database. The University of Wisconsin System also licenses and manages a set of databases that are available to all institutions in the system. Known as the Shared Electronic Collection (Library Program, 2017), it reduces costs to institutions by taking advantage of cooperative purchasing and licensing opportunities. A handful of resources are even available to UWRF students at no cost due to licensing agreements made by the University of Wisconsin-Madison in individual campus purchases. The Shared Electronic Collection currently includes ebooks by Wiley, Taylor and Francis, and Project Muse.

Utilizing library ebooks in the Textbook Services program reduces

costs for students, but not only because we no longer have to pay for each individual copy of the book. Print items carry the additional expenses of ordering, processing, circulation, and, in the case of our distance students, postage. Ebooks eliminate these costs, creating savings that can be transferred to other purchases.

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These efforts toward increased integration and collaboration between Textbook Services and the library represent a strong start, and we see two additional areas as opportunities for promoting Open Education: using the library liaison program to promote open education principles to faculty, and identifying faculty who are receptive to integrating OERs into their courses.

Collaboration (Internal)/Open Ed in the Library

In addition to collaborations between Textbook Services and the Libraries, there are opportunities at UWRF to collaborate with collegiate departments to promote OERs. The availability of OERs, for instance, allowed the Libraries to review an existing but dated K-12 Textbook Collection through a new lens, leading to an innovative solution for an ongoing problem. The Textbook Collection, wholly separate from Textbook Services, was the result of a community collaboration that has long since ceased to exist. Primarily between 1998 and 2007, a nearby school district donated sample and withdrawn textbooks. Although they were quality materials, by the time the collection was weeded, the great majority of items were more than 17 years old. The cost of purchasing newer editions was prohibitive, and finding single copies of current print-only editions from the major textbook publishers (without single-user electronic licenses or access codes) was more difficult than expected. In addition, each of the major K-12 publishing houses with whom the librarian spoke was unable to provide a licensing option for electronic textbooks in a higher education environment.

With Teacher Education students having access to a department collection of print textbooks within a computer lab housing teacher education resources, the collection also duplicated existing resources. When presented with the costs to improve the Textbook Collection, the acting Teacher Education Department Chair agreed that the expense was too great to make replacements worthwhile since it would have restricted the purchase of other materials.

These considerations led to the promotion of open textbooks as replacements. The librarian placed posters in the collection's remaining stacks, providing the URL for a collection of open education textbooks, and created a LibGuide with a list of other organizations that have created Open Textbooks for the K-12 age group. The library estimates a savings of more than $5,000 by not replacing the obsolete print textbooks, not including the additional savings of future replacements. Funds were instead used to update nonfiction materials and increase the number of books reflecting diverse perspectives. Since these new items have already circulated more than the textbooks, it has clearly benefited students and faculty to look at open alternatives to this collection.

This is one example of how liaison librarians can integrate OERs into work with their academic departments. We look forward to identifying additional innovative approaches in the future.

Purchase on Demand/Integrating ebooks into Courses

While OERs will continue to be an important part of our strategy, the incorporation of existing resources and purchasing models will be necessary as well. The library currently uses a Demand Driven Acquisition (DDA) program to provide users with content when they need it and save money by avoiding unnecessary purchases. A user is given immediate access to an ebook, but if he or she views only a few pages, the book is not purchased

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and the library saves money. DDA programs provide library users with access to a broad array of content, and libraries only purchase those items that are really useful to their users. The program not only reduces the time and expense of tracking down enough copies of a book, but eliminates unnecessary purchases that are based on speculation regarding what users will find useful. Since UWRF programs are incredibly broad and are focused around the sciences, we save significant amounts of money by not purchasing books that can run into the hundreds of dollars without being certain of their potential for circulation. Results of inevitable changes in class enrollments, such as rush purchase expenses due to a sudden increase in enrollment, or unused extra copies due to a smaller than expected class size, drive up acquisition costs. Using DDA, a copy is simply purchased when it is used in the ebook format, and in the case of titles purchased under the unlimited use purchasing tier, one copy covers a course's needs.

Another area of increased collaboration on instructional content has been the licensing of additional resources, like streaming video. UWRF subscribed to Films on Demand for many years to supply access to video content for instruction. Traditionally, Textbook Services paid for this access. This past year, however, due to faculty demand, it became clear that we needed additional streaming video options. In conjunction with the library and the Division of Technology Services, Kanopy was identified as a resource that would benefit campus. After a trial and investigation, the purchase was approved and the cost split between the three departments. This was the first partnership that added a third party to the library/Textbook Services partnership, and we view it as a model that can be used in the future, especially as online and distance education continue to grow.

Challenges

As discussed earlier, our textbook program has been very successful for our students, saving them a significant amount of money during their course of study at UWRF. As it moves forward with a hybrid approach to instructional content, however, the program faces several challenges . This year, for instance, the Textbook Services budget will receive only a minimal funding increase, which will keep the program operational but will not allow for any investment for creative new services. We are also caught in the middle of the print-to-digital transition, feeling pressure from publishers to move to a fully digital program, but lacking the budget, staff,

and administrative support to do so. And finally, the library made major cuts to our database's budget line in the 2017–2018 fiscal year due to rising costs of existing subscriptions (most notably in the resources we are committed to renewing through their inclusion in the Shared Electronic Collection) and to the lack of new funds available to the library.

Financial/Budgetary Challenge

The first challenge is budgetary. As mentioned, our students paid $80.64/semester during the 2017–2018 academic year for access to their books. With a normal textbook model, that amount would barely buy one book. But the rising cost of textbooks has hit our program hard. As textbook prices rise almost 6% annually (Bureau of Labor, 2017), each adoption of a new textbook for our large 100- and 200-level classes costs us more money. Because we are administered by the university and through the library, our rules for faculty are as friendly as we can make them. Most textbook rental models require a minimum of three years of use. We let faculty switch a book after two years, or earlier if there is a specific need. We allow for more than one book per class, and do not put a minimum or maximum cap on the cost of books. However, with the rising number of adjunct instructors being hired close to the start of the semester, we are at times scrambling to get the correct books for classes at an affordable cost. We give faculty complete academic freedom, but work with them to find the most affordable solution for their instruction needs, especially in the case of late hires. While these faculty-friendly practices are an important part of our service provision, they can have a negative impact on the final cost to students each semester.

Print-to-Digital Challenge

Another challenge involves the move from print to digital textbooks. Our textbook program was built on the foundation of print texts. We have built our inventory and instructors have designed courses with print texts in mind. As we received new book requests this past year, we found that publishers are increasingly selling only an e-text version or, possibly, an e-text and loose-leaf version. Books that are available only as e-texts affect our budget because we have to purchase access to them every semester rather than purchasing print copies that can be reused for multiple semesters. This greatly increases our costs and puts additional pressure on our budget. We have handled this extra cost with special course fees for classes that use an e-text, but this is not sustainable, and we are adding additional costs to students. The loose-leaf format is also not ideal; we either have to pay extra to bind books (this is also time consuming) or purchase three-ring binders for the pages. Pages get torn out or ripped much more easily, and students have to carry a large three-ring binder if they need to take their book to class. Loose-leaf texts are generally cheaper than hardback or paperback versions of ebooks, but the lower cost does not make up for the additional processing costs, time, and text damage. As publishers continue to push all-inclusive digital textbook models to instructors and to campuses, that pressure hurts rental models like ours.

Using ebooks as part of a textbook program presents additional difficulties. Many of the monographic books requested are not available in ebook format, and others are spread across several publishers. For library ebooks to serve as a true replacement for print copies, more ebook vendors would have to be used by the UWRF library to get the selection that faculty expect. As an example, our textbook library inventory contains many technical

titles by O'Reilly Publishing, which are available as ebooks through the Safari database. Safari is too expensive for either the Textbook Services and the Library budget, so we continue to purchase the print books.

Real-world use of library ebook titles has also proved difficult. Certain requested titles are not available under an unlimited model or a non-linear purchase model, which allows for multiple simultaneous users but triggers the purchase of another copy after a pre-established number of check-outs. This understandably creates frustrations for students when they are unable to access titles with simultaneous user limits. In general, based on feedback provided during instruction and reference sessions, UWRF students express a preference for print books, citing the ability to read them without a device, especially on breaks at work or in other situations where a laptop or computer would not be immediately at hand, and frustration with using the ebook vendor's interface. Some instructors also require the use of print books for certain assignments, which creates a demand for print-only book titles at our institution. In one case this fall, the Textbook Services Manager worked with an instructor on access to three ebooks for a special topics class. Unfortunately, after about three weeks of class, students were unable to access the ebooks because of difficulty with the books' discoverability in our discovery tool, and were frustrated by the experience. We eventually purchased physical books to avoid further frustration for both instructor and students.

> **Additional training is needed to show students how to maneuver and make full use of ebooks and, more importantly, to help faculty gain familiarity and comfort with them as a legitimate format to be used in academic projects.**

Additional training is needed to show students how to maneuver and make full use of ebooks and, more importantly, to help faculty gain familiarity and comfort with them as a legitimate format to be used in academic projects. Restructuring library instruction to include time for ebook demonstrations is an important first step, yet difficult due to the number of different ebook interfaces. We have also considered creating a LibGuide to serve as a resource for classes using ebooks, providing training to new faculty and instructional staff, and training our own librarians and staff on best practices for use and the full array of features available through our ebook vendor. The long-term success of integrating library ebooks into the classroom will depend on how successful UWRF is at training its campus community to embrace their potential.

Journal and ebook Price Increase Challenge

When analyzed in the winter of 2016, price increases for single-journal purchases at UWRF averaged five percent per year; this amount is also the average yearly increase for our largest journal package. Although this rate of increase seems reasonable, it is unsustainable in light of the recent budget cuts in the University of Wisconsin system. As more instructional content moves to formats outside of the textbook, journal cost increases affect the amount of content instructors can access.

A large percentage of our serials and electronic resources budget is committed to purchases for the Shared Electronic Collection and large package deals. Not only do price increases and additions to the collection make it difficult to acquire new resources, but it is increasingly likely that other resources will need to be cut in order to preserve these existing commitments. New academic programs do not receive additional funding for the

new resources required to support them. UWRF has coped with this budget situation by severely restricting the purchase of new resources and cutting single-journal title purchases based on cost per use analysis. Open access and open educational resources are a bright spot in a difficult budget situation, providing new resources that would not otherwise be available.

Campus Perception Challenge

Having begun when the school opened in 1874, the textbook rental program at UWRF is a part of campus culture. While high cost of textbooks and instructional materials have been discussed in higher education for years, the issue has not affected UWRF faculty. They have been good stewards of the program and have used books for multiple years, changing only when needed and not when publishers push a shiny new tool or edition. Given this context, however, the growing discussion and use of OERs and library resources for instructional content is not met with the same urgency at UWRF as at other institutions.

The Textbook Services Manager has given two separate faculty presentations on OERs, one before the start of the fall 2016 semester and one before the start of the 2017 spring semester. Both were minimally attended and the main reason for attendance was a separate item on the agenda, not the discussion of OERs. As requests for new books are received, he advocates the use of OERs and ebooks already in our system; helping faculty understand the need for these changes, however, will take time. The collaboration between Textbook Services and the library will be essential in this process. The budget pressures faced by Textbook Services are real and, in order to keep our program thriving, we will need to incorporate the use of OERs and library materials to continue providing a low textbook fee to our students. Both Textbook Services and the library also need to advocate with the students themselves for lower-cost instructional content. Our students appreciate the service but, unless they have transferred from another institution that does not have a textbook rental model, they may not fully realize their savings. Pressure from students may also help instructors move to lower-cost options for textbooks and instructional materials.

Wrap-Up

This semester our analytics revealed an unprecedented rate of increase in the use of ebooks accessed through our library discovery tool, showing that instructors and students are finding and using ebooks as instructional material for classes. We will be investigating to see if this increase is tied to specific classes, assignments, or instructors (at least two faculty have used library-provided ebooks for courses in the spring of 2018 without requesting them through Textbook Services) or to the attention given to ebooks during library instruction sessions.

Support for OERs is growing in the University of Wisconsin system, especially after the Madison campus identified it as a priority in their Educational Innovation Initiative (Open Educational, 2017). The E-ffordability Summit is expanding its target audience beyond libraries, adding an additional day to the 2018 conference. Discussions regularly take place between librarians on other campuses about how to promote OERs to faculty. The push for overall higher education affordability within the state of Wisconsin does, in spite of other budgetary difficulties, provide momentum to discover and promote OER options to administrators and faculty. As campuses

restructure, it becomes necessary to find options that can be easily and inexpensively used across multiple campuses. OERs may in time become a financial necessity to keep our textbook program viable at UWRF. Promoting them now may ease any possible transitions and create goodwill with faculty. By starting the investigative process now, UWRF sets itself up well for the future.

In this chapter we have highlighted how our textbook program saves each student thousands of dollars during their time at UWRF. The increased cooperation between Textbook Services and the library has breathed new life into efforts to connect instructors with ebooks and other digital content. As cooperation and integration with the library grows, the program will remain stable for years to come. The addition of OERs into the mix will further allow us to keep our student textbook fee down and also give faculty more flexibility to update and create content. Our textbook program does, however, face challenges. Our budget, the print-to-digital transition, increasing journal and ebook costs, and campus perception will cause us to continually refine our program and advocate to our faculty about the changing landscape of instructional content. We believe that our hybrid approach to affordable instructional content provides value now and flexibility for the future, allowing us to keep our program strong and saving students significant money during their time at UWRF.

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Chapter 21 - The Role of the Independent College Bookstore in Providing Affordable Course Material

Marguerite Stocker

by Marguerite Stocker, Monmouth University (bio)

Introduction

The mission statement of nearly every independent college bookstore includes a focus on students. Operating outside of the traditional, for-profit corporate structure allows these stores to take a customer-centered—in this case, student-centered— approach, whether through cost-competitive offerings or product availability. This chapter examines how the independent college bookstore can play a vital role in providing students affordable course material.

Until recently, college stores could be cost-competitive by selling old editions of textbooks, sourcing used books from wholesalers, and buying books back from students. But when publishers began revising editions more frequently, they eliminated the bookstore's ability to leverage these cost-reducing work-arounds. According to the Bureau of Labor Statistics (2016), textbook prices

> **This chapter examines how the independent college bookstore can play a vital role in providing students affordable course material.**

rose more than three times the rate of inflation between January, 1977, and June, 2015—an increase of 1,041%. Publishers note many reasons for this increase (such as the rising cost of paper, royalties, and marketing costs), but none have resulted in improved content.

The Textbook Publishing Market Takes Shape

The textbook publishing market has experienced the same ebbs and flows as the overall publishing industry, notably those marked by mergers, acquisitions, and consolidations. The resulting market has become an oligopoly (Larivière, Haustein, & Mongeon, 2015), with a small number of companies controlling the supply and distribution of course materials.

Publishing houses started merging in the 1960s, with Random House's purchase of Alfred A. Knopf in 1960 (Osnos, 2012). In 1975, Gulf+Western acquired Simon & Schuster (keeping the Simon & Schuster imprint), which, between 1984 and 1994, acquired more than 60 other publishing firms, including Prentice Hall and Macmillan (Simon & Schuster, 2018). With the addition of these educational, professional, and reference imprints, Simon & Schuster's revenue grew from $200 million in 1983 to $830 million in 2017 (Publishers Weekly, 2018a).

As seen by looking at the five largest publishers, the mergers and acquisitions continuing into the 21st century have had significant impact on the publishing market:

- The largest publisher of course material, Simon & Schuster's educational division (including Prentice Hall) was sold to Pearson PLC in 1998 (Pearson, 2018).

- McGraw Hill acquired Random House's college division in 1998 for more than $200 million, and in the following year entered into a 50/50 joint venture with Macmillan, combining their elementary, secondary, and vocational education businesses. The company bought out Macmillan's half for $161 million in 1993, and in the next year McGraw Hill's three business segments (educational and professional publishing, financial services, and information and media services) brought in revenue of $2.8 billion (Bahsin, 2011). McGraw Hill acquired Tribune Education for $635 million in 2000, moving to challenge Pearson Education for the top spot in education publishing. In 2014, however, their revenue had fallen to $1.24 billion (Publishers Weekly, 2015).

- The third-largest publisher of educational material, Scholastic specializes in the K–12 market, and had a revenue of $1.74 billion in 2017 (Scholastic, 2017).

- Cengage, formerly Thomson Learning (owned by Wadsworth Publishing), was created from a restructuring of International Thomson Publishing. Thomson was sold for $7.75 billion in 2016 to a private equity consortium consisting of Apex Partners and OMERS Capital Partners, and the name was changed to Cengage Learning. Cengage subsequently acquired Houghton Mifflin College Division, National Geographic School Publishing, and Web Assign, among others. In 2017, Cengage's revenue was $1.5 billion (Publishers Weekly, 2017).

- After selling its college division to Cengage in 2009, HM Harcourt restructured. In 2012, it purchased the reference and culinary portfolios of John Wiley & Sons, including Cliff Notes and Webster's New World Dictionary. HMH had a 2017 revenue of $1.41 billion (Publishers Weekly 2018b).

New Textbook Marketing Strategies

The five publishers with a lock on the market (Quinn, 2014) are able to drive up prices—and ultimately, their profits— without fear of market competition. One of their primary strategies to undermine the used textbook market and increase prices is the frequent revision of existing textbooks. While the content of some subjects covered by traditional textbooks does change regularly, book updates—sometimes every two years—appear to outpace content updates. These new textbooks carry higher prices, and prevent students from leveraging the used textbook market. The California Public Interest Research Group (CALPIRG), which has taken on the publishing industry on behalf of students, claims that new editions for the most widely purchased textbooks on college campuses are published every three to four years and that they cost, on average, approximately 50 percent more than used copies of the previous edition (Zomar, 2007). According to CALPIRG, faculty have noted that new textbook editions are relevant and justified only half of the time (Fairchild, 2004). Publishers, however, continue to publish frequent updates, and no longer reprint older editions, forcing students to purchase the new material. After a short time, older editions become more difficult to find and bookstores are forced to buy the latest editions to satisfy demand.

