LIBRARY is the new PUBLISHER

Establishing Workflows for Library-based Open Educational Resource Production Programs in Post-secondary Institutions across Canada and the United States

by
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Abstract

As a response to increasing costs of textbooks for college students, post-secondary institutions are exploring new methods to make learning materials affordable for students. This has resulted in a surge of interest in the concept of open educational resources (OER), or freely accessible learning materials, the most prominent of which is the open textbook. Post-secondary institutions have begun to start their own OER production programs, often staffed by librarians and run through an institutional library. As the work that was traditionally done by publishers begins to move into the academic space, new OER coordinators are searching for answers for how to successfully run an OER production program. This report is an analysis of the workflows of six OER production programs run through the libraries of post-secondary institutions in the United States and Canada, and stands a record that can be built upon in the future in the efforts to formulate a standardized approach to running a successful OER production program using Pressbooks' book production and distribution software.

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I. INTRODUCTION

The cost of textbooks for courses in post-secondary institutions has risen dramatically over recent years. With a lack of any affordable alternatives, textbooks became cost-prohibitive to students trying to earn and afford an education. In response, the academic community has begun to support and implement new affordable content solutions. One concept being explored as a viable alternative to the traditionally published textbook are open educational resources. Open educational resources (OERs) are learning materials such as textbooks, videos, and other media that are openly licensed and free to read, redistribute, or modify. These resources are typically distributed and read in digital formats because of the relatively low cost of publishing on a web, though they may be made available in print formats as well. Because OER are intended to be freely modified, original versions can grow into improved versions, or be taken apart and used in different, new resources; it's in the nature of OER to be shared and built upon, so, in the ideal case, every textbook creation project becomes a community project with the involvement of all the creators, where the resulting work feeds back into the ecosystem organically.

With motivations that diverge from those of the traditional publisher, creation of open textbooks and other resources had to find a new home in higher education. This mantle has been taken upon by the post-secondary institutions themselves; instead of outsourcing textbook production for offered courses, universities create textbooks they intend to use. This has in part been done by starting OER production programs in existing departments or units at the institution. One common choice for the OER production program was the library. In many ways, the mission of the library pairs perfectly with that of the OER movement: both are driven by a commitment to public access of education and resources. However, the title of publisher is still new to librarians in the emerging space of open education, and the processes of how to run a successful OER production program are not yet set in place. To facilitate OER production, some libraries have turned to Pressbooks, a software that can be used to design and format books to make them available in various formats. Pressbooks has been adopted into the workflow of OER production programs

^{1.} Kathy Kristof, "What's behind the Soaring Cost of College Textbooks," CBS News, January 26, 2018, accessed October 01, 2018, https://www.cbsnews.com/news/whats-behind-the-soaring-cost-of-college-textbooks/.

as a tool for creating and distributing open textbooks that meets the needs of both faculty authors and an institution's students.

The following research offers insight into the workflows of several OER production programs run through the libraries of post-secondary institutions in Canada and the United States. This report can educate readers on the use of OER and establish an understanding of how Pressbooks fits into the open education environment. The core of the report is a series of in-depth interviews with representatives of the OER production programs at SUNY, Seneca College, University of Guelph, Ryerson University, University of Washington, and the University of Texas at Arlington. Following these interviews is an analysis of the similarities these programs have in their workflows and experiences. After, the report includes observations on what obstacles the OER community faces in creating a standard approach to OER production within the context of a library-hosted program. This report is intended to educate readers on the current practices and perspectives of the OER community and provide a stepping stone to future research on successful workflows for OER production.

1. OER: the What, the Why, the Who, and the How

To understand how Pressbooks can have an impact on the workflows of OER production programs, it's important to first understand what open educational resources are, why they are necessary, who is behind the OER movement, and how it's made possible.

What are Open Educational Resources?