The increase in textbook costs can also be attributed to "bundles"—textbooks offered along with supplementary materials and web-based tutorials. According to CALPIRG, the bundled version of a textbook can be more than twice the price of the stand-alone version (Fairchild, 2004). Publishers claim to have increased their investment in the development of supplementary material to meet the increased demands from instructors to enhance student learning (GAO, 2005). According to Exposing the Textbook Industry, however, just 50% of professors use all bundled components. One-third say that they could not assign a chosen book without the bundle or did not know if that option was available (Zomer, 2007).

The July 2005 GAO Report to Congressional Requestors found the following:

> While publishers, retailers, and wholesalers all play a role in textbook pricing, the primary factor contributing to increases in the price of textbooks has been the increased investment publishers made in new products to enhance instruction and learning…. In particular, publishers point out the high cost associated with the development of technology applications that supplement traditional textbooks. The publishers have made these investments to meet changing needs of higher education, such as the increase in part-time faculty who require greater instructional support and supplements that will enhance student learning of the subject matter. While wholesalers, retailers and others do not question the quality of these materials, they have expressed concern that the publishers' practice of packaging supplements with a textbook to sell as one unit limits the opportunity students have to purchase less expensive used books.

At Monmouth University, about 25% of courses adopt bundled material. Selectors do so with the expectation that individual faculty will use all parts of the bundle, but this is rarely the case. When surveyed during textbook buybacks on campus, student feedback indicates that less than 10% actually use all the components. This fact is most evident when students bring their components in still wrapped and unused.

Textbooks costs have risen at an incredible rate over the last 60 years, in part because of shorter revision cycles and the introduction of bundled textbooks.

Textbooks costs have risen at an incredible rate over the last 60 years, in part because of shorter revision cycles and the introduction of bundled textbooks. Understanding the publishing environment helps bookstore staff facilitate the best possible textbook options for students. It's also important to know how course materials are chosen, so as to provide crucial information at key points in the process.

Faculty and the Textbook Selection Process

Book selection is the responsibility of professors, department chairs, or department committees. At Monmouth University, for example, texts are chosen by the department chair, and all faculty, including adjuncts, are required to use the chosen books.

Textbook selectors are often influenced by publisher representatives, who solicit virtually and in-person using new titles and new editions of existing textbooks. Representatives may highlight the latest in instructional support for the title, focus on the book's supplementary material, or offer incentives, such as new computers for labs. Publishing representatives are less likely to promote textbooks based on affordability or cost-savings. According to Exposing the Textbook Industry, 77% of surveyed faculty said their sales representative did not provide price

information. "Even when professors directly asked for the price during a sales meeting, only 38% reported that the sales representative would always disclose the price" (Zomer, 2007).

To best serve the campus community, it is important that independent college bookstores take on the responsibility of educating textbook selectors about affordability. Working with faculty on affordability issues, however, can be complex, as faculty opinions about the value of textbooks are highly varied. According to the 2016–2017 Faculty Watch Report of the National Association of College Stores (NACS), 25% of faculty surveyed do not require course material because it is "…not worth the expense to my students/materials are too expensive." Faculty are also unsure what they can or should do to provide their students with more affordable textbook options, with 55% being unsure about the role they play in textbook affordability, and more than 40% not viewing the issue as "a priority for their institution, themselves or the campus store" (NACS, 2017). At Monmouth University, student success and achievement are top institutional priorities. Meeting these priorities becomes a challenge when course materials are too expensive, causing unnecessary stress and often forcing students to take classes without the required material.

> **To best serve the campus community, it is important that independent college bookstores take on the responsibility of educating textbook selectors about affordability.**

Finally, faculty often focus on content—quality, appropriateness for the level of the course, and so on—before considering the cost of the material. As noted by the GAO in its June 2013 Report to Congressional Committees:

> "Faculty told us they typically prioritize selecting the most appropriate materials for their courses over pricing and format considerations. One faculty group explained that the quality and relevance of the material are the key factors in finding the best match for the course. Another group said they need to determine whether the material is at a level suitable for the students likely to enroll and comprehensive enough for the content they plan to cover. Only after they have identified the most appropriate course materials will faculty consider pricing and format options."

A representative of a national campus retailer noted that faculty ask about cost-saving options like digital formats and textbook rentals only after identifying the materials that best help students master the necessary concepts. Bookstore staff, and others working with faculty on affordability issues, can use these surveys to better understand faculty behavior, and to design approaches to book selection that raise affordability issues earlier in the selection process.

The Bookstore Role in Affordability

To ensure that decisions are made in students' best interests, it is imperative that independent college bookstores take part in conversations between publisher representatives and faculty. As noted by NACS, bookstores can function as academic resource centers, working with faculty to research course material options that satisfy instructor requirements while also reducing costs to students (NACS, 2018).

One way in which stores can provide faculty with cost-conscience solutions is to use third-party software. Verba, for example, provides affordability rankings that are based on publisher list price, the availability of used copies

in the campus store, the availability of new and used copies in the marketplace, price, and rental percentages in the campus store and in the general marketplace. Faculty can be sure they are making the best choice for their students (Crook, 2017), and bookstores can review faculty choices and make alternate suggestions for low-scoring materials.

Bookstores can also review their own pricing schematics to determine the flexibility of their margins within the parameters of contributing back to their institutions and meeting budgets. Not being part of a larger cooperation, which sets standard margins, allows independent bookstores to be more flexible on a book-by-book basis. The margin measures the relationship between inventory cost and the price charged to customers. If a book costs the store $200, for example, the store may set its margin at 25%, resulting in a retail price of $250. For a book costing the store $20, the margin may be set at 28%, for a retail price of $25.60. This flexibility helps keep the higher-priced books from being astronomically expensive. When a bookstore takes the time to review the price of a newly adopted book, it can use strategic pricing to stay competitive in the marketplace and, at the same time, be cost-conscious for the student-consumor.

> **Independent college bookstores can help lower the costs of course materials by effectively communicating with faculty, partnering with third-party vendors to provide more transparency in pricing along with alternate forms of course material, and changing their margins based on the extended retail of a text.**

Independent stores can also take advantage of marketplace partnerships. In mid-2016, for example, Nebraska Book Company, a company providing wholesale textbook distribution services to approximately 2,500 stores, partnered with Red Shelf, a distributor of digital learning materials, to offer integrated digital content to independent college stores through online ordering and point-of-sale systems. By partnering with more than 500 educational bookstores, Red Shelf can offer content at prices 60% lower than those of the printed text. Red Shelf has also partnered with many publishers to offer Inclusive Access (IA) material, also at a discounted rate. This digital material is made available on the first day of class to every student in a course; students are charged through direct student account invoicing or through the bookstore itself.

Independent college bookstores can help lower the costs of course materials by effectively communicating with faculty, partnering with third-party vendors to provide more transparency in pricing along with alternate forms of course material, and changing their margins based on the extended retail of a text. Bookstores can also work toward lower textbooks prices by forming new campus relationships.

Building Campus Relationships

Bookstores can leverage many opportunities to help lower the price of course materials. With each independent store able to reflect the image and culture of its campus, staff can, for instance, create bonds and build loyalty by involving students in the purchasing process. Soliciting—and paying attention to—student feedback can help a store become a more trusted partner in course material consideration. And each store can determine the threshold of pricing for its own institution, and modify its margins accordingly.

To ensure that lines of communication are open to all portions of the campus community, each independent bookstore can create an ad-hoc committee with representatives from the faculty, IT department, library, and student body. This committee can identify lower-cost alternatives such as custom books, books including only class-specific chapters, open source material, inclusive access materials, and new library lending options.

Because independent college bookstores have the flexibility to be active listeners, they can facilitate positive student engagement. A campus store might, for example, offer a meeting space within the store, where staff can meet regularly with student councils to discuss problems and generate ideas. This provides students more one-on-one interaction with store staff, builds relationships, and increases the commitment to buy locally. If students trust that the store is acting in their best interests, they are more inclined to support it, and to encourage support from their peers as well—ultimately benefiting both the institution and its students by keeping revenue in-house and tuition costs stable.

Independent college stores have the flexibility to change and/or extend their hours of operation to reflect student events and activities. When competing with online vendors, it's crucial to have both an accessible brick-and-mortar store and a robust website, and to provide short turnaround time in order fulfillment along with easy delivery (with orders brought to dorm rooms, for example, or placed in locker units similar to those used by Amazon). With this flexible approach, bookstores can build more loyalty and better serve their students.

Additional Strategies

Independent stores need to stay on top of current trends in K–12 course materials, cloud computing, mobile learning, bring-your-own-device policies, and open content. Knowing, for example, about the materials that have been used by incoming students can help bookstore staff gauge student expectations and their attitudes toward course purchases.

When independent bookstores take advantage of their autonomy, they can employ approaches which reflect campus concerns, local economics, and current competitive trends. One such example is a store's return policy. Independent stores can be flexible with policies which helps students deflect unnecessary charges if they purchase the wrong material.

Bookstores can also lower the cost of course materials by developing custom books in-house, securing copyright information, and using on-campus printing facilities.

When independent bookstores take advantage of their autonomy, they can employ approaches which reflect campus concerns, local economics, and current competitive trends.

Independent college stores should also rely on organizations created to support them, such as Indico and the Independent College Bookstore Association, both of which offer resources including benchmarking material, webinars, listservs, conferences, and one-on-one marketing and purchasing help.

Conclusion

Flexibility. Intuitiveness. Strategic response. Support. Collegiality. With an approach including these elements, the independent college bookstore can ensure the affordability of course materials despite consolidation in the textbook publishing market and the subsequent increase in textbook costs. Taking the time to communicate with faculty, students, publishers, third-party vendors, and peers, bookstores can fulfill their missions—serving students responsibly and offering the most cost-effective course materials available.

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Creating and Publishing Openly Licensed/Open Access Content

Chapter 22 - Open and Inclusive Education – Connections to Universal Design

Kaela Parks

by Kaela Parks, Portland Community College (bio)

Introduction

Affordability is a key factor in making educational resources accessible; if students cannot afford a given text or course material fee, they are not going to have access. If, however, we are able to ensure that cost is not a barrier, what else is necessary to ensure that resources are accessible and that students cannot only afford a given opportunity, but make good use of it?

This chapter explores how we can ensure that learning materials are not only affordable, but equitable for a diverse population. We start by discussing what it means to be accessible, then review connections to universal design. The chapter concludes with a case study of how collaboration and a focus on accessibility has helped Portland Community College lower costs for students taking math courses, lower institutional costs for remediation, and reduce delays in providing accessible formats for students with documented disabilities.

An Introduction to Accessibility

As defined by the University of Washington's DO-IT program, "accessible," "universal design," and "usable design" can be roughly paraphrased as follows:

- Accessible design: design that is aligned with accessibility standards and guidelines to ensure independence for people with disabilities. There are specific dimensions and tolerances, for example, defined for the construction and renovation of the built environment (United States Access Board), and Web Content Accessibility Guidelines for online content (W3C, 2017; WAI, 2018; WCAG, 2018).

- Universal design: design made with a conscious, proactive attempt to minimize barriers so that environments, activities, programs, and offerings, like books and videos, are usable without the need for additional adaptation.

- Usable design: design that is end-user-tested—though testers don't tend to be disabled themselves unless this demographic is purposefully included within the testing plan.

One definition of accessible from the Office of Civil Rights is often cited in compliance reviews and resolution agreements related to inaccessible digital resources, and is good for those working in open education to understand:

> "Accessible" means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. (Office of Civil Rights, Resolution agreement with South Carolina Technical College System, 2/18/13)

Open educational resources (OERs) are most often created and shared in digital formats, which can be accessible without being more expensive or difficult to make. By ensuring that digital materials conform to web content accessibility guidelines, they are made robust, flexible, and far more likely to be useful to a much wider segment of the population.

However, it is easy to see how the ideal—access for the broadest population possible—can become separated from practice, with access being impeded during content creation. Accessible design, for example, requires content creators to be aware of accessible design issues. If creators are not mindful, institutions must work to ensure accessibility prior to use, an effort which requires resources of people, technology, and time. If institutions don't follow through, it falls to end users to report barriers as they are encountered, which requires time to make a formal complaint, and time to see it through. And if these end users lack the capacity or the will to advocate for themselves, the perpetuation of inaccessible learning materials and environments can flourish.

> **By ensuring that digital materials conform to web content accessibility guidelines, they are made robust, flexible, and far more likely to be useful to a much wider segment of the population.**

Unfortunately, even a quick scan of the legal landscape reveals a grim picture in which complaint after complaint highlight the same problems— learning systems, websites, and other digital materials that are not usable by those with disabilities. The problems persist, and higher education has been ill-equipped to provide the accessible digital environments and materials needed for equity. (EDUCAUSE, 2015).

When digital learning materials are not designed to be accessible, it takes time to create alternate formats each time a student requests a disability-related accommodation. This can lead to inequity, and can also come at a cost to institutions, each using resources to create accessible alternatives at the point of consumption. It is much more efficient and effective to work during the design stage to ensure a base level of accessibility.

There is a common belief in higher education that the disability-related accommodations will "level the playing field" to ensure equity. But as described by Refocus, a project aimed at shifting practice in higher education, our traditional reliance on the accommodation process can "give the illusion of equal opportunity, while in reality requiring disabled students to accept special treatment and take on burdensome responsibilities" (Funckes, Kroeger, Loewen, & Thornton, n.d, Examining Our Practices Section, para 4).

Consider the following quote published in the Journal on Postsecondary Education and Disability:

> "Imagine if you will, a university where women or students of color are required to self-identify, provide documentation, and be made eligible to obtain textbooks, take exams, utilize technology, or participate in field trips. We would consider such an institution to be absurd and discriminatory in their attitudes and actions. So

why, given the knowledge and technology we have available to us today, do we continue to require similar actions from disabled students?" (Haven, 2010, page 18).

One critically important part of this quote is the phrase "given the knowledge and technology we have available to us today," because the truth is that we do know enough to do better. Well-established and internationally vetted standards have been in place for years (WCAG, 2013), including guidance in the form of "Dear Colleague" letters (U.S. Department of Justice and U.S. Department of Education, 2010), and free online training and technical assistance sources.

> **Design practices that can help ensure the accessibility of learning materials are readily available. They just aren't always practiced, and this is where open education provides important new opportunities.**

Design practices that can help ensure the accessibility of learning materials are readily available. They just aren't always practiced, and this is where open education provides important new opportunities. Open educators are steeped in the values of sharing, and want to share the materials we create as broadly as possible. Our field's initial focus on broad access through the use of open licenses gives us a framework for considering the ways in which open education can promote equity, not just through lower costs and greater accessibility, but through other approaches as well.

Open educators can choose to bring in voices that aren't often heard. Students can be learners as well as producers. Primary sources can be cultivated from around the world, not simply obtained from commercial producers in the U.S. These producers have again and again failed to do right by students and faculty with disabilities. Open educators can reject the dominant practice, and do better (CCCOER, 2018).

By using workflows that ensure good alignment among materials, activities, and instructional goals, open educators can reduce barriers and promote equity. They can, for example, help faculty improve materials which were not created with a focus on accessibility, and reshare these materials. They can also make sure that metadata is used to track these improvements, so that future educators can more easily find the accessible versions.

Open education funding can be structured to explicitly address accessibility, as some grant initiatives have done. Even in the absence of an external motivator, however, we as educators can choose to address not just affordability, but cultural relevance and student voice. Open educators can choose to bring in and have learners generate socially relevant and personally meaningful connection points to enhance student engagement and the learning experience.

Universal Design

Universal Design (UD) has been explored and described in a variety of ways. Ron Mace, credited as the father of UD, described it as "Design that's usable by all people, To the greatest extent possible, Without the need for adaptation or specialized design" (1985). It is a model that first gained ground in architecture, and has been expanded to the design of objects for daily living and of educational materials and spaces. Because education-related ideas focus on building flexibility into structures to support diverse learners, the ideas translate well to

open education. UDI, or Universal Design for Instruction, adapts Mace's original principles defined to the design of instructional offerings.

The Center for Applied Special Technology (CAST, 2015) has worked to promote Universal Design for Learning (UDL), leveraging neuroscience and framing UD in terms of three key ideas, as described in Table 1.

Key Element in UD	Neuroscience Connection	Open Education Connection
Multiple means of Engagement	Motivation and persistence	Open education can pull in socially relevant authors or data sets as fuel for student-centered explorations
Multiple means of Expression	Interactive elements and networked connections	Open education can support flexible assessments and interactive activities to document engaged learning
Multiple means of Representation	Accessible multimedia content can be perceived	Open education can use rich robust content that is designed to work well across different modalities

Table 1: UD and Open Education

We are All Learners and Collaborators

Our students come to us from many different backgrounds, and those of us at community colleges and other open enrollment institutions know we serve a critical role: making a space for people to change their trajectory. We need approaches that are built for diversity, and that can ensure greater equity.

In approaching the problem of inaccessible curricular materials, it is important to remember that administrators, educators, student support staff, and instructional support personnel are all learners as well. It is thus essential to start with an understanding of the characteristics of adult learners. While a combination of policies, politics, organizational structures, and leadership shape institutional practices, the practices are implemented by people, who are themselves learning and/or reinforcing those practices on a daily basis.

Effective teaching and learning depends, in part, on being responsive to learners (Davis, 1993; Gadbow, 2002; Hiemstra, 1990). In talking about teaching ourselves how to align with standards and reconsider workflows, we must see faculty and staff as learners. Andragogy, defined as the education of adults, was described by Knowles as being distinct from Pedagogy, with adult learners tending to be defined by five characteristics: self-direction, reliance on experience, identification with social roles, problem-centered

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approach, and internal motivation (Hiemstra, 1990; Knowles, 1970; Pratt, 1993). An adult accumulates a growing reservoir of experience, which is a rich resource for learning (Hiemstra, 1990; Knowles, 1970; Kolb, 1984; Pratt, 1993).

Adult educators who are drawn to open education may also be self-directed problem solvers who are motivated toward social justice. The motivation to lower costs for students is a motivation to address a barrier. This same

principle can drive us to make sure the high-quality, low-cost materials we create, adopt, revise, and cultivate can be used by the full range of learners eligible to participate.

The problem of inaccessible curricular offerings cannot be addressed solely by focusing on students in the classroom, but must first be understood in terms of the mechanisms by which we equip our faculty members, instructional designers, librarians, technologists, procurement officers, and support staff. Too often, we hire people into roles that require participation in the offering of educational opportunities without providing them the chance to gain practice and experience with the process of ensuring accessibility. If progress is to be made, it will be through the development of a greater sense of shared responsibility (Vance, Lipsitz, & Parks, 2013).

Multiple Means of Engagement

Educators who use and share open resources apply to these resources the arts of teaching and learning. By cultivating materials and activities in ways that are both reasoned and creative, they provide connection points that make sense, that challenge and support their students. With open practices the educator can utilize the best resources, not just those easiest to find.

Crafted and cultivated collections of open materials and activities can ensure that educators align these resources with course goals, and do so in ways that explicitly acknowledge and bring focus to socially relevant applications. Open educators can provide students with multiple means of engagement, connecting course content to their actual lives, and moving conversations from the abstract to the real world.

Multiple Means of Expression

Students need different ways to demonstrate what they are uncovering, questioning, and learning along the way. Open educators can be thoughtful and eclectic in terms of allowing more student-led participation that is not pre-scripted, but is instead created and evaluated within the flow of each individual course.

Students may, for example, be assigned to work in groups to create something that demonstrates their learning during the course. They may choose to create one of any number of things, with each group learning from the others as well as from the process of creation itself. Selected artifacts could become content for future classes, allowing students to learn from each other over time, using and being inspired by previous work.

Multiple Means of Representation

Videos and music, charts and arts, physical spaces and virtual realities—educators can use these resources, and more, to expand the traditional classroom world of written material, lectures, and discussion, and to expand student exposure to a course's core ideas and concepts.

Ideas and concepts can be represented verbally, narratively, numerically, symbolically, graphically, and physically. They need to be explorable in different formats because different representations will resonate in different ways for different learners.

Case Studies: Partnering to Ensure Accessible OERs

Two case studies of partnerships between math faculty, librarians, and disability services at Portland Community College (PCC) help illustrate how accessibility and UD can be embedded within open education. The first details use of an open homework system called WeBWorK, while the second looks at a partnership for a developmental education math course.

Case Study One: From Accessibility Study to Dedicated WeBWorK

In 2011, PCC convened a large group of stakeholders to advance a commitment to accessible online curricular materials. One outcome of those conversations was an offer from college leadership to fund subject area studies. Faculty were given release time to engage in a discipline-specific investigation of the barriers related to creating and facilitating accessible online education in their subject area.

Mathematics—a subject with high class enrollments, and thus high rates of participation by students with disabilities—was the first subject area study to be funded. The highly technical nature of mathematical notation, as well as the visual nature of graphs and charts, raised specific concerns about achieving technical accessibility for digital content.

In 2012, two faculty members were selected to for this initial subject area study. The two had different approaches to creating math content, but both had experience teaching math courses at different levels within the college. They decided to take the following approach to the study:

1. They sent a short survey to all math instructors across the college, with questions about the most common techniques for producing or adopting curricular materials.

2. After learning which techniques were in heaviest use, they spent time "test driving" these techniques with students who rely on assistive technology, in the process gaining a rich appreciation of the degree to which design decisions impact end-users.

3. They then prepared a report to share with their colleagues.

One of the systems tested during the subject area study was WeBWorK, an open system supported through the Mathematical Association of America (MAA). The faculty members found that it was not only lower in cost than other options tested, but had a significantly more accessible interface than the more heavily used commercial publisher platforms. When this became clear, the faculty members and Disability Services requested a dedicated server for the WeBWorK platform.

Accessibility personnel from Distance Education and Disability Services worked together with math faculty to document areas in which accessibility could be improved, and then sponsored a code camp for WeBWorK contributors. The result was a more accessible platform and an updated product accessibility template.

Since the subject area study, mathematics faculty have not only expanded the use of WebWorK, but have leveraged a combination of institutional and external funding to support further development, increasing the number of problem sets per course and the number of courses using the system. This work has not only led to lower course fees for students, but has also saved the institution money in the form of reduced accommodation costs.

PCC now has math courses using openly licensed texts integrated with WeBWorK, meaning that students are provided with free access to homework sites, and also have access to materials offline or via low-cost hard copy. The online versions contain interactive elements such as homework problems and targeted feedback, all built to conform to web content accessibility guidelines. Students can access resources on the devices of their choice, and these resources can be magnified, read out loud, or accessed via refreshable braille display. All with relative ease, and with an expectation that accommodation will be provided should a barrier be encountered.

We continue to address potential barriers by conducting end-user testing of new features, including more interactive elements, and reviewing and testing accessible authoring interfaces and other features prior to their release.

Faculty working on the project, with support of a campus president, have established a process by which a small fee for printing on demand fuels a Math Success Fund, which provides both math student scholarships and OER faculty development funding. Our efforts to support accessible and affordable math learning opportunities are being nurtured in ways that should provide sustainability.

- Presentation at Accessing Higher Ground Conference
- Archived webinar on completion of WebWorK and MathBookXML

Connections to Universal Design

The mathematics subject area study and related WeBWorK projects demonstrate the application of UD:

- By ensuring that online content conforms to web content accessibility guidelines, and by engaging in frequent end-user testing, the math faculty working on WeBWorK and related open education projects are ensuring that materials are robust, perceivable, and usable by those using a range of technologies.
- By offering online interactive, offline, and hard copy versions, the math faculty working on these projects have ensured flexibility for users who have needs or preferences for particular formats.
- By engaging faculty as the chief problem-solvers, and providing a space to work with instructional support, disability services, and end users, the college is recognizing employees as adult learners who will thrive when stimulated, challenged, and supported.

Case Study Two: A Pre-College Math Workbook

In 2015, a group of PCC math faculty teaching beginning level pre-college math developed a workbook to give students physical models with which to work when exploring topics such as fractions.

While the original idea was to create a word-processed document, Disability Services partnered with the faculty to ensure the workbook could be openly licensed and disseminated in a variety of formats to support flexibility in use, optimizing the content for output as HTML with MathML, as Word files using MathType, as PDFs (for ease of printing), and as Braille ready files for embossing or use via refreshable display.

Disability Services also recruited a student to develop a 3D model for the fraction kit activity. Our student used 3D modeling software to create a kit that was slightly larger than the commercially produced versions, and had a lip on the edge to allow the pieces to stack. The model was tested at multiple points during the design phase by both students and educators, and adjusted at each review point. The final product was licensed under Creative Commons and shared, and kits were printed and distributed at each campus for use by instructors.

- Interactive site for Math 20 workbook
- Thingiverse files for fraction kits

Connection to Universal Design

The pre-college math activity packet and fraction kit project also demonstrate the application of UD:

- Using HTML with MathML allows students and instructors who use screenreaders, text-to-speech, or magnification to access content directly online (via MathJax as needed).
- Adobe PDF versions are provided for those who prefer to print a hard copy.
- Microsoft Word docx versions allow offline access via screenreader, text-to-speech, magnification, or voice recognition.

- Braille Ready Files ensure refreshable braille display, or can be printed as hard copies.

The same math courses are often offered in different ways by different faculty, with some using an open text and homework system, and others using commercially produced materials.

In the case of courses using open resources and systems, the Disability Services office may simply need to ensure that students know how to use the features of their accessibility software to make use of the structure already in place. If not, the source files are often available, and can be used and adapted to ensure access in a timely manner. The open homework sites used by our math faculty tend to employ MathML, allowing the material to be read aloud, converted to braille, or magnified on screen.

For the commercial materials, however, the department is often only able to obtain a version of the text that the publisher is willing to share. Because the math is not always available as HTML with MathML, and there are rarely LaTeX or other source files available, Disability Services personnel may need to recreate each weekly homework set in an alternate format, and an aide may have to be provided to assist the student in completing the homework assignments.

In comparison to the students using assistive technology in the open courses, students in courses using commercially produced texts and systems are less able to work independently. This means that not only are students asked to pay steep prices for these commercial resources, but the institution, in needing to provide student with additional resources, bears a higher cost as well.

Recommendations

Courses using open systems allow for a greater sense of community among learners. Everyone can use the same materials, and there is no difference in access related to the ability to pay, or see, or use a mouse.

Open education can provide learners, both educators and students, with opportunities to grow, to cultivate and create, and to share and enrich. With a focus on equity, and with an approach informed by universal design, we can make sure that materials are not just affordable, but also accessible, socially relevant, and engaging. Below are recommendations for open educators to consider.

With a focus on equity, and with an approach informed by universal design, we can make sure that materials are not just affordable, but also accessible, socially relevant, and engaging.

Funding and the Necessity to Require Line Items for Access Reviews and Remediation

Open educators might find themselves in a position to serve on an advisory board, work group, or committee tasked with establishing criteria for funded projects. It can be very helpful to voice the need for line items for accessibility reviews and for remediation or other technical assistance needed to bring quality up to standards. If not explicitly called for, these items can often be overlooked and opportunities can be missed.

Metadata and Other Means of Communicating to Users

It is important to make end users aware of the specific strategies being used to ensure accessibility of the resource.

Collaboration

The key is to success is to bring individuals together from different areas; we should not limit ourselves to traditional academic partnerships. Bringing academic affairs and student affairs together with facilities and IT, for instance, can be incredibly productive.

Rulemaking

Ideally, conformity with web content accessibility guidelines (WCAGs) can be written in as a requirement of funded projects to ensure alignment. This has been done at federal, state, and institutional levels, with good success.

Conclusion

As educators, we need to be committed not only to lowering costs, but to removing barriers. We need to ensure that our students can afford to participate, but also that the materials we bring into focus put content into context. We have to be certain that materials are not only affordable, but accessible in equitable ways. Universal Design helps ensure that more people get a better experience, and a better shot, more of the time. After all, open education isn't open if it isn't accessible.

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Chapter 23 - Valuing Open Textbooks: Derivatives, Adaptation, and Remix

Anita Walz

by Anita Walz, Virginia Tech (bio)

Introduction

In 2014, amidst excitement about the promise and possibilities of open licenses, I began supporting a project at Virginia Tech to customize and remix an existing openly licensed textbook. It sounded easy at the time, which, in retrospect, was good, for otherwise I may have never taken the opportunity to learn what it takes or how to make it easier.

To many readers, instructors, and students, open educational resources (OERs) are equivalent to freely available texts, simulations, or images, valued primarily because they provide student or institutional cost savings or because they offer free worldwide access (digital divide issues aside). OERs are, however, more than free resources. This chapter considers the potential

> **This chapter considers the potential of OERs beyond free access, looking at remix, adaptation, or creation within and outside of the classroom.**

of OERs beyond free access, looking at remix, adaptation, or creation within and outside of the classroom. I discuss the differences between in-copyright affordable resources and freely available, sharable, and editable OERs, highlight the value in adapting and resharing openly licensed content, and look at the process of creating derivatives, remixing, and adapting. I also review a paradigm for thinking about producing openly licensed textbook-like publications, and offer observations on technology solutions and some common pitfalls to avoid.

Definitions

U.S. Copyright law recognizes the exclusive rights of copyright owners to make verbatim copies, create derivative works, share copies/derivative works, perform, publicly display, and electronically transmit verbatim copies/derivative works (U.S. Copyright law). Free redistribution of copyrighted works, in whole or in part, is allowed by U.S. Copyright under private agreement or permission, and in limited situations called exemptions, with Fair Use being the most well known.

In contrast, as defined by the Hewlett Foundation (2016), OERs are:

> Teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources

> include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

In-copyright and library-subscribed resources without open licenses are, by definition, not OERs. Access to library-subscribed resources is restricted to a particular community of paying subscribers. OERs are essentially comprised of works in the public domain, works with Creative Commons (CC) licenses (those which allow derivatives), and works with similar open licenses. Beyond digital availability, free access, and lack of paywalls, the potential of OERs is perhaps best viewed through the lens of threshold concepts, with OERs differing from in-copyright and pay-restricted content in at least three important ways: 1) free access is required, 2) modification and redistribution are allowed, and 3) attribution is required (except for public domain resources where citations are part of good scholarship).

OER Threshold Concept #1: Beyond prohibited copying to free access

Public domain and CC-licensed materials may be shared, copied, and distributed with attribution, without charge, and without fear of copyright infringement. When authors openly license and publicly share their content, challenges related to sharing, copying, and distribution vanish.

OER Threshold Concept #2: Permission to create derivatives, remix, adapt, and share

OERs allow creation of derivatives, remixing of similar materials, and adaptation—in other words, users can make changes in the materials. This may be startling at first. It has been common for instructors to combine material from different sources—chapters, videos, "reasonable and limited portions" of a work—under fair use. Using substantive portions, making changes, combining separate works, and publicly sharing the end product has not, however, been the traditional model, in part because technology did not allow it, and in part because instructors and students have been trained to be wary of plagiarizing sources and violating copyrights.

Materials released under an open license or those in the public domain do, however, permit creation of derivative works, the remixing or combining of works, and adaption or customization of existing works—like creations using Rjiksmuseum artifacts 1, animated GIFs 2, and a wide array of music, video, images, and text shared with CC licenses 3.

OER Threshold Concept #3: Giving credit or "attribution is required"

Giving credit when using quotes, ideas, or figures from another source is always appropriate within a scholarly context. Those using works licensed under Creative Commons must also follow the terms of this license and provide attribution. More details on attribution are available in best practices for attribution (Creative Commons, n.d.)

Why Create Derivatives, Remix, or Adapt?

The possibilities inherent in OERs raise questions about materials that might be adapted to fit a particular course, remixed to create something new, or critiqued and improved upon to show student mastery of a topic. And the work itself, of course, takes effort.

Instructors often choose to create a derivative resource, or remix or adapt existing resources, because they cannot find current and reasonably priced materials that fit their courses, learning objectives, and pedagogical approaches.

Certain values and goals may push a faculty member to consider adapting an OER text. For example, we wanted Virginia Tech's first open textbook, Fundamentals of Business (Skripak, 2016) to be:

- freely available to students and to the world,

- a high-quality, current, accurate, appropriately sequenced text mapped to course learning objectives,

- engaging for students, with current and culturally relevant text and images,

- available as individual chapters in our learning management system

- 508-compliant and accessible to screen readers,

- as openly licensed as possible and easily editable by others,

- and available from the University Libraries as an at-cost print-on-demand version.

Each of these goals influenced the book's content, formatting, and features.

Steps in Publication

There are three main options for adapting, remixing, and creating derivative resources. The first is to scrub the text of formatting, make textual changes, and create a new design and layout. The second is to edit within an existing format or platform, understanding that certain platforms are more amenable to small changes while others can accommodate deeper, more significant changes. It's easy, for example, to edit a few words, a paragraph, page numbers, or individual images within a screen-readable PDF, as long as you plan to keep the same page breaks. Making significant changes across a PDF document, however, is very difficult.

The third option is to use a platform or template that allows editing but lightens the burden of layout and design. Several are designed to support editing at the source level and couple manuscript development with layout. These include HTML with stylesheets, LaTeX templates, the Pressbooks platform, OpenStax' Connexions remix system, software or courseshells in learning management systems or virtual learning environments, and platforms that implement templates or custom tagging such as Overleaf and Markdown, respectively, or file types such as Epub or Mobi. Each has its own learning curve and may require a certain degree of manual clean-up.

Unless the source document is available or the file type, source language, or platform has been created to allow

easy editing, making deep or substantive changes may be difficult. The guide Modifying an Open Textbook: What you Need to Know (Cuillier, 2016) outlines ways to analyze the potential scope of your project before starting it.

Some institutions offer publication production assistance for everything from LaTeX layouts and platforms with pre-set templates up to assistance from a library publishing initiative or University Press. Instructors and faculty often learn of the possibilities for adapting and remixing openly licensed content through the efforts and expertise of librarians, instructional designers, and colleagues who have developed and shared training resources.

Practices and Examples

Because OERs are, by definition, free of access barriers and thus do not require registration, it is difficult to know how frequently sources are remixed. At the level of creation, some platforms designed for collaborative authoring or linking of derivative works provide ways to follow the adaptation of openly licensed content. One example is Github, in which a project or a portion of a project is "forked" from an existing resource, allowing adapted works to be easily trackable. Works derived from OpenStax texts using their Connexions system are also easily counted and accessed, as they often include the original name of a work in the new title. While many instructors are still not accustomed to sharing beyond their individual courses, an emphasis on collaboration is emerging among groups such as the Rebus Community, and some open textbooks have feedback and registration loops so that adopters and adapters may receive updates and/or communicate with the original author(s).

Successful remix projects at several institutions demonstrate the value of this approach. Some individuals and groups, for instance, have "localized" and broadly shared open textbooks in an effort to make them more relevant to different audiences:

- At least nine Canadian editions were adapted from existing open textbooks by faculty supported by BCCampus. The texts, hosted in a Pressbooks platform and available in multiple formats, now include Canadian content, images, and references and, in some cases, additional chapters. These may be found by searching for "Canadian edition" on BCCampus's site.

- Faculty, students, and staff at the University of Hawaii at Mānoa remixed multiple openly-licensed texts to create Human Nutrition (Summer 2018). The book, hosted on a Pressbooks platform, has an Hawaiian, Asian, and Pacific issues (HAP) focus, which makes it more relatable to students and is required by the university's curriculum.

Others resources have been adapted to fit a local course, with curricular rather than geographical or cultural localization:

- At Virginia Tech I worked with multiple business faculty to adapt an existing, openly-licensed text to fit the course sequence and requirements for an introductory business course. The source material, originally released in 2011 as a PDF, was deeply edited, fully updated, and released in PDF and MSWord formats via the university's institutional repository in August, 2016, as Fundamentals of Business (Skripak, 2016). We have also developed a Pressbooks version of the book's second edition, which includes interactive features and enables easier adaptation.

- Two OpenStax textbooks were adapted by faculty authors at different institutions and published thru

OpenStax's CNX publishing process. Chemistry: Atoms First (University of Connecticut) and Introductory Business Statistics (University of Oklahoma) were undertaken by faculty author/adapters at various institutions and published through OpenStax's publishing process. Hundreds of OpenStax open textbooks have been adapted and reshared through OpenStax' CNX platform as complete books or smaller modules.

Some users have adapted texts by putting them in a format which is easier to edit, and by replacing in-copyright images with openly-licensed images:

- The University of Minnesota's eLearning Support Initiative and Publishing Services have adapted over 25 open textbooks from HTML into a Pressbooks format, updating images and other features in the process.