"Open educational resources," or OER, is a blanket term for all educational materials that have been made freely accessible and openly licensed. The most common form of OER is the open textbook, though articles, scholarly monographs, videos, and other forms of content can fit under this umbrella as well. In order for content to be considered "open," it must be free to read, use, and redistribute. Non-OER textbooks, as with the majority of published works, are typically licensed as "All Rights Reserved," which means the right to copy and use the content within the publication is held explicitly by a limited number of people or organizations. On the other hand, OERs are typically licensed with Creative Commons (CC) licenses, which are publication licenses created to help "creators [...] retain copyright while allowing others to copy, distribute, and make some uses of their work." Creative Commons licenses require that any redistribution of a work attributes the original creator, while allowing for uses that aren't permitted by "All Rights Reserved" licenses. There are several different licenses, including those with specific clauses for attribution, sharing, commercial use, and creation of derivatives. CC licenses are a way to meet David Wiley's (an Education Fellow at Creative Commons

^{1. &}quot;Licensing Types," Creative Commons - Attribution-ShareAlike 3.0 Unported - CC BY-SA 3.0, accessed December 01, 2018, https://creativecommons.org/share-your-work/licensing-types-examples/.

^{2. &}quot;About The Licenses," Creative Commons - Attribution-ShareAlike 3.0 Unported - CC BY-SA 3.0, , accessed December 13, 2018, https://creativecommons.org/licenses/.

and well-known voice in the open education community) definition of what it takes for a resource to be fully "open":

The terms "open content" and "open educational resources" describe any copyrightable work [...] that is either (1) in the public domain or (2) licensed in a manner that provides users with free and perpetual permission to engage in the 5R activities:

- 1. Retain the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)
- 2. Reuse the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)
- 3. Revise the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)
- 4. Remix the right to combine the original or revised content with other material to create something new (e.g., incorporate the content into a mashup)
- 5. Redistribute the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

The abstract concepts that Wiley explores can manifest in practice as more specific requirements—for instance, use of open licenses or distribution of multiple open formats. Another important interpretation of "open" is that resources must also be accessible to learners with different needs. This may mean making making books available for free online but also creating a print version for individuals without internet access. It may also mean making sure all versions of the text have been formatted in a way that allows users with screen readers to easily navigate and understand the content. All of these interpretations of "open" culminate in a system of ethics and conventions that allows for the production of educational resources that can be made freely accessible to everyone.

^{3.} David Wiley, "Defining the "Open" in Open Content and Open Educational Resources," OpenContent, accessed October 01, 2018, https://www.opencontent.org/definition/.

Why do We Need Open Educational Resources?

Open educational resources were created to address a rising need in open education for affordable learning materials. According to CBS News:⁴

Despite growing online markets for discounted books, the average cost of college textbooks has risen four times faster than the rate of inflation over the past 10 years. That has caused 65 percent of students to skip buying require texts at some point in their college career because of a lack of affordability.

Textbook companies have also cottoned onto students' tendency to opt for used, discounted books and have countered this effect by creating courseware – testing and evaluation software with unique, time-sensitive access codes that students have to purchase new with the textbook or individually at a high markup. As a result, students who opt for used books may find themselves paying a steeper total cost for mandatory course software than they would have had they bought a book new. With rising costs and dwindling choice when it comes to alternatives, students are placed at more and more of a disadvantage. Textbooks became cost-prohibitive to students' education. Open educational resources have developed as an answer to that problem. Open textbooks are a traditional textbook alternative that's for free for students. The open education community exists on the premise that education is the right of all people, regardless of financial need, and seeks to revolutionize a small part of higher education by building an ecosystem of reusable and adaptable educational resources.

^{4.} Kathy Kristof, "What's behind the Soaring Cost of College Textbooks," CBS News, January 26, 2018, accessed October 01, 2018,

^{5.} Laura McKenna, "Why Students Are Still Spending So Much For College Textbooks," The Atlantic, January 26, 2018, accessed October 23, 2018, https://www.theatlantic.com/education/archive/2018/01/why-students-are-still-spending-so-much-for-college-textbooks/551639/.

Who is Creating Open Educational Resources?

To meet an active need for open resources in higher education, post-secondary institutions have taken the initiative to create their own OER production programs. In general, these programs are run through a few typical departments or units in the institution: the library, the center for teaching and learning, or IT services. This study focuses on the first of these units, the library. In each case, the department or unit that leads OER production becomes a publisher, bending their own expertise to a new mission. These programs work with faculty authors from within the institution to create open educational resources for their student body. In many cases, open textbooks are created for a specific class that a faculty member teaches. Those texts are then adapted for reuse for other classes and institutions.

Other OER production programs are run by consortia of multiple post-secondary institutions. In some cases these organizations formed specifically to address the needs of open education; one example would be the Open Textbook Network. In other cases, the consortium predated the OER production program. Well known organizations with large-scale OER production programs include SUNY, eCampusOntario, BCcampus, and Open Oregon. One recognizable pattern is that these large-scale OER programs tend to serve a defined region, such as a state or province.

On the level of authorship, the charge for OER is led by compassionate educators with deep values for open access, who see a need for open resource and choose to author open textbooks instead of their traditionally published counterparts. OER production programs seek to incentivize this choice by facilitating grant programs and fostering community. A large part of an OER program's work can often be in advocacy, with time and resources dedicated to proving the value that open resources hold in higher education.

How are Open Educational Resources Created?

This is where Pressbooks comes in. Pressbooks is a book production and design

software capable of making books that meet the definitions of "open" described in the previous section. In the hands of an OER program, Pressbooks can be a tool for the entire OER production process: creation, revision, dissemination, and more. Pressbooks isn't the only OER production software that exists. However, all institutions involved in this study use Pressbooks to facilitate their OER production.

2. Overview of Pressbooks

Pressbooks as an automated book production tool has has existed since 2011. The software was built on top of WordPress, an open source and widely used content management system on the web. Pressbooks was intended to be an easily usable tool for anyone wanting to make books, and to enable new models of publishing to emerge. Its first user base was mostly self-published authors and some small presses, seeking to decrease design costs and automate the design and formatting process. Meanwhile, Pressbooks was available for free as an open source software, and academic institutions began to take notice. Post-secondary institutions were hosting instances of Pressbooks on their own servers and using the book production software to sustain their open textbook production.

In 2017, the Pressbooks team decisively pivoted their business model away from the self-publishing industry and toward higher education, launching the PressbooksEDU initiative. Increasingly, colleges, universities, and educational consortia were beginning to look for software that could help make their OER programs successful. With many institutions using open source instances of Pressbooks to facilitate their book production, and others actively seeking to purchase hosting services for book production, the path forward was becoming clear. The simple, WordPress-based automated production system that small and medium independent presses had shied away from was exactly what OER programs—in search of easy-to-use, cost effective production methods—needed. Rather than charging a one-time fee per book on one shared network, Pressbooks opted for a business model based on charging an annual fee to host an entire network per institution. The change enabled a more stable revenue flow for Pressbooks, and also allowed for the innovative, unconventional web-based publishing models that CEO and founder of Pressbooks Hugh McGuire sought to explore from the beginning.

A large turning point for the company was its partnership with learning technologies consortium eCampusOntario; though many large organizations with OER programs, like SUNY and BCcampus, were already using Pressbooks in an open source capacity, eCampusOntario was the first consortium to commit to a hosted network and major financial investment in Pressbooks. eCampusOntario purchased a Pressbooks network that had the potential to

make OER creation possible in all public post-secondary institutions in the province of Ontario, and also commissioned the custom development of educational features for the software. In the months following, Pressbooks worked to change its marketing and business strategies in a large overhaul of the company's approach to book production. Pressbooks.com would still offer single-serving books, but PressbooksEDU would differ; the business model would be built on hosting standalone book production networks for institutions on an annual or monthly subscription basis. With the changed direction came the onboarding of several new team members; over the year, the team doubled its personnel and more than doubled its working hours.

As of September 2018, Pressbooks was hosting book production networks for approximately 40 institutions. Notably, Pressbooks has partnered with the eCampusOntario and the Unizin higher education consortia to offer affordable solutions to OER production, and is now available in many other high ranking institutions across the United States and Canada.

What Does PressbooksEDU do for open education publishers?