Creating, Remixing, Adapting, and Curating with Students

Some instructors use course material to set the sequence for a course. Others assign textbooks as the body of knowledge students must master, as an authoritative reference, or as a source of end-of-chapter questions used for homework. Still others engage with a much different paradigm by applying Bloom's taxonomy to learning materials, realizing that students engage more deeply by evaluating, critiquing, and creating rather than reading to understand or recall from memory. This last group of instructors are leveraging OER adaptation, remix, and creation as learning activities. The practice of creating assignments that enable students to engage with the public knowledge commons, produce something useful for the world, and in many cases release content under an open license has come to be called Open Pedagogy (DeRosa and Jhangiani, 2017)

A few examples: In 2013, graduate students at Brigham Young University created Project Management for Instructional Design (Wiley, n,d,), an openly-licensed and remixed textbook developed in a semester-long, graduate-level course on project management for instructional designers, and refined by subsequent students (Randall, et. al, 2013). Students at Plymouth State University have curated public domain content to create the Open Anthology of Earlier American Literature (DeRosa, n.d.), a course reader hosted in the Pressbooks authoring tool.

Student learning projects can extend beyond adaptation and remix to the creation of new resources. For example:

- Since 2006, education faculty at Old Dominion University (Norfolk, VA) have engaged students in creating learning materials for their classmates and their peers in other institutions. (Kidd, n.d.) The project initially started in Wikibooks, moved to wittie editor, and now resides in Google sites. Authoring by students has enhanced student information literacy and technical fluency skills (O'Shea, et. al, 2011).

- In 2014, students at the Hong Kong Institute of Education cooperatively created an academic wikibook "Introduction to Linguistics" as part of their course. (Wang, 2014)

A Case Study

In 2015, I met Stephen Skripak, Professor of Practice in the Pamplin College of Business at Virginia Tech. Steve had noticed that students in his large introductory business course were not reading the assigned text, and was frustrated that the book was being issued as a new edition priced above $200. He began to explore other options, and was referred to me. After reviewing several openly licensed texts, he decided to update and customize one, and selected a Creative Commons NonCommercial Share-Alike 3.0 (CC BY NC SA 3.0) licensed text *Exploring Business* which seemed to match his learning objectives.

Because the book was four years old, we decided to update its data and pop-culture references and entirely replace the graphics. Steve and colleague Anastasia Cortes selected the portions of the book that best fit their learning objectives, organized content, wrote updates and new content, and commissioned others to write additional content. At least 40% of the existing book was discarded in this process, new sections were added, one new chapter was created, and cultural references were updated—Ugg boots, for example, were replaced by Timberlands, the Dixie Chicks were replaced by Beyoncé and Pitbull, and socialism was moved from mainstream to left of center on the spectrum of economic systems.
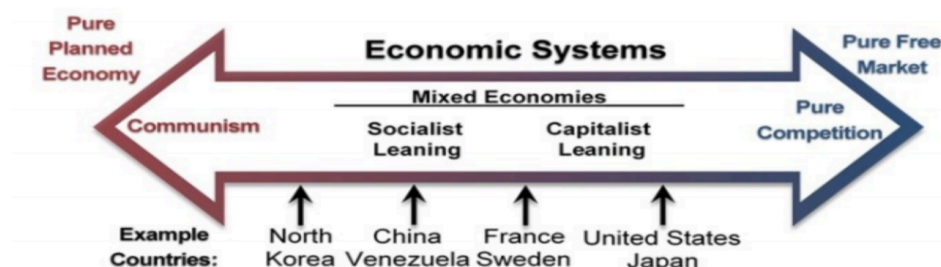
Figure 1.4: Exploring Business is licensed with a Creative Commons Share Alike 3.0 license. The text was adapted by the Saylor Foundation under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License without attribution, as requested by the work's original creator or licensee.

I reviewed the text's tables, charts, and images to identify copyright issues, researched updated sources of data, and arranged graphic design and other project support. Using reverse image search tools, I identified and flagged multiple images which were not openly licensed, were of dubious copyright, or which appeared to be used without permission of the copyright holder. While some may have been used under fair use, it was difficult to discern, so they were removed from the text.

We decided to use only openly licensed, public domain images, along with graphics we created ourselves. Out of concern for downstream users, we opted not to pursue use of in-copyright images under fair use. We evaluated some of our copyright decisions on the basis of whether they would cause confusion or additional work for downstream users, a barrier to further remix I did not want to introduce. (I've learned that my approach was relatively conservative, as such use would likely be seen as transformative, which would fit within fair use. Further, some topics are impossible to teach or write about without asserting fair use.)

We encountered many challenges. Locating U.S. Government data for early chapters of the book, for instance, was more

time consuming than I imagined. Incorporating graphic design support brought new vitality to the book's appearance, though we struggled to balance the competing demands of aesthetics, accessibility, electronic presentation, and print-on-demand formatting. A constant stream of questions, shifting timelines, and staffing changes influenced our processes at every stage, and compelled us to repeatedly remind ourselves of our initial goals.

We also ran into issues with the original book's attribution.The first page indicated that the work was shared "without attribution as requested by the work's original creator or licensee," a reference to a formerly open publisher which had abandoned a business model reliant on open licenses and moved "from free to fair" in search for profits. To protect their market share, they apparently no longer wanted their name or the original author's name on any versions of their texts. To address the attribution issue, I asked a colleague in the open education community for advice, and was assured that Creative Commons licenses are never retractable. At my request this colleague reached out to the author to ask how she would like to be attributed. There is more to this story, but there is a lesson here for authors and creators to read, understand, and carefully examine third-party agreements to ensure that their work can be read and reused, and that they will always receive credit and the right to use their own work as they wish.

In retrospect, before beginning our project, we would have been wise to obtain technical and workflow advice from publishing experts and others who had remixed works; what we thought would be a relatively simple process quickly became complex.

These are some of the additional challenges we encountered::

- A PDF file is difficult to edit, and extracting a PDF into MSWord makes the file very clunky. We were not aware that a version of the text was also available in HTML, which may have made our process easier.

- We attempted to export files from InDesign into MSWord for student reviewers, but these files were difficult to work with and could not easily be put back into InDesign after changes.

- The layout was more work than we imagined. Changes had to be noted by the author, conveyed to the project manager, and interpreted by the graphic designer. This plan for iterative layout and review lasted for only the first two chapters.

- We lacked the necessary publishing software.

- We had only a little money, and none to pay a faculty member who stepped in at the last minute to help with the layout.

- Our systems for tracking the copyright status of illustrations and figures failed when content moved from one chapter to another.

- We struggled with version control of multiple documents between multiple people.

- Onboarding additional collaborators part way through the process was time intensive and required review and clarification of our overall project goals, of Creative Commons licenses, and of work processes like finding, vetting, and attributing images and illustrations; it also required more discussions about funding.

- The research work load was intensive for just one librarian.

- The end-of-chapter citations were checked for broken links but were impossible to keep up to date.

- Our "editable" versions are in Microsoft Word, which, while ubiquitous, is far from ideal for layout and design, and these versions will become obsolete as the software ages.

It is an understatement but hardly a surprise to say that we struggled with workflow, tools, workload, and essentially inventing a publishing processes. For a new type of project the problems we encountered are not entirely surprising—but they certainly challenged our expectations.

By early August we finalized the book and stopped accepting changes. I worked with Bowker/MyIdentifiers to obtain ISBNs and with our graphic designer and Steve to design a book cover. Then I worked with Lulu Press to choose features of the physical book, and listed a print-on-demand version of the book via Lulu at cost (due to the NC license). In addition to creating a digital version of the book as both PDF and MSWord files, I divided both the PDF and Word document into chapters, each with an attribution cover page, and made these files available for download via our institutional repository, VTechWorks (Skripak, 2016).

Designing a book for electronic display is very different than designing a book for print. We designed a digital text and

then created a print version. Professional publishers, I've now learned, design for print and then create a digital version though many have moved to an XML-first approach.
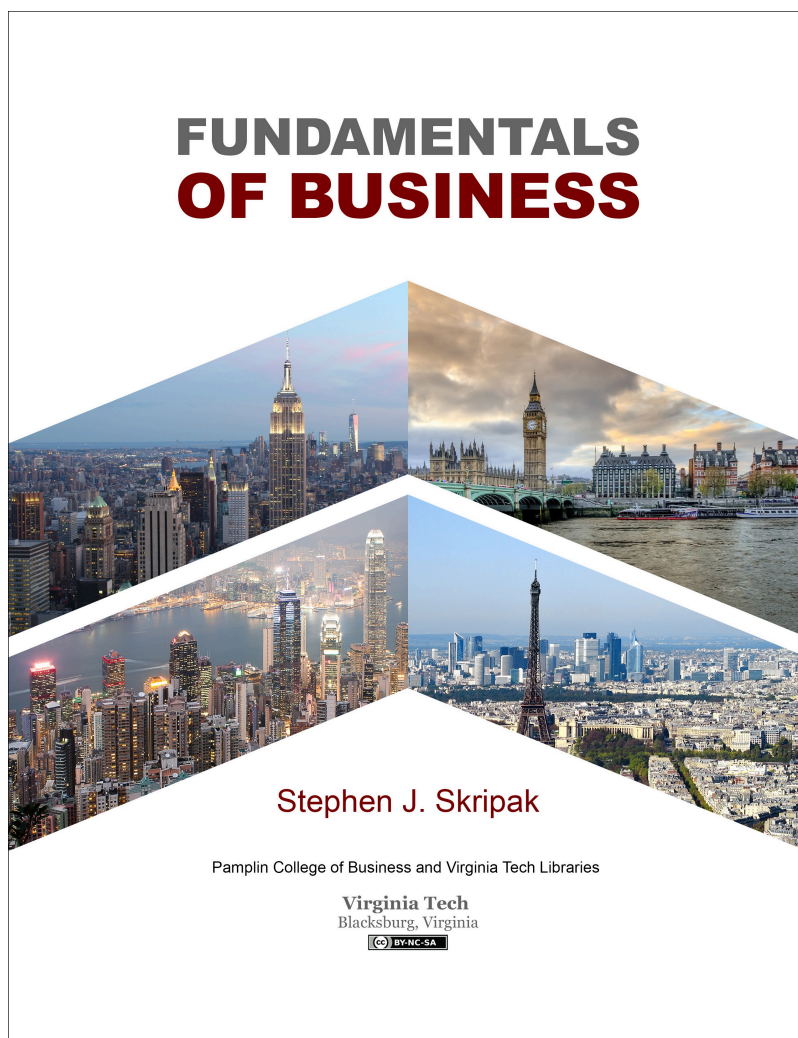

Figure 2. Cover by Trevor Finney. Image attributions: "Hong Kong Skyscrapers" by Estial, modified CC BY-SA 4.0; "Paris vue d'ensemble tour Eiffel" by Taxiarchos228, modified CC BY 3.0; "London Bridge" by Skitterphoto, modified, Public Domain; "New York" by Mscamilaalmeida, modified Public Domain

The final version of the 2016 book has 17 chapters and is properly attributed as required by the original Creative Commons license. The public, electronic version of the book is available from VTechWorks, and has been downloaded over 100,000 times by users from around the world. The print-on-demand version of the book is available at cost for students who want a printed version (we do not make any money off the book). When it was ready for public release, I wrote a blog post (Walz, 2016), announced the book via various listservs and Twitter, and submitted the book to be listed in the Open Textbook Library, MERLOT, and OER Commons. The text has been used in multiple course sections during the past five semesters, by an average of 750 students per year. The Virginia Tech faculty using the book are actively adapting the text for the course, once again demonstrating the potential for remixed open textbooks.

Since issuing our revised version, we've made several discoveries. In addition to MSWord being proprietary, it continues to be a cumbersome program to use for layouts and ongoing changes. While it does allow files to be easily converted to a PDF format, it does not allow for interactive features.

In the second edition of the book, in Pressbooks, we have made the content more interactive, including linking to videos and adding self-assessment questions in each chapter. This edition also corrects minor errors, includes several new case studies, and includes an updated chapter on tourism and hospitality.

Several colleagues have heard others say that remix or adaptation is a nightmare version of a DIY (do-it-yourself) rehabilitation project, that it's not worth it, and that you shouldn't bother trying. My experience is on the more extreme side because of my initial lack of technical expertise and lack of awareness of the best platforms and tools. More and more people, however, are now aware of and working on authoring and adapting openly licensed texts. Tools have matured, problems have been resolved, and communities of practice have formed. Multiple technical, pedagogical, rights-related, and format-oriented resources have been developed since the 2013 release of "Six Steps to Modifying an Open Textbook" (Lalonde) and the 2015 open textbook Accessibility Toolkit (Collidge, Donner & Robinson), including "Modifying An Open Textbook: What You Need to Know" (Cuillier et al, 2016), "Guide to Developing Open Textbooks" (Moore & Butcher, 2016), "Authoring Open Textbooks" (Falldin & Lauritsen), "Guide to Making Open Textbooks with Students" (Mays, 2017), and the Self-Publishing Guide (Aesoph, 2018). There are also emerging collaborative communities such as the Library Publishing Coalition, the Rebus Community, and the Open Textbook Network Publishing Cooperative. The effort involved in adapting and remixing can only decrease as more people work to address challenges, share successes, and continue to refine their skills and approaches so as to leverage the potential of open licenses.

Authoring, remixing, and adapting openly licensed content is the best way to ensure sustainable, ethical, and lasting access to course material and zero materials cost for students.

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Dedication/Acknowledgements: This chapter is dedicated to Stephen Skripak and Anastasia (Katy) Cortes, Faculty in the Pamplin College of Business at Virginia Tech, who completed this project because they care about students. This chapter is also dedicated to Peter Potter, who joined VT Libraries after completion of this project. Peter has been and continues to be an invaluable sounding board regarding the publishing process.

Postscript: For those interested in publishing or a deep adaptation of an open textbook, I strongly encourage you to find knowledgeable mentors who will assist you in critiquing your plans. Patience and a resilient attitude are called for in these many experiences which combine traditional practices and innovative methods, platforms, and software.

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Chapter 24 - Collaborative Assessment Authoring: Building Alliances Across Consortia to Create and Share High-Quality, Open Assessments With the World

Liv Gjestvang, Ashley Miller, and Alexis Duffy

by Ashley Miller, Alexis Duffy, and Liv Gjestvang (all Ohio State University)
(bios)

Introduction

In the summer of 2017, The Ohio State University (OSU), Unizin, and the Big Ten Academic Alliance (BTAA) held the first Content Camp, a collaborative authoring event to quickly create textbook-agnostic test banks at scale. The event, which was more than two years in the making, used a web-based tool to streamline the process of authoring, revision, and quiz creation. After successful completion of three test banks for macroeconomics, medical biology, and sociology, OSU began working with Penn State University to develop a new tool to make the process even easier, and has already piloted the new product in a second event in the spring of 2018. This chapter details the history, reasoning, planning, and results of that project.

History

In December, 2015, a group of learning technology leaders in the Big Ten Academic Alliance identified affordability and open educational resources (OERs) as core topics of interest, and in January, 2016, authored the following problem statement around Affordable Content:

> Designing programs to engage our campus communities in learning about and creating (or adopting) low or no cost content is a commitment we share across campuses. In addition to sharing this commitment, we benefit greatly as a consortium if we design clear, streamlined ways to share the successful models, programs and platforms we have created on our individual campuses, so they can be adopted and scaled across the Big Ten.

The following month, a group of more than 40 educational technology and other academic professionals met as part of the Teaching and Learning committee within Unizin, a consortium of 11 research-focused institutions committed to addressing some of the most critical issues facing higher education today, including learner success, access, and affordability. This team articulated a commitment to "Improve student learning by increasing access to affordable high-quality course content and analytics" through a strategy of "Encourag[ing] creation, adoption and adaptation of high quality course content (interactive digital texts, adaptive learning modules, videos, problem sets, assessments, etc.) to increase affordability, quality of content, student learning, and access to analytics and data."

While both the Big Ten and Unizin groups articulated similar goals and were driven by an equally strong commitment to free and open content, neither had existing structures in place to leverage faculty from across disciplines and institutions to collaboratively author and review high-quality content. At OSU, however, the Affordable Learning Exchange team had identified a model for open content development that could leverage both of these large consortia to drive the shared development and dissemination of open content.

The Challenge of Ancillary Materials

Setting the Scene

OSU's Affordable Learning Exchange (ALX) was created to help instructors take ownership of their courses and content. Our team believes that the cost of textbooks shouldn't be a limiting factor in student success, especially when there are high quality open and affordable alternatives to conventional, high-cost textbooks. Our mission is to help faculty navigate the waters of affordable resources and find creative solutions that promote student savings. This includes re-imagining the textbook, encouraging faculty innovation, and empowering faculty through grants and training opportunities to adopt, adapt, create, and share OERs.

When recruiting applicants for our grants-based support program, we hear recurring arguments from faculty against adopting OERs that won't be surprising to anyone reading this chapter—they don't have time to undertake such a large project, they're uncertain about the quality of available open textbooks, and they can't take time away from research or service obligations to focus on teaching. Among these familiar challenges,

Among these familiar challenges, however, we heard another concern that was new to us: the threat of lost ancillary materials like slides and test banks.

however, we heard another concern that was new to us: the threat of lost ancillary materials like slides and test banks. While we knew these materials were heavily used in many courses, we didn't realize the impact of this loss at an institution the size of OSU—with class sizes routinely reaching into the hundreds—until we talked to the faculty teaching these large classes, and realized that even highly motivated faculty who can overcome the "usual" barriers to OER adoption are often limited by dependence on these ancillaries.

What Students Said

A series of focus groups held in the fall of 2016 at four of OSU's regional campuses gave us additional insight into the pervasive nature of these instructor supports, particularly test banks. We held these focus groups after faculty raised concerns about student access to and experience with digital materials. We talked to 35 students, asking the following:

- How much did you spend on textbooks this semester?

- What are some strategies you've used to save money on textbooks?

- How would you describe your comfort level using technology?

- How would you describe your experience using digital books and other online course materials at home or in the classroom?

- What kinds of barriers do you encounter accessing digital books or course materials?

- Is there anything else important on this topic that we haven't talked about?

Key Findings

We found that students in these groups were typically spending between $300–$600 per semester on textbooks and access codes. All of them had access to technology, at home or on campus, and were routinely required to use digital course materials. Most reported that they were comfortable with technology. Several described having to buy both a book and an access code, although they often had no assigned readings from the textbook, but were instead pointed to the homework system and digital materials bundled with the purchase.

These conversations satisfied our initial mission, but opened up new concerns about this apparent reliance on ancillary materials. While we don't have the resources, time, or knowledge to tackle a complete solution to overcoming the barrier of all online course supports, we did feel that we could tackle one big part of the problem: large test banks.

It is worth noting that, while we heard a great deal of feedback regarding homework and online assessments, none of our questions explicitly sought this information. We had thought of assessment as an instructor issue—each instructor having the responsibility to design, administer, and grade assessments in his or her own courses. But thanks to these student focus groups, we recognized the extent to which instructor and student experiences are intertwined, and how instructor challenges can seep into the classroom experiences for our students.

Instructor's Experience as Opportunity

Dr. Darcy Hartman was a grant winner in the Affordable Learning Exchange's initial cohort in 2015–2016. At the helm of a 1,200-student macroeconomics course, she was working to replace the $220 conventionally-published textbook. She conducted a review of the OER landscape in macroeconomics and settled on an openly-licensed textbook. But as she prepared her new materials for class, she found that she would not be able to adequately assess her students' knowledge throughout the semester without the test banks that come packaged with textbooks. She thus made a last-minute switch to a publisher that packaged her new open textbook with the ancillary materials she needed and charged students between $25 and $60 for access (based on the file type and access level selected).

Dr. Hartman was still interested, however, in cutting her students' cost to $0. Her need for an open and free test bank provided the impetus we needed to tackle this new problem.

The Big Idea: Content Camp

It became clear to us that, to encourage more widespread adoption of OERs, we needed to address the problem

of ancillaries, and test banks were a good place to start. We decided to use collaborative authoring to create multiple test banks large enough to be used for more than one semester, in more than one class. As we began considering an approach, we identified the importance of shifting focus away from authoring assessments for specific textbooks and towards aligning assessment questions with overarching learning objectives that represent content shared among similar courses. This approach allowed us to create comprehensive test banks organized by topic and learning objective, with wide appeal across all types of users and institutions.

> **It became clear to us that, to encourage more widespread adoption of OERs, we needed to address the problem of ancillaries, and test banks were a good place to start.**

To kickstart the creation of these banks, we decided to host the first Content Camp, an in-person, professional development opportunity for faculty from across the US, combining instructional design guidance with content creation in a group setting.

Textbook-Independence for Wide Adoption

We quickly realized that organizing the test banks by learning objective would allow faculty to easily navigate and adopt questions from banks regardless of their textbook or learning materials. In fact, the first task we assigned to the faculty leaders recruited for our Content Camp project was to prepare a list of fairly granular objectives, organized by topic, that could be used as guidance for assessment items. (As we'll discuss later in the chapter, asking faculty to start at the objective level for this project eventually changed our approach to every project the ALX has managed since.) We also wanted to build peer review into the collaboration process, adding a level of credibility to the final product that is missing in paid products currently on the market.

Building Community

Through our work within the Big Ten Academic Alliance and Unizin, we had been participating in conversations since 2015 about how to leverage faculty from across institutions to collaboratively author open content. The first Content Camp pilot was designed to leverage national faculty networks to create a product that could be used in any course across the country. We wanted to include faculty contributors from a wide range of universities to identify and address a range of approaches to course organization and a broad spectrum of teaching styles, ensuring that our product was agile enough to work with as many instructor nuances as possible.

Figure 1: The macroeconomics team working together at the Content Camp pilot in June 2017. Clockwise from the bottom left: Jeffrey Barr, Kaitlin Farnan, Alexandra Nica, Darcy Hartman, Marzi Bolhassani

Our vision of the product beyond this initial pilot also relied heavily on the development of an engaged community. Our ultimate goal is to build an open online resource in which instructors can regularly access and author new questions, which will be reviewed by other users who are experts in their disciplines. To keep the bank growing, we'll need a large number of highly-engaged users across the disciplines who are revising and improving both individual questions and, ultimately, the bank itself.

A Focus on Quality and User Experience

Having determined that the success of such a product depended on the quality of the assessment items and the user experience, our team decided that faculty development should play a major role in our in-person pilot event. We recruited a member of OSU's Center for the Advancement of Teaching to attend and lead sessions on the authoring of both objectives and questions. We believe that educating question authors about what makes a fair and well-composed question will help build a bank of material that will be reliable, will test knowledge appropriately, and will require little editing on the part of the end-user.

Another layer of credibility is added to the test questions by the end-users themselves. It is our vision that, as they browse and search for questions that are organized by topic and objective, they will be able to rate, suggest modifications to, and comment on questions. They will be able to see which questions are the most used and most highly rated, and view suggestions on usage from instructors who have used the questions themselves. This community will lean on each other not just by building the bank, but by continuously adding to, refining, and improving the library.

Because the quality of our content depends so heavily on the user community, it is vitally important to construct a

reliable user scheme. Before they are granted permission to author or modify questions, users will be required to demonstrate that they are active in a particular discipline. While we have not yet worked out the specifics of this process, we imagine it could include the submission of a CV or a link to a department website that clearly lists the user and his or her role at the institution. This way, questions are sure to come from subject matter experts themselves. Any user, however, will be allowed to create and download quizzes in any discipline.

These quizzes will eventually be available in a variety of downloadable formats. The first version of the tool will allow instructors to download a quiz in QTI format, which will easily upload into learning management systems (LMSs) like Blackboard and Canvas. Eventually, we'll expand to other file formats and add a function that will allow users to export a quiz or bank into a Word document.

The Affordable Learning Exchange is committed to making the final product and its contents as open as possible. For the first stages, we intend to limit access to instructors only; any instructor can join, and will then be able to author or revise questions and create and download quizzes.

We have discussed the open licensing of the product and its contents at length, as its specifics present a host of unique challenges. While we want the bank to remain as open as possible, we also want to ensure that faculty members receive credit for their contributions, and that their material is protected from third-party commercialization. Any attribution license from Creative Commons requires that the end-user be able to see the original author. After speaking with the Creative Commons legal team at length, we have determined that in this case the ultimate end-user is a student taking a quiz. Frankly, attributing each question is a cumbersome notion, and one that does not serve our audience. Instead, OSU and Penn State are working together to develop clear licensing language that allows free usage among instructors, and ensures that a third-party cannot absorb the original content and profit from the work of our faculty. While this licensing approach does not fit neatly into any of the available standard Creative Commons license options, it will ensure the content is openly available for free use and remix by anyone for non-commercial purposes. Site users will be credited for their activity on the site as well (including authoring of original questions, commenting, editing, and remixing).

Many instructors and educational technologists have expressed concerns regarding student access to the bank. For the first stage, our plan to restrict access to instructors only will avoid this issue. If we later decide to remove that barrier and make the bank truly open, we feel that, with the vast number of questions we are aiming to include, it would be nearly impossible for students to cheat. If they did go in and memorize thousands of questions, then they are in fact learning the material—which is, of course, our ultimate goal in helping instructors build quizzes.

Content Camp Logistics

Program Model

Content Camp was designed as a three-month process, starting with an initial six-week phase during which authors developed and reviewed a significant list of course objectives in their respective disciplines. Faculty teams met virtually to discuss expectations, review the process, and outline logistics for an in-person event at the Big Ten Center in Chicago. The in-person event allowed faculty teams to connect face-to-face to finalize their shared course objectives, learn about psychometrics and best practices in assessment authoring, and begin authoring and

reviewing assessment questions using the tool. The final phase of the authoring process spanned the summer, with each faculty author writing and then reviewing questions for the bank.

Recruitment

To recruit participants for the Content Camp Pilot in June, 2017, we first gathered faculty with an interest in collaboration and a willingness to try something new. They also had to have time. We reasoned that a test bank should have approximately 1,000 questions in order to be large enough to be flexible. Recruiting faculty teams of five, we asked that each participant be responsible for authoring and reviewing 200 questions.

Aside from macroeconomics, the course which was the impetus for the project, we weren't yet sure which disciplines to focus on. Thinking that we could build test question banks for two other disciplines at the same time, we put together a brief project description with a rough timeline, and reached out to learning technology peers at other Big Ten Academic Alliance and Unizin institutions to ask for their help recruiting interested faculty. We expected that people in educational technology leadership roles would be likely to know which faculty would be interested in the exploration and the trial and error that comes with a pilot experience.

Teams were designed to have one Team Lead, and four Content Contributors. The Team Leads began their work first, each proposing a list of learning objectives that would represent all of the material covered in an introductory course in his or her discipline.

This relatively flat hierarchy, with a leader who has a dual role as contributor, helped distribute the project management workload. Meetings were scheduled twice monthly between the Team Lead and an OSU Affordable Learning project manager, and monthly meetings were held with the entire team. Though these quick check-in meetings lasted only 15 minutes or so, they served as an important part of the process, keeping lines of communication open and the team on task throughout the project. We also encouraged more frequent communication between team members, but allowed each Team Lead to negotiate the terms of that communication based on team dynamics.

Lessons We Learned

Faculty Incentives

Team Leads were offered a $3,000 stipend, while Contributors were offered $1,200. These stipends were paid for by the contributor's home institution, while in-person meeting expenses and lodging were paid for by OSU.

Team Leads had a small amount of additional work, which included proposing disciplinary objectives and serving in a leadership role throughout the process. This often meant checking in with our administrative team, and with their own.

Aside from the monetary compensation, the team members we worked with had a general enthusiasm for innovation in teaching and learning. They also gave positive feedback after working through the session on

question and objective writing, sharing that they had not been trained in these areas before, and were grateful to engage in these conversations with peers.

Project Management Approach

We believe that a large portion of the value we bring to faculty who are undertaking any kind of OER authoring/ remix project is in our established, agile project management support. For Content Camp, we added an important component to this process, which we've since extended formally to the rest of our projects: faculty leadership.

We recognize our inability to anticipate all faculty needs in the process, so asking faculty to tell us what supports they need is important. We've also observed that teams often prefer to take direction from their peers, rather than from us, and we feel that this builds both camaraderie and (we hope) lasting connections.

Teams decide how often they meet, and who (based on expertise) focuses on particular objectives. They also determine the pace of the work; we check in to hear about their decisions, remind them of their timeline, and gauge progress based on those decisions. We are not content experts, nor are we close enough to their comprehensive workloads to weigh in on these decisions, but we are well situated (and appreciated) as neutral observers and resources for questions—we connect them with the information or expertise they may need and help them organize their work.

Piloting the Process: Timelines and Templates

Figure 2 shows our initial timeline. In reality, recruitment didn't fully wrap up until early May. Recruitment for contributors did not slow the objective writing process, and we began meeting with Team Leads as soon as they were recruited.
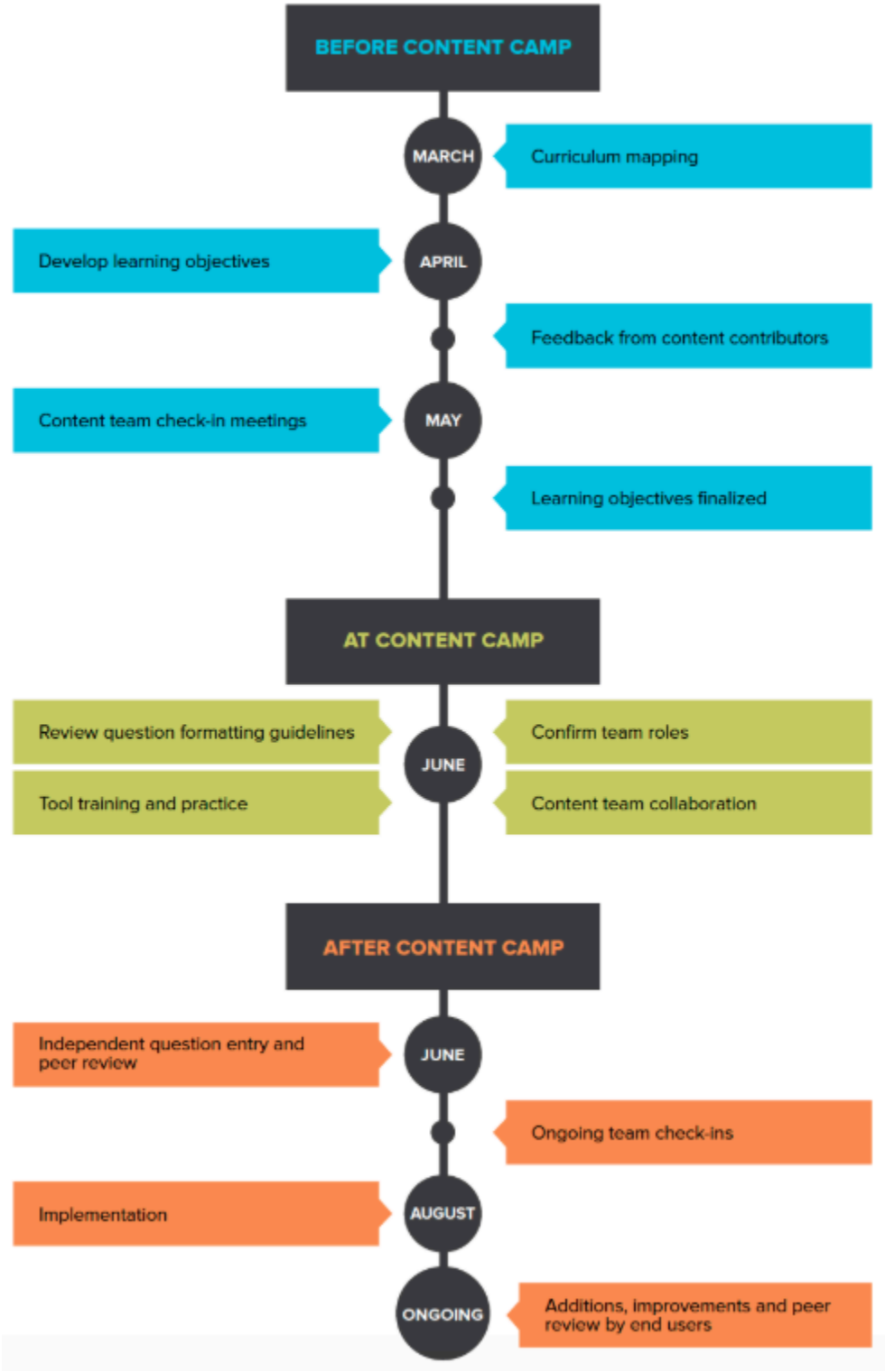
Figure 2: Content Camp timeline

Each participant completed a memorandum of understanding, which briefly outlined their responsibilities, the final deadline, and their stipend. The document was administered through a Google Form for easy tracking.

As we moved closer to the event, we developed an agenda. We divided the hours we had together into chunks of time dedicated to specific tasks, including professional development on the authoring of objectives and questions, training on use of the tool, and plenty of work time for the groups. This agenda is outlined in Figure 3 below.

Time	Activity
8:00-8:45 am	**Breakfast**
8:45-10:00 am	**Introduction to Proola** *Tony Albano* *University of Nebraska* **Question Authoring Practice in Proola** *Team breakouts*
10:00-10:30 am	**Question Review Guidelines Overview** *Laurie Maynell* *The Ohio State University*
10:30-10:45 am	**Break**
10:45 am-12:00 pm	**Introduction to Peer Reviewing in Proola** *Tony Albano* *University of Nebraska* **Question Review Practice in Proola** *Team breakouts*
12:00-12:45 pm	**Lunch**
12:45-1:45 pm	**Licensing Our Content** *Ashley Miller* *The Ohio State University*
1:45-2:00 pm	**Break**
2:00-2:30 pm	**After Content Camp** *Ashley Miller* *The Ohio State University*
2:30-3:00 pm	**Plusses, Deltas and Thank You** *Liv Gjestvang* *The Ohio State University*

Time	Activity
3:00-3:45 pm	**Welcome and Introductions** *Liv Gjestvang, Associate Vice President, Learning Technology* *The Ohio State University*
3:45-4:15 pm	**Path to Content Camp** *Alexis Duffy, Educational Technologist, Affordable Learning Exchange* *The Ohio State University*
4:15-4:30 pm	**Break**
4:30-5:30 pm	**Meet with Teams on Objectives** *Team breakouts to finalize learning objectives and initial authoring assignments*
5:30-6:30 pm	**Dinner**
6:30-8:00 pm	**Question-Writing Guidelines*** *Tony Albano, Assistant Professor* *University of Nebraska* *Laurie Maynell, Assistant Director and Coordinator for International Initiatives* *The Ohio State University*

*Part one – General guidelines and practice questions. Will assign short homework task: come prepared with subject area questions to begin practicing in Proola on day 2.

Figure 3: Content Camp agenda (click image for larger version)

Discipline- and Team-Specific Outcomes and Challenges

Despite having received the same training and instructions, the disciplinary teams produced vastly different products. The macroeconomics team, led by Dr. Hartman, started with approximately 130 objectives, and easily divided up the authoring amongst the team members according to their expertise. The medical biology team ended up with approximately 500 objectives; while this made question authoring very clear, it was difficult to cover all of the material and to develop more than a question or two per objective. The sociology team, in contrast, compiled a list of just 20 objectives; as they sat down as a team to write, they realized that their objectives weren't specific enough, making it difficult for them to author questions.

Some disciplines, including economics, may be more naturally suited to translation into objectives, while others, like sociology, may be more nebulous. But since a standard aspect of teaching is identifying course goals and objectives for students, this process should be echoed in the creation of fully representative objective lists.

Because of this experience, we recommend that teams aim for around 150 objectives per course. Again, these are meant to represent the material covered in an introductory course, and resemble a textbook's table of contents, but this does not mean that every instructor covers every topic or objective. Our goal is simply to provide content that instructors can use to support their unique course goals. The selection process remains in instructor hands.

Piloting a Tool

Requirements

As we developed our plans for the pilot, we started looking for a tool that could facilitate the collaborative authoring process. We began by examining the current process that instructors like Dr. Hartman go through to use test banks from publishers. Typically, instructors are delivered a Word document that contains hundreds of questions, often organized by chapter and sorted by question type. To use these questions in their LMS, instructors must copy and paste the desired questions into the corresponding fields, or format and use third-party software to generate a file that can be ingested by an LMS. There is no way to easily search, sort, and save questions.

We began looking for a product that made this easier. Our ideal tool would allow users to author their own questions, review the questions written by other authors, and ultimately search for questions, create quizzes, and export those quizzes. A tool like this has three advantages:

1. Adding a peer-review function into the authoring process ensures that test questions will be of higher quality than those packaged with publisher materials.

2. Searching for questions and building tests happens outside of an LMS and employs technology that allows users the ability to search by keyword or browse by objective.

3. Uploading a created quiz into an LMS like Canvas is a much easier process than sifting through an entire test bank that has been already been imported into an LMS.

User Feedback

Throughout the event, we collected feedback on the tool via a Google doc that participants could update live. We also held several meetings with content teams after the event wrapped and while they continued their work over the remainder of the summer.

Overall, the foundation of the tool was well-received, and participants reported positive feedback regarding a keyword search function and the review capabilities. On the other hand, users found the tool difficult to navigate for review or test building. Eventually, it became clear that this particular tool was not a good match for the higher education audience with which we had tested it.

We found many of these requirements in an open-source tool created by an expert in psychometrics, who agreed that we could use his tool to facilitate our work in the pilot.

Figure 4: Content Camp pilot participants from the top left. Tony Albano, Andrew Martin, Scott Lewis, Kevin McDade, Heath Tuttle, Jeffrey Barr, Melisa Beers, Alexandra Nica, Barbara Zsembik, Timothy Paustian, Marzi Bolhassani, Lindsey Chamberlain, Laurie Maynell, Alison Bianchi, Diane Kuharsky, Alexis Duffy, Darcy Hartman, Kaitlin Farnan, Ashley Miller

Lessons Learned and Evolution

Results

The first Content Camp pilot was completed in August, 2017, and resulted in:

- Three test banks, each with approximately 1,000 questions, for a total collection of 3,000 questions in the tool.

- A basic process that married professional development on student assessment with technology training.

- A clear idea of what a successful technology solution might look like, in order to effectively facilitate collaborative authoring, review, and test creation.

The planning and execution of the event left us with these major takeaways:

- An engaged group of instructors who have not previously worked together can, with moderate support, generate shared course objectives and hundreds of assessment questions in a short amount of time.

- Faculty participants are very appreciative of the opportunity to learn about and practice assessment authoring skills (most articulated that they had not formally learned these strategies in the past).

- A strong project-management team is critical to ensuring that faculty teams can land on shared objectives and deliver a 1,000 question bank within a few months.

- A well-designed, easy-to-use tool is a critical element in the authoring and review process when creating questions at large scale and with a rapid pace.

Ongoing Development and Goals

Thanks to the pilot, we better understood the critical role of a tool that effectively facilitates the writing, review, and quiz-making processes. Our use of the tool in our pilot helped us identify the most important technical capabilities, and we immediately put this knowledge to work as we started building a new tool in partnership with Penn State University. OSU continues to drive the process, including professional development and the strategy for and requirements of the tool, while Penn State leads the software development with its technical expertise. Our teams stay in touch with weekly one-on-one meetings to fine-tune and test, and the larger teams gather together monthly to check in on progress. OSU remains dedicated to hearing and incorporating the voices of the faculty.

The team has also moved forward in a partnership with the Big Ten Academic Alliance. Learning technology leaders across the campuses have affirmed their commitment to more affordable experiences for students, and have fully supported any collaboration that makes this happen. The BTAA is supporting interested institutions with funding and administrative fiscal support.

In May, 2018, we hosted an additional Content Camp event, with instructors traveling to build test banks for Introduction to Psychology and American Government courses. These instructors are not only acting as authors and reviewers, but are taking on a new role as beta testers of the tool in development. Test banks from this latest Content Camp will be ready in August, in time for the fall semester of 2018.

Closing

Our work with colleagues in the Big Ten Academic Alliance and Unizin spurred us to examine the question of how institutions can work together to expand the reach of OERs and affordable content, which led us to identify a concrete problem, iterated by both faculty and students, that served as a barrier to further adoption. With our background in faculty support, we recognized this as an opportunity to break new ground in collaborative development. The implementation of a pilot to develop an engaged faculty community, to provide faculty development, and to create and review assessment questions based on well-iterated learning objectives for specific disciplines provided us with new resources to support further development in this area. We were also able to recognize the importance of a two-pronged approach involving professional development and the facilitation of a web-based tool.

> **As the use of OERs continues to expand, it is important for those in university technology and pedagogical support roles to build out ancillary materials on which faculty can rely.**

As the use of OERs continues to expand, it is important for those in university technology and pedagogical support roles to build out ancillary materials on which faculty can rely. We will continue working to refine the Content Camp process, and developing a tool to support the vast number of questions and users that we envision. Assessment is an important part of learning, and we believe that this project will not only reduce cost, but will improve that experience for both faculty and students.

Author Bios:

Ashley Miller is Program Manager for Affordability and Access in Ohio State's Office of Distance Education and eLearning. She manages the Affordable Learning Exchange, which works with partners across the university to support faculty who wish to move away from conventional course materials in favor of low-cost and Open Educational Resources. She is passionate about transforming classroom learning experiences and helping to make higher education more affordable for students at Ohio State and beyond.

Alexis Duffy is the Projects Coordinator with Ohio State's Affordable Learning Exchange. She holds degrees from Michigan State University, Emerson College and The Ohio State University. With a background in educational publishing, Alexis works closely with grant winners as they plan and implement affordable solutions, including writing, remixing and adopting open textbooks.

Liv Gjestvang joined OSU's Learning Technology team in 2006 and has served as Associate Vice President since 2014. Her team leads enterprise learning systems, classroom technology, and faculty innovation support. She is committed to student access and success, with teams that lead OSU's Affordable Learning Exchange, Digital Bookshelf, and the development of low and no-cost texts. She serves on the Unizin board, is chair of the Big Ten Learning Technology Leaders group, and co-authored College Ready Ohio, a $13.5 million grant from the Ohio Department of Education, supporting college readiness for high school students.

Chapter 25 - Affordable Learning Engagement and Publishing Strategies: Empowering Opportunities for Open-Access Publishing

Kyle Morgan

by Kyle Morgan, Humboldt State University (bio)

Introduction

As shown by a current $1.4 trillion in student loan debt (Experian, 2017), the affordability of a college education is one of the most crucial needs for students and the future of higher education. An increasing amount of that debt comes from textbook costs, which rose 812% from 1977 to 2012 (Perry, 2012). Studies by the U.S. Public Interest Research Group (PIRG) Education Fund and the Student PIRGs (Senack, 2014), the Higher Education Coordinating Commission (HECC) Textbook Affordability Workgroup of Oregon (2015), Florida Virtual Campus (2016), and VitalSource Technologies (2017) have reported the deleterious effects on student success when students are not able to buy required textbooks.

Humboldt State University (HSU) Library has worked to address this issue by encouraging the replacement of commercially produced textbooks with open educational resources (OERs). The UNESCO website (2017) defines OERs as follows:

Open Educational Resources (OERs) are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation.

As part of this campaign, HSU Press has encouraged faculty and lecturers to develop their own OER textbooks to address gaps in current OER offerings. This chapter describes the efforts of Humboldt State University Press to develop OER textbooks, including:

A grant project to directly incentivize authors to publish open-access textbooks.

- Collaboration in a grant project to incentivize faculty and lecturers to attend OER adoption seminars.
- Collaboration in a grant project to incentivize departments to redesign their courses and adopt OERs.
- Collaborations with faculty to publish student-authored open-access works.

This chapter addresses the benefits and drawbacks of each effort as they pertain to our university, including the use of incentives and publishing as a transformational pedagogical tool. It also discusses the challenge of maintaining OER production, and the value of adopting a broader open access publishing model. In the context of HSU Press,

open access refers to content—including educational material, scholarship, research, and creative works—that has been made available for free download and re-use under a Creative Commons license.

Publishing through open access supports the mission of libraries to facilitate the equitable dissemination of knowledge to all people. Open access publishing services also support the HSU campus community by creating and empowering campus authors, providing experiential learning opportunities, developing community outreach, and facilitating the university's social justice mission. These successes not only justify the services of an open-access press, but allow for continued OER conversations and development on campus.

Getting Started

HSU is a small public rural college in the California State University (CSU) system. It is located on California's isolated northern coast, and enrolls more than 8,000 students.

In 2014, HSU hired a new Library Dean with experience in library publishing. In 2015, he launched HSU Press as a service of the library to publish high-quality, open-access scholarly, intellectual, and creative works by or in support of the HSU campus community. In alignment with the university's mission statement, the press set forth a vision to be a sustainable, academic-friendly publisher that will positively affect the human condition, the environment, and our community.

In 2015–2016, the Library Dean successfully applied for two grant initiatives to support the library's efforts to encourage the adoption and development of OERs on campus. In July, 2016, the library hired a Scholarly Communications Librarian, a new position with responsibility over HSU Press and OER-related projects. Two months later, a negotiation with the Graduate Studies office transferred funding to the library for two student assistants to manage thesis and project sign-offs and conduct accessibility and format reviews. When not working on theses and projects, the students could assist with copyediting, typesetting, design, and marketing for HSU Press, as well as with general scholarly communications-related work.

HSU Press has published five titles through BePress' Digital Commons platform, with three manuscripts in current development, six additional manuscripts scheduled for 2018–2019, and ten proposals under active discussion. It has also facilitated the hosting of seven journals and assisted with the digitization and posting of out-of-print publications and yearbooks. HSU Press works with Omeka, Digital Commons, and Humboldt Digital Scholar to facilitate digital humanities projects and to preserve and provide access to videos, research posters, research data, audio, photographs and other digital objects.

Open Textbook Incentives

HSU Library received grant funding from the CSU Affordable Learning Solutions (AL$) program to incentivize the creation of open-access textbooks. As part of the grant, the newly created HSU Press offered authors $1,500 compensation for accepted proposals and provided peer review, copy editing, design, typesetting, local marketing, and assistance creating a print-on-demand account. This grant was envisioned as a way to launch a new press of

open-access textbooks and to establish another approach to lowering textbook costs at the university and across higher education.

HSU Press promoted the offering across the campus' weekly notice boards, sent flyers and information to campus deans and department chairs, and distributed information to deans on other CSU campuses. A preference for textbooks that could be published by the next year led us to favor manuscripts already in development and smaller works that could be created within the abbreviated time frame.

HSU Press received and accepted two viable textbook proposals. The first, *To Catch the Rain*, was a cross-disciplinary, academic approach towards building low-cost rainwater catchment systems. The proposed textbook would borrow extensively from a wiki-type collaborative space, Appropedia, that only permitted reuse under a Creative Commons license. The second proposal was a textbook on exercise physiology that overturned traditional wisdom on the topic. Already in completed draft form, the book faced a difficult publication path through traditional textbook publishers because of its challenge to existing paradigms. For both of these projects, our press provided the most promising path to publication.

The limited number of viable proposals made us question whether our author incentive was too low. Textbook publishing has been built on a certain level of compensation for the expertise and labors of academics, a level well-known to educational authors. One faculty member who contacted me, and ultimately declined to submit, commented that while he supported publishing in open access, the $1,500 stipend paled in comparison to the compensation he would receive submitting his manuscript to a traditional textbook publisher. This was but one conversation, but it is not hard to imagine his perception being shared by other academics.

Kortemeyer (2013) noted that higher educational faculty need to have an understanding of the OER ideology before they can be convinced to contribute teaching materials. Wiley (2015) talked about this as "evangelism work:" the need to persuade faculty to accept the religion of open-access before creation and sharing can occur. Indeed, both authors who published with us had enrolled in three-hour workshops on OER adoption and authoring (see next section for details). Perhaps this introduction helped convince these authors to embrace open access and accept less compensation for their work.

In hindsight, this project raised questions as to whether incentivizing OER authors was the best path for HSU Press. Said another way, were the options of low compensation and no compensation viewed as equal in the minds of prospective authors? Furthermore, did the incentivized program hinder HSU Press' ability in the long run to encourage the creation of OER textbooks? Would we have been better off simply announcing HSU Press as a social justice, open-access press working towards publishing OERs for the public good—a messaging and pathway we could sustain—and not trying to compete in the unsustainable compensation model of traditional publishers?

In the book *Drive* (2011), Pink discusses the experiments of Russian economist Anton Suvorov on compensation and its effects.

By offering a reward, a principal signals to the agent that the task is undesirable. (If the task were desirable,

> the agent wouldn't need a prod.) But that initial signal, and the reward that goes with it, forces the principal onto a path that's difficult to leave. Offer too small a reward and the agent won't comply. But offer a reward that's enticing enough to get the agent to act the first time, and the principal is "doomed to give it again in the second." There's no going back. -Pink, Drive, pg. 52

Textbook creation is more involved than the simple tasks Suvorov used in his experiment, and the tradition of paying faculty for their educational offerings was established long before HSU Press came along. Still, I was troubled that stipends themselves, rather than their goals, were the focus of most conversations I had about the project. When two faculty who approached me after the deadline learned that the stipend was no longer available, neither took me up on my offer to review their proposals anyway.

These interactions also suggest the limitations with short-term, grant-funded work. If the press had been able to sustain the incentives, even in that reduced amount, could we have produced two more publications and built on the success for more in the future? Extended messaging and the showcasing of successes could only have helped our call for OER submissions. Perhaps potential authors just needed time to come around to the conceptual change of open-access publishing.

Regardless, it is essential for new OER publishers like HSU Press to consider the benefits and consequences of operating within an incentive-driven publishing model. HSU Press received this grant in part because we proposed a recognizable academic model of author compensation. We announced our press and project using this model, thereby legitimizing our new press, brand, and services. By adopting this model, however, we also reinforced a long-adopted practice of judging publishing opportunities by the compensation provided, so perhaps we should not be surprised that the press received viable proposals only from authors who could not take advantage of traditional and more lucrative publishing opportunities.

The incentivized book project did create one positive result: as of Spring, 2018, we are readying for the open-access release of *To Catch the Rain*. The author has already been using his notes and manuscript drafts in two upper division classes, accounting for an over $2,000 in student savings. In addition, the author launched a prepublication kickstarter campaign that raised over $12,000 to support translating the book into multiple languages. The cross-disciplinary and non-academic language that may limit its broad adoption as an OER may ultimately make it an uniquely valuable resource to communities worldwide that are working to harvest clean, drinkable water.

Incentives have their value. We are indebted to those who have sustained the production of OERs through competitive incentives; they are responsible for hundreds of thousands of dollars in savings at our university alone. But for a small rural state college with limited resources, we decided that, moving forward, we needed a different model of encouraging OER production. The next section addresses an alternate incentivized model to encourage and facilitate the creation of OER textbooks.

Adoption to Authoring: The Faculty Training Approach

Across the 2016–2017 academic year, grant funding from CSU's Affordable Learning Solutions (AL$) provided faculty $300 stipends to attend a three-hour, hands-on Sustainable Learning Workshop to learn about, explore, and

evaluate OERs. A team of five librarians, including the Library Dean, held multiple sessions to introduce more than 80 faculty participants to Creative Commons and OER concepts, online sources of OER content, ebook and library resources, and OER development.

The workshop began with a quick discussion of goals and an introduction to concepts, then moved into a one-hour, hands-on exploration of three popular sources for OER content: the Open Textbook Library, OER Commons, and Merlot, CSU's own OER repository. Each faculty member then chose an OER resource to evaluate, and spent 15 minutes answering evaluative questions based on a rubric designed by BCOER librarians (BCOER, 2015). The second half of the workshop addressed alternatives if faculty found no perfect OER resource: using library resources such as ebooks and articles, editing an existing OER, or creating an OER. The librarians also highlighted ways to improve student engagement and classroom relevance by including students in the process of creating an OER.

The Library Dean and I led the 15-minute section on open-access authoring, addressing both how to create and publish OERs and how to integrate students in the process. We showcased a class that had used such an approach, highlighting the impact on classroom relevance and student engagement, and providing a step-by-step recipe of how publishing could be applied in the classroom (see next section for more details).

After participating in a workshop, four faculty approached HSU Press with proposals for open licensed works. Two have been accepted and are scheduled for peer review and publication in 2018–2019. One will be implemented in the classroom, first as an OER tailored to a specific HSU course, and then, with modifications, as a broadly applicable open textbook.

The impact of the OER workshops is illustrated by the growing number of HSU courses now offering OERs. The impact of the workshops on OER creation and publication, however, was similar to that seen with the grant directly incentivizing authors. Perhaps we would have received more proposals had the class been focused on authoring or if we had addressed authoring earlier in the workshop. The authoring section fit logically at the end of the workshop, but after more than two hours, faculty might not have been as fully engaged in the 15-minute lecture as they would have at the beginning of the session.

The workshops exposed both faculty members and my cohort of librarians to the methods and value of OER authoring.

Still, the workshops brought many positives. The collaboration allowed the librarians to pool our resources and collective knowledge and provide an impactful learning experience that changed hearts and minds about OERs. The workshops exposed both faculty members and my cohort of librarians to the methods and value of OER authoring. They also allowed me to spread the word about HSU Press, to detail our support services, to better brand the press as a social justice, open-access publisher, and to show how open-access authoring helps fulfill HSU's social justice mission and contribute to the public good. And, ultimately, the workshops started conversations on OERs and open-access authoring that centered not on compensation, but on authoring works that could impact the classroom and/or the world.

Once the workshop ended, most participants went their separate ways and did not communicate again. However, the few workshops attended by more than one member of a particular department sparked conversations pointing

to the possibility of future discussions. We talked about how we could develop our sessions to encourage more of these discussions outside the workshops to facilitate the adoption and creation of OERs.

Adoption to Authoring: The Department Training Approach

In the new Director of Academic Technology, the Library Dean found a collaborative partner. Seeing an additional benefit of OER adoption for course redevelopment, the two collaborated on a grant from the AL$ and Course Redesign with Technology/Quality Assurance (CRT/QA) to work with selected departments to encourage OER adoption and improve course design. The joint grant offered $5,000 to departments and $300 to individual faculty to participate in a multi-week training session, which included an introductory meeting to discuss goals; a targeted two-hour version of our Sustainable Learning Workshop to locate and evaluate affordable textbooks in their field; a facilitated, asynchronous, two-week online training course focused on course redesign; and a follow-up meeting to discuss progress and future goals.

Weller (2014), Langem (2014), Wiley (2015), and Blascheke (2016) noted a variety of individual, organizational, and audience-specific motivations that may be at play in adopting OERs. Even this initiative, with its specific audience of faculty and lecturers within a campus department, spoke to differing interests and goals. The library addressed this by researching OER options for each course taught by the participating faculty in advance of the workshop. By providing a specialized OER list to each participating member, we were able to condense the hands-on OER search portion of the workshop, shorten the entire workshop, and give more focus during the sessions to evaluation, implementation, and authoring.

Striving to improve the messaging of our previous workshops, we tailored a variety of messages and deliverables to engage differing interests and learning styles. Over the course of the workshop, we presented faculty with research data, visuals, and personal stories to touch on how OER adoption could improve student success, student retention, class design, and even the profile of the course or department. To align with the social justice mission statement of HSU Press and the university, we developed a social justice narrative based on unequal access to resources.. And we showcased the following workflow on how to incorporate students into the developmental process.

1. Organize the class into teams, assign textbook topics, and set goals and deadlines.

2. Direct the teams to build resource lists and bibliographies. Test students for content knowledge.

3. Use Google Drive for the creation and curation of content. Weekly team presentations can help monitor progress and allow for peer advice.

4. Have teams review each other's finals drafts using a predefined rubric. Allow teams time to integrate edits and resubmit for final grading.

5. If needed, revise and refine across multiple courses or internships, then publish with HSU Press.

Wiley (2015) mentioned that Lumen moved from encouraging adoption from individual faculty to supporting faculty groups. We noted many advantages with this strategy, especially with a department focus. The departmental dynamic allowed us to discuss the potential for a zero-cost degree program and the associated benefits in student impact, departmental marketing, and student recruitment. It also improved the learning

community environment that had been largely absent in the previous workshops. For example, when faculty discussed implementing or developing OERs in this version of the Sustainable Learning Workshop, their department peers chimed in with subject knowledge advice and support. The two-week online course facilitated and rewarded continued discussions on course redesign and OER implementation. In addition, those conversations continued outside of the trainings as the faculty worked to implement OERs and redesign their specific courses.

Cox (2004) noted how, through faculty learning communities, "results can be obtained faster, more efficiently, and with greater insights when shared with supportive and inventive colleagues." Indeed, at our wrap-up meeting, faculty noted these exact advantages of completing the workshop as a department. The workshop brought faculty together around a common cause and created a support system for expedited OER implementation and course redesign. Faculty familiarity with their colleagues' courses and areas of expertise facilitated improved discovery of OER options and greater sharing of resources.

The greater depth of conversation among librarians, instructional designers, and faculty across multiple meetings made this incentivized grant project the most positive to date. All five department participants implemented OERs in their classrooms. Two are collaborating to create an OER textbook, while a third is implementing an online OER resource. The five faculty also have shared their experiences and knowledge with the remaining department faculty, and have devised a plan for a degree pathway that includes a zero-cost textbook program.

At the end of the 2018 academic year, the faculty will present their experiences and results to the HSU campus community. Hopefully, their success will motivate other campus departments and provide a foundation for future discussions on OER adoption and creation. The project has certainly provided library and academic technologies staff with a direction for future collaborative projects and incentivized grant initiatives.

Publishing as Pedagogy

Not all OER textbook or openly licensed projects on campus have come to HSU Press as a result of incentives or, in fact, from any targeted initiative on our part. Some OER authors have responded to our outreach efforts with new proposals, already formulated plans, or, in some cases, completed drafts. Perhaps because they have been developed outside of the control or direction of HSU Press, these projects have been some of the most informative in shaping my perception on how OERs might be created and valued at our university.

Two such projects involved faculty who approached HSU Press to publish openly-licensed works created by their students. Because I had bought into the model of compensating academic experts for the creation of educational works, I was skeptical about the ultimate value of these projects. Through the course of working on both projects, however, the faculty and students changed my view of the full impact of OERs. These projects demonstrated not only the value of using publishing as pedagogy to transform the classroom and the student experience, but the value of student-produced OERs.

Publishing as pedagogy—a term borrowed from Hicks' (2017) discussion of leveraging student authoring as a transformative classroom practice—comprises one of the most impactful opportunities of OERs. Student-produced OERs tap into what Herrington (2014) describes as the authentic learning experiences that "place learners in the context of real-world experiences and challenges." In addition to student engagement in these

real-world assignments, the end products are OERs that are well-aligned with students' mindset and cultural vocabulary.

Case Study #1: Communication Study Textbook

In 2009, two faculty members wrote and published an open-access textbook in Wikibooks for an introductory course to Communication Study. They posted the work hoping that other faculty who used the book would contribute to and update the text. When this did not happen, the authors saw an opportunity to involve students.

> We have increasingly moved our pedagogy in our courses to move beyond what we call "the audience of one." Traditional classroom models are set up in such a way that professors give students assignments, students complete the assignments, the professors grade them, then give them back to the students. The only audience that encounters the students' work are their professors—an audience of one. We have found that when we create assignments that are written for the public, the motivation and work of our students rises dramatically.
>
> Given the move to go beyond the audience of one for our students, it occurred to us that our open source textbook would be a perfect fit as a class project for our students. Thus, we developed our senior Communication Capstone course in such a way that our senior Communication students would be the editors of the "second edition" of Survey of Communication Study.
>
> –Paynton and Hahn, Survey of Communication Study, "Preface"

By Fall, 2017, one of the faculty members was again teaching the capstone course and decided to put his students to the test of updating the book. He invited me to support the process through an instruction session on copyright and plagiarism, and also to visit the class periodically and witness the process over the course of the semester.

Tapping into their learning over the past years, the students identified evidence of communications theory at play in today's world, then adapted and integrated that content into the textbook. Some of the content was original information, such as communication theory in social media. Other content involved the replacement of outdated examples and the addition of new ones, such as how communication theory has been at play in football player protests.

Each week, class groups presented on their topics and progress. The content and examples reflected the particular interest and knowledge-base of the students, with limited instructor input. A group working on social media communication, for example, did not choose the Russian interference in the 2016 U.S. election as an illustrative example, but instead delved into suicide postings on Facebook. The end result was an academic textbook illustrated with examples most pertinent to today's students.

Besides creating a resource for students and by students, student activity and engagement demonstrated the pedagogical power of student publishing projects. As each group presented, other students chimed in, providing support for their work and guidance on areas for improvement. The faculty member focused on facilitation and commented when appropriate, but, most importantly, listened and learned through the process. When students recommended referencing a Friends television episode as an illustrative example, for instance, the faculty member and I learned something about the students' cultural vocabulary and what would be relevant and interesting to those using this textbook.

By adopting publishing as pedagogy instead of the traditional lecturer-as-expert model, the faculty member transformed the class from a hierarchical structure into a true learning community, one with all the associated benefits Cox (2004) describes of engagement, support, and innovation. Miller (2013) states that the real goal of faculty is to relinquish their authority and allow students to assert their agency, which is exactly what happened in this project. The student voices were not just heard but validated, and in a public, published work. Two groups that presented at the end of class mentioned the unique value of navigating an ambiguous, real-world project,

and meeting that challenge with a finished product. Another spoke to their heightened engagement and how their choices for the textbook might determine which elements of history would be remembered and which forgotten. This resilience and engagement is the promise of publishing assignments.

In their book *Authentic Learning Environments in Higher Education*, Anthony and Jan Herrington report that the more authentic the tasks and activities, "the more students are engaged, the more they learn, and the more they retain." The Communications class demonstrated the power of publishing as pedagogy as that authentic learning experience, with impact on student learning both for the creators of the OERs and the students who will be learning from their resource.

Case Study #2: Courageous Cuentos

Publishing as pedagogy does not need to result in a textbook to be of value to a class. HSU Press was approached by a faculty member in Fall, 2016, to publish the creative writing of students in the Chican@/Latin@ Lives and Growing Up Chicana/Latino classes from the Department of Critical Race, Gender & Sexuality Studies. Here is the synopsized origin story in the words of the instructor.

> In spring 2015, students of ES 107 were expected to respond to a prompt related to the assigned readings with a freewrite at the beginning of each class…. After fifteen minutes of writing, students had the opportunity to share what they wrote with the whole class. Early into the semester, it was clear that students could not wait to write, could not wait to share, could not wait to listen to what their peers had written about their dreams and hopes, the stories they survived, and the tales they hear and tell…. [Ultimately] the students argued tenaciously, more accurately, they demanded that I help them share the stories of their lives—in their own words, in their own language(s), and importantly, in their own voice, en su propia voz—with the world.
>
> They wanted to write for the whole world to read. They wanted their friends and family members to know—the ones who did not have the opportunity to pursue higher education—that lived experiences are factually valid knowledge…. In our class, we read stories written by accomplished and eloquent authors, by talented and creative poets, and storytellers…. The students of the Ethnic Studies 107: Chican@/Latin@ Lives class yearn to write such narratives; the kinds of stories that their professors, indeed, cannot write. We, the teachers of ES 107, wish to support their writings and publish them to boot.
>
> -Corral-Ribordy, Courageous Cuentos, "Journal's Genesis"

Wiley (2017) states that OER development by students increases "the diversity of voices and perspectives available for study by later students." Indeed, even the diverse class readings by prominent Latinx authors could not speak to the multitude of lived experiences of the students in the classroom. The instructor for this class understood that works by students and for students not only expand the reservoir of voices, but resonate beyond what faculty-selected readings or lectures can achieve. Only by including student voices in class resources, by giving those voices the same value as any other—including the instructor's—could the faculty member expose the students to the broadest range of Latinex/Chicanx experiences, and create the kind of learning community that validated every student's authority, value, and identity.

> [The student reflections] reveal the pedagogical power of creating a space for students to write/speak about their own lived experiences and the impact such process has had on their sense of self as writers, one which validates them as authorities of their own lives, and truths. [They] illustrate the potential power of this form of pedagogy to liberate the students, in the words of [student] Demetria Martínez, to name their own reality and "become a subject, not an object, in history."
> -Corral-Ribordy, Courageous Cuentos, "Introduction"

Two semesters of classes published their collective works online through HSU Press. The publication launch event drew over 50 people the first semester, and over 100 the next, and had the audience laughing, wincing, and crying along with the speakers. Students promoted the publication and event in the campus newsletter and on a local community radio show, further building on their learning experience while spreading their counternarratives far beyond those who attended the events.

The ways in which we facilitate classroom publishing projects is part of the broader issue of how we transform the tradition of lecturing experts and disposable assignments into collaborative learning communities and real-world learning experiences. Resistance to this transition, and specifically to student publishing, comes in many forms. Faculty have spoken to me about the disappointing engagement and work of their students, implicating any student creation as suspect and unworthy. Student publications cannot be fully controlled, thereby introducing unproductive, risky, or even dangerous elements to the classroom. Publishing as pedagogy requires additional faculty time for course redesign and for editing the final product, time which many faculty note they do not have (Allen and Seaman, 2016, showed this as a commonly noted barrier to OER adoption as well). These are not easy issues to address, but if we can demonstrate the benefits and promote the incredible power of student publishing for pedagogical transformation, it will expand not only the number of OER publications, but the relevance of higher education to our students.

Conclusion: Adapt, Promote, and Survive

HSU Press was launched on the back of grant-funded initiatives to encourage faculty to create and publish OERs. Each library's situation and position will be different, but we have learned what works best within the context of our particular university environment. We will not seek further grants to directly incentivize authors for OER textbooks, as we will not be able to sustain the incentives over time, and that reality may ultimately work against our long-term efforts. Incentivizing attendance to OER workshops allowed us to pool skills and resources and have a great impact on OER adoption, but proved to be a less efficient method of encouraging OER authorship. Incentivizing departments and department faculty to complete a more involved training in both OER adoption and course redesign yielded the highest percentage of attendees both adopting and creating OERs. Based on this success, we will be pursuing more grants and collaborations to incentivize department-based initiatives.

For all these efforts, as of Spring, 2018, HSU Press has published one OER textbook. Grant projects to incentivize OER adoption have brought in two more OER textbooks for publication in 2018–2019, and a student-authored OER textbook has dropped into our publication schedule independent of any incentive. Since my start at HSU Press in the summer of 2016, the total savings to students because of my work to develop OER textbooks is a little over $2,000.

Based solely on the production of OER textbooks and the cost savings to students, this limited success does not

provide a strong argument for the continued support of HSU Press or OER initiatives. This is a common problem with OER initiatives that emerge out of short-term grant projects. Both Wiley and Gurrell (2009) and Annand and Jensen (2017) comment on the challenge of OER projects surviving beyond their start-up funding. Simply surviving to continue the work is one of the big challenges facing OER development.

HSU Press has survived because of the unflinching support of the Library Dean, who has helped us weather limited textbook development, library budget cuts, and changes in university priorities. HSU Press has also adapted and found ways for the dean and the library to argue for its continued support.

The collaboration of HSU Press with librarians and instructional designers on OER adoption has had a huge impact on student expenditures. Over the past two years, the switch to more affordable classroom materials has saved HSU students more than $1 million. HSU Press has also shown value through its support of open-access journals. HSU Press manages *ideaFest Journal,* the peer-reviewed journal of student research and creative works on campus, co-manages the *Scholarship of Teaching and Learning, Innovative Pedagogy* journal, and helps facilitate the publication of four other open-access journals on campus.

Student-published works like *Courageous Cuentos and Survey of Communication Study* have shown the value of HSU Press to student learning and engagement. Student assistant, internship, and volunteer opportunities with the press have provided students real-world learning experiences in publishing and digital scholarship. Outreach and support of student-managed journals and periodicals has further integrated the press into student learning and engagement on campus.

The popularity of HSU Press across a wide swath of the campus community demonstrates broad support for our services. Authors of the manuscripts currently in development, on the 2018–2019 schedule, or in current negotiation include six retired HSU faculty, five HSU faculty/lecturers, two HSU staff, two HSU alumni, and four local community members. We have contributors and supporters from across the sciences, humanities, and professional studies departments creating works in an assortment of genres, including textbooks, manuals, poetry, fiction, reports, children's books, biographies, and histories.

The outreach to retired faculty has been a particular boon. Our first five publications came from emeritus faculty authors, whose attendance at HSU Press events has facilitated stronger emeritus faculty connections and engagement at the university. We collect no fees from authors to support our services, yet two emeritus faculty authors have signed over their royalties from print-on-demand sales to support the work at HSU Press. Four others have donated over $2,000 to support library scholar internships for students to gain experiential knowledge and skills working with HSU Press.

HSU Press also works with people and organizations unaffiliated with the university to support and facilitate campus and community engagement. We will soon publish a children's book illustrated by local elementary school students, with print-on-demand proceeds going to support music and arts at the school, and will be publishing student works from the Redwood Writing Project, helping promote and support this historic local writing program.

Our publishing of openly licensed works aligned with the university's social justice mission has also helped justify the press. International diversity and reach are demonstrated by the published and soon-to-be published manuscripts, including works set in Chile, India, Vietnam, Japan, Central America, and Western Africa, addressing a broad range of issues such as rainwater catchment, community connections, cultural incursions,

congressional apportionment, Native American rights, LGBTQ civil rights, and homelessness. The authors retain copyright over their creations and can republish for profit, but all so far have taken advantage of the print-on-demand opportunity to raise money and awareness for causes and foundations. Although print sales have been low (as expected with works with free digital versions), their works have been collectively downloaded or otherwise shared over 1,000 times and counting, spreading their diverse voices to the world.

Individual narratives behind the publications have helped sell the press and its services as well. One open-licensed trade publication has recently been adopted in a classroom as an OER. Another resulted in a well-attended book launch event that has ignited plans for a week-long series of civics events and a voter registration drive. Another is being translated into three languages to expand the dissemination of its beautiful story of hope and community.

Open-access publishing has a broad impact, and powerful narratives and arguments can attract and engage an audience in any environment. Because of our successes, HSU Press can continue to speak for OER production and serve to influence the creation of OER textbooks, publishing as pedagogy, and the greater social good. If we can continue to empower authors through open-access publishing and market our successes, we can, we hope, continue to convert others to OER success and continue to expand a movement.

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Chapter 26 - Libraries and Open Educational Resources (OERs): How Libraries Can Use Networks to Support Open Access Textbook Publishing

Kate Pitcher

by Kate Pitcher, St. Mary's College of Maryland (bio)

Introduction

The networked approach I describe in this chapter uses the Open SUNY Textbooks (OST) program at the State University of New York (SUNY) as a service model and hub for adopting, adapting, and creating content. OST grew from a grant program into a service model supported by SUNY system administration and campus libraries, and by SUNY Geneseo in particular. Its goal is to develop a networked approach to supporting the development of open educational resources (OERs), along with the more traditional publishing models of copy editing, peer review, and print-on-demand production.

In collaboration with specialty OER communities of practice (CoP), OST funds campus incentive programs to encourage SUNY faculty to adopt, adapt, and create OERs that can be shared via the OST platform. The sustainability of the services will depend on the development of a fee structure and membership model for participating institutions. The result will be a service model called SUNY OER Services, part of the framework for developing an open access publishing infrastructure for SUNY faculty who want to publish using alternative models and methods.

This chapter is a case study of how libraries in one university system are developing a networked approach to overcome the challenges and roadblocks of using OERs in higher education, and working to create a sustainable system to encourage and facilitate the wide-scale adoption, creation, and distribution of openly licensed textbook and course materials.

> This chapter is a case study of how libraries in one university system are developing a networked approach to overcome the challenges and roadblocks of using OERs in higher education, and working to create a sustainable system to encourage and facilitate the wide-scale adoption, creation, and distribution

In this chapter I review the skills, processes, and structures needed to set up a system for improved delivery of OER services and support. I also discuss our efforts to establish a faculty incentive program for

of openly licensed textbook and course materials.

publishing openly-licensed textbooks, our program to support broader faculty adoption of OERs, and the mechanisms we've used to develop CoPs to support information sharing and knowledge transfer among librarians, instructional designers, and faculty.

The Babson Survey Research Group's 2016 report on OERs in higher education reinforces commonly held assumptions about faculty behavior related to OERs: faculty cite discoverability (48%) and applicability to course content (49%) as two major barriers to OER adoption[1]. Libraries have been developing new services and models to support faculty in adopting and creating OERs. Some library services include programming to educate students and faculty about open access, copyright, licensing, and using OERs as alternatives to costly textbooks. Libraries also support faculty through consultations, interviews, instruction sessions, and pathfinders and research guides.

Developing services and functionality around the discovery, adaptation, and customization of OER content and platforms is a new service model for libraries. Challenges include the development of systems to curate OER content across disparate platforms, adapt it for reuse in different forms, and customize it for faculty use. Supporting faculty curricular needs and formats with new services means that libraries must systematically re-organize job functions and organizational capacity. This is by no means an easy or quick task.

SUNY is one of the largest public university systems in the country, with 64 campuses and hundreds of libraries. The system is comprised of two-year community colleges, technical colleges, four-year comprehensives, specialty institutions, and doctoral-granting university centers. With over 440,000 students enrolled in SUNY programs and over 90,000 employed faculty and staff[2] across the state, the system can most effectively leverage "systemness" at scale with opportunities like OERs, using coordinated, networked approaches to facilitating professional development, CoPs and platform hosting for content.

In our model, OST supports instructional designers and librarians who work with faculty to evaluate courses and the possibility of transitioning to the use of OERs. Once a faculty member has assessed a course's needs and drawn up a plan, he or she is given access to OST's authoring platform. After the material has been mixed or created, OST provides support for standardization of format, copy editing, and peer review (if the material is newly created) through a network of SUNY faculty and librarians.

Challenges to this model include gaining buy-in from library and campus stakeholders, engaging faculty, and developing key relationships with campus and systemwide business officers and administration. Communication, training, and the realignment of services and infrastructure to support these new models of instructional resource support are challenging as well.

1. Allen and Seaman, "*Opening the Textbook: Educational Resources in U.S. Higher Education, 2015-16*." http://www.onlinelearningsurvey.com/reports/openingthetextbook2016.pdf
2. *2016 SUNY Fast Facts*, http://www.suny.edu/media/suny/content-assets/documents/FastFacts2016.pdf

Getting Started

OER Creation and Faculty Incentive Grants

The OST program began in 2012 when SUNY Geneseo's Milne Library and several partner libraries received a SUNY Innovative Instructional Technology Grant (IITG), a competitive award distributed by system administration to incentivize SUNY faculty and staff to develop innovative course designs and prototype new instructional models and systems. The grants are awarded at three levels, with funding capped at an upper level of $60,000 per proposal. Geneseo was awarded a Tier 2 grant of $20,000 to fund the development of an openly-licensed publishing model to incentivize SUNY faculty to create OERs, specifically textbooks. The pilot project had three goals:

1. Reduce textbook costs for SUNY students.

2. Reduce barriers for faculty who want to experiment and use new academic publishing models.

3. Develop a library publishing infrastructure to support openly-licensed textbook publishing.

We issued an initial call for textbook authors across all SUNY system campuses, and received 38 proposals—a high number, which may be attributed to several factors. Faculty identified the monetary incentive—$3,000 upon completion of the manuscript—as a significant attraction. They were also encouraged and highly motivated by seeing copy editing and peer review support written into the proposal process, as this reinforced the scholarly publishing model. And while librarians sparked much of the campus interest and helped motivate faculty to submit proposals, provosts and vice presidents widely shared the call as well, ensuring overall campus support.

Since this was a system-wide effort, a selection committee of library directors initially evaluated the proposals. Applications were organized by textbook subject areas, broadly classified into English and foreign languages; computer science, math, and philosophy; anthropology, art, and music; education; business and economics; and all other sciences. Directors with interest or subject expertise as librarian or practitioner volunteered to review proposals. Four were identified as the most promising, and selected for inclusion. Additionally, four partner libraries contributed an extra $40,000 to publish an additional 11 books, allowing us to select 15 proposals.

The grant money was used to fund author incentives, at $3,000 per book. Another $1,000 was awarded if the faculty member(s) incorporated student contributors or assessment and feedback into the textbook. Additional funds were set aside for peer review of each publication ($1,000) and for copy editing. In the end, most of the copy editing work was completed by volunteer copy editors in SUNY libraries.

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In 2013, SUNY Geneseo submitted a follow-up IITG grant application and was awarded an additional $60,000 to issue a second, modified call for author proposals system-wide, with improvements to the application process and timeline. Because of increased interest from faculty across the system, we decided to expand the number of open textbooks published, increase the number of participating libraries, and invite participation from our colleagues in instructional technology units on the different campuses.

In this second round of grants, we also decided to focus on the development of textbooks that serve widely enrolled general education courses. This decision was based on the varying subject matter of first round textbooks, and their applicability only to the author's specific courses. We decided this time to strive for maximum impact by choosing material that could be widely adopted, and wrote this criterion into the grant announcement.

This call produced 43 proposals, and we selected 15. In this round, authors were awarded $1,000 upon completion of the manuscript, and two required peer reviewers each received $300 upon completion of the review process. The drop in award amounts was an economic decision to fund more textbook creation. We also decided to add a second peer review to each textbook and reduced the amount paid to each reviewer, mainly based on feedback from faculty authors and peer reviewers.

Responding to feedback from faculty authors, we decided to add more faculty participation to the selection process. Since faculty are the ones choosing textbooks for their courses, it made sense to include them in the grant award process as well. We actively encourage library directors across SUNY to have their liaisons in the disciplines covered by the proposals consult with faculty to review and select proposals as good candidates for open textbooks. Faculty reviewed blind proposals and made recommendations using a rubric with criteria such as applicability, content, and appropriateness for a particular level of undergraduate or graduate student. To date, 22 textbooks have been published (see http://textbooks.opensuny.org for the complete list) and are available for anyone with the URL to download.

We learned several lessons from these two pilot programs. First, workflows and processes need to be consistent and documented for all participants. Second, regular and consistent communication with authors is essential. Adding regular check-ins (via phone or email) to our second pilot significantly decreased the time to completion of manuscripts and ultimate production of the book. Finally, providing guidance for authors is predicated on the simple fact that many have never written or developed a textbook. It was essential that OST provide authors with guidelines, resources, and, when necessary, consultations with instructional designers.

The next steps for OST include development of a business model, with plans for consistent sources of funding beyond the two grants, the hiring of dedicated personnel, and recruitment of volunteers.

SUNY OER Adoption Program

In the fall of 2015, eight campuses began additional work on a collaborative project to scale-up OER adoption. The project, *SUNY Open Educational Resources: Improving Faculty Discovery and Adoption*, received funding through the SUNY Innovative Instruction Technology Grants (IITG), the same program which funded the OST (along with nearly 20 other OER projects within SUNY). The eight campuses outlined a plan to identify faculty

from each campus to replace existing course materials with OERs. Our efforts resulted in over 50 faculty on the eight campuses transitioning their courses during the 2015–16 academic year. An additional three campuses later joined the team, bringing the total number of faculty to 65 and the number of campuses to 11.

Even with the successful faculty transition and buy-in, two areas were identified by the PIs, faculty, and students as obvious roadblocks to wide-scale adoption that should be addressed in any ongoing service model:

- *Campus expertise*: Although there are talented and informed personnel throughout SUNY who help with adoption efforts on campus, a formal and robust mentorship program is needed to help train librarians and instructional designers in OER best practices so they can support faculty on their campuses. In addition, many personnel will need to create and rely on a regional support model, so that experts in their area can offer hands-on support when it is required.

- *Sustainable funding*: To create a sustainable model for OER scale-up, SUNY and its campuses cannot simply rely on grant funding. A reasonable cost should therefore be assigned to courses using OERs, with the funds used to support existing OERs and support services, while also providing the system with a business model to implement and support future initiatives.

Next steps: Building a support network

Using the information gathered from both IITG projects, and the recommendations put forward, partner libraries within the OST project began to collaborate on a scaled-up, networked approach to support digital learning and the publication of OERs. The partners agreed that they needed to develop the necessary infrastructure, with a publishing platform, personnel, and new funding structures. The new service model would be called SUNY OER Services, and would incorporate the OST textbook program, This model now includes several key elements, as follows.

Faculty Course Support Teams and CoPs for OER Adoption and Development

Support teams consist of instructional designers and librarians, while CoPs include faculty working on OERs. Together, members can form small teams on a campus, or faculty from one campus can be assigned to work with faculty, librarians, and instructional designers at other locations.

CoPs form around similar interests, needs, and expertise levels, and in this case include practitioners interested in OER creation and adoption, instructional design, and discoverability. All CoPs are coordinated and managed through SUNY OER Services at SUNY Geneseo, which is developing a systematic program of professional development, training, and mentorship to support them in integrating OERs into their courses.

SUNY OER Services funds a series of hands-on professional development workshops and supplemental online webinars to train faculty, instructional designers, and librarians interested in joining the network, building a new CoP, or participating in an existing one. It also provides follow-up consultations to participating faculty who are interested in scaling up OER adoption and design at their campuses and who may have no course supports nearby. Ideally, faculty identify team members on their campus to receive this support, or work with OST to prepare their

campuses to provide such support in the future. Either way, faculty work with OST to develop the CoP and course supports model that best suits their needs.

Development of a Digital Publishing Platform

The OST uses a WordPress website and, most recently, a locally-hosted installation of Pressbooks to host and push out OER content. Because of the faculty-identified need for a unified, flexible, and user-friendly platform, the development of a digital publishing platform that supports the creation and remixing of openly licensed content tailored to course learning outcomes is a high priority.

SUNY OER Services, through a partnership with Lumen Learning, will offer its OER content on Lumen's Candela platform through course and platform subscription fees. OST contracts with Lumen for the entire system, eliminating the need for multiple platforms at multiple campuses, and thus keeping costs down. This allows OST to create and provide one sustainable, flexible digital learning and publishing platform and interface, through which faculty can discover, use, and reuse openly licensed content from all over SUNY, whether through digital collections, repositories, or archives. Faculty will be able to create new content as well.

Because faculty also identified integration with learning management systems (LMSs) as a significant need, learning tools interoperability (LTI) integration is enabled as part of the platform. LTI is a technology standard designed to connect different learning tools and to share data and information between learning platforms. Creating a platform and using LTI allows faculty to use their own OER content and make it available through the local campus LMS, and also allows the content to be made available through a system-wide interface for other faculty to find and adopt.

The platform provided by SUNY OER Services allows faculty to publish high-quality course materials for wider use across SUNY and internationally, and provides access to metrics that are invaluable in gaining tenure.

The platform provided by SUNY OER Services allows faculty to publish high-quality course materials for wider use across SUNY and internationally, and provides access to metrics that are invaluable in gaining tenure. It also provides an existing model of editorial support, including peer review and copy editing, which uses student editors and creates opportunities for applied learning for students across the system.

Development of a Sustainable Service and Business Model

The creation of a business model is crucial for long-term operational and system success. Buy-in from system-level and campus administration (including libraries, academic affairs, and business offices) is essential. Our framework (still under development) includes a model for collecting course fees as well as a membership model to fund ongoing operations and administration of the services. In addition, this model will necessitate the hiring of an administrator to coordinate OER course supports and the CoPs, along with the copy editing, peer review and any required print-on-demand production.

The creation of a business model is crucial for long-term operational and system success. Buy-in from system-level and campus administration (including libraries, academic affairs, and business offices) is essential.

In collaboration with the CoPs, the project will also fund a campus incentive program to encourage SUNY faculty to adopt, adapt, and create OERs that can be shared via the platform. Once an OER is being used in a class, the plan is to implement a course fee to provide funding for future projects. The fees will be assessed at enrollment, and while the amount will vary, it will usually be $10 per student per OER course. Levying fees on students will be optional for each campus, but home campuses will be invoiced by SUNY OER Services for the OER supports (LMS integration, instructional design, copy editing, etc.) provided to them for the course. A membership model will also be offered to campuses, which can pay a yearly fee to become a Partner, allowing them to receive additional services including workshops, training, consultations, and extra support for redesigning courses to include OERs or transition fully to OERs.

With each of these service models, instructional designers, librarians, and faculty are designated on each campus as advocates and work with SUNY OER Services to scale-up OER adoptions at a campus level. This *OER Success Framework* process helps campuses evaluate courses and particular needs for transitioning to OERs. Not all campuses are ready for campus-level engagement, and the service model recognizes that there will be different levels of needs depending on where faculty are in the process.

Challenges

Ongoing development of the SUNY OER Services system-wide model faces several challenges, including program implementation and provision of financial support across a large, dispersed state system, faculty and librarian training, communication across campuses, marketing of both the services and the platform, sustainability, funding of future initiatives, and permanent funding for staff positions and ongoing professional development and support.

The biggest challenge will be resolving the inherent conflicts among the different campuses, many surrounding the fee structure and membership model. Support at the system-wide administration level is crucial, and is in place. Campuses already using the Lumen Learning platform are good candidates for pilot courses, and are already in conversation with SUNY OER Services. These campuses can serve as models for other SUNY campuses interested in implementing an OER strategy.

Questions of funding and sustainability are also key to the future of SUNY OER Services. Creation of a sound business model and commitment to funding by the system and home campuses will have to be negotiated and agreed upon by all parties. Initial support is in place within system administration and SUNY Geneseo, where SUNY OER Services will be based. In addition, permanent staffing needs to be part of the implemented business model.

While training of faculty and librarians across a large system will be a challenge, SUNY OER Services can

connect to existing initiatives and leverage regional library and professional groups to tap into existing networks for instructional designers, librarians, multimedia developers, and faculty.

Another challenge lies in communicating the importance of adopting and creating OERs at this point in time. The conversation should focus on how higher education can grab the opportunity to design its own future in the world of content creation and publishing. Faculty, especially, have the opportunity to work with

> **Questions of funding and sustainability are also key to the future of SUNY OER Services.**

their campuses, openly license their own content, and control its dissemination. Libraries can help by rethinking priorities and aligning services to support these new publishing and learning models.

Marketing of services is another challenge, but one that can again be met by leveraging existing partnerships, participating in conversations with faculty where they meet, and actively working with different campus constituents, including academic technology staff, student groups, faculty, and librarians.

Summary

The development of OER support services is a crucial step in enabling faculty to design, build, and use their own openly-licensed content.

This chapter documents our efforts to establish a faculty incentive program for publishing openly-licensed textbooks, as well as a program to support broader faculty adoption of OERs; it also describes our development of communities of practice (CoPs) to support information sharing and knowledge transfer among librarians, instructional designers, and faculty, along with our challenges in trying to scale up the networked approach and build a sustainable business model to support that system-wide endeavor.

Future & Conclusions

The future of SUNY OER Services looks bright. The OST network needs to capitalize on the existing infrastructure of SUNY communities to leverage shared resources of people, technology, and time. Using the membership model means that libraries, faculty, and instructional designers can actively participate in building communities of practice and in leveraging expertise in different areas, like instructional design, systems administration, faculty collaboration, and content curation.

One major outcome will be the development of a SUNY-wide CoP for creating, adopting, and curating OERs, coordinated through SUNY OER Services. The CoP will:

- be a network of faculty, librarians, instructional designers, and multimedia developers
- provide support and mentorship, develop best practices, and facilitate sharing of expertise across SUNY for wider-scale OER adoption and creation, and
- include workshops, documentation, and assessment of training and instructional materials.

Another essential outcome will be the development of a course content authoring and publishing platform which supports the creation and remixing of openly licensed content, is tailored to course learning outcomes, and can be integrated into a campus LMS. This will be achieved by capitalizing on partnerships, such as the existing one with Lumen Learning to host the Candela open courseware platform for the adoption, reuse, and remixing of openly licensed content across the entire system. It will also include the design and implementation of a SUNY-wide catalog of openly licensed content, facilitating cross-campus adoption and new collaborations, as well as the creation of ways to share workflows and documentation for both publishing and editorial support training—key in scaling up services around the publishing platform.

The development of a sustainable model for OER course content design, adoption, and curation services through SUNY OER Services means that campuses can leverage their resources effectively by participating as members and sharing expertise through the CoPs. At the same time, we are also creating documentation and best practices around course fees, membership models, and course supports to inform future planning. Current benchmarks for success include the number of courses and enrolled students moving to OERs, dollar savings from textbook replacement, and, most importantly, assessment of real student learning outcomes in courses using OERs versus traditional texts. We are currently collecting data, and will evaluate benchmarks during the academic year.

By assessing course fees for all OER courses, SUNY campuses commit to creating a sustainable business model which supports the creation of additional OERs. An OER fee of $10 per course versus a textbook cost of $80–$300 creates significant savings for students.

One way for SUNY OER Services to enhance the membership model is by developing campus incentive programs to allow faculty and their course support teams to pilot the model before entering into a full membership with SUNY OER Services. The program waives payment for one year of a campus' membership, and actively gathers and evaluates feedback from course support teams and campus administration about what works and what doesn't.

The communities of practice, publishing platform, and service hub will be documented extensively to provide as much information as possible for those who might want to replicate the programs. All documentation and instructional content will be licensed with a Creative Commons license, "Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)," and shared via the SUNY OER Services website.

Without the fundamental institutional commitment to open access, scholarly communications, and OER strategies, libraries and faculty will find it difficult to create affordable content services that can scale effectively. Using network approaches (whether at the consortial or system levels) to scale up OER adoption is an alternative to libraries or other campus entities working in isolation. Working with partners across a network, librarians, instructional designers, and faculty can find a range of expertise to support content, technology, and pedagogy issues. By leveraging a network, a system gains the benefits of a common approach and effectively utilizes scarce resources, such as instructional designers, technologists, and faculty time. By partnering with one another, we can scale up OER adoption and save our students money at the same time.

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Kate Pitcher is Director of the Library, Archives, and Media Center at St. Mary's College of Maryland, where

she leads of staff of twenty staff and fifty student employees. Main responsibilities include oversight for financial, program, and operations management; organizational design and development; strategic planning; marketing and communications planning; and liaising with administration, policy makers and local and regional advocacy and funding organizations. Other responsibilities include roles as the interim library director at SUNY Geneseo and the principal investigator for the State University of New York (SUNY) grant-funded project, the Open SUNY Textbooks program, an open-access textbook publishing initiative funding the development and publication of twenty-six open educational resources, authored by SUNY faculty. Kate Pitcher received her B.A. from SUNY Geneseo, and her M.L.S from the University at Buffalo.

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