PressbooksEDU is a book design and production tool, as well as a multisite-networked content management system. While the first of these is important for any author not working with professional designers, the second is integral for an OER production program. Pressbooks can both automate the design process and facilitate the bulk distribution of openly licensed works – an ideal combination.

Book Design and Production

Pressbooks' main service is the automation of book design and formatting. Any user on Pressbooks can import their work and create a completely designed book file by choosing one of the more than twenty pre-designed book themes. After the theme is chosen and the content is uploaded, Pressbooks enables users to export book files into a number of different file formats, most notably PDF, EPUB, and webbook. Webbooks are hosted online on Pressbooks

networks, and users can then decide to keep as private or mark as public. Public books can be distributed for free all over the web.

The PDF and EPUB formats are used more widely by far by the self-publishing audience, whereas the webbook is primarily used by open textbook publishers. The webbook, hosted on Pressbooks' infrastructure, is built for ease of access and interactivity. Users can embed digital elements, such as videos, quizzes, and the Hypothes.is web annotation tool. These interactive elements are especially significant in increasing the value of the digital open textbook in competition with the traditionally published textbook.

Content Management and Distribution

Pressbooks' standalone book production networks also serve as content management systems. When an institution opts for a standalone network, they gain the ability to create multiple books. Each plan has a set storage limit; the network can continue to create books until their storage limit has been reached. Network administrators of a PressbooksEDU network have access to all books and users on their network. Books can be created, designed, peer reviewed, published, and read – all within the Pressbooks platform.

Distribution is the other half of this equation. The Pressbook webbook in its public form can be distributed to readers in various ways. Users who prefer to reserve their copyright typically choose to create books as EPUBs or PDFs and distribute them through third-party services, but the Pressbooks platform has built-in distribution methods for users who choose to distribute with open licenses. Pressbooks supports use of Creative Commons licenses, which are the widely recognized open license standard for publications, especially in the open textbook community. On PressbooksEDU networks, authors or administrators may choose to distribute all file formats from the webbook's homepage. This means users can download their own prefered file of the book to their personal computer and view the content from outside the Pressbooks platform, which can be critical to students who may not reliably have access to texts that require an internet connect. Pressbooks also enables "cloning" of

^{1. &}quot;Home," Hypothesis, accessed October 01, 2018, https://web.hypothes.is/.

content—creating a copy a book that can be used by another network, revised, or even recombined with other books.

Adoption of Pressbooks in Higher Education

Pressbooks is in an ideal position to greatly affect how the OER movement is formed and changes. Counting hosted networks alone, PressbooksEDU is available to more than 100 institutions in North America and Australia through local networks or through consortia. With no tracking mechanism for open source network downloads, it's difficult to estimate exactly how many schools are using Pressbooks, though numbers are likely in the hundreds. With major organizations like eCampusOntario, the Open Textbook Network, SUNY, Lumen Learning, and BCcampus actively using Pressbooks to create and adapt OER, the platform is reaching a level of visibility that being noticed by the OER community. Pressbooks is now in a position to learn from the institutions which it hosts and create a platform that is tailored to the needs of educational publishers. By engaging actively with the OER community, knowing its needs, and sharing its values, Pressbooks can then inform the ecosystem itself by how it offers its services. Pressbooks seeks to establish a reliable and replicable process for post-secondary institutions; one intention of this study is to help identify how Pressbooks can be informed by the current workflows of OER publishing programs currently in operation.

II. PRESSBOOKS' MODEL OER PRODUCTION PROGRAMS

This study focuses on a small set of diverse institutions across the US and Canada. The goal was to involve schools which were smaller and larger, American and Canadian, well-funded and less well-funded. The OER programs themselves span a range of ages and stages of establishment or recognition. The recognition of the structure and workflows of these individual institutions' OER publishing programs can help clarify the process for future OER programs across North America. Included in this report are the following institutions and programs: SUNY OER Services, eCampusOntario, the University of Washington, and the University of Texas at Arlington.

3. SUNY OER Services

SUNY is a consortium of all 64 state universities New York. SUNY OER Services provides resources and offers their publishing services to any university in this collective. The following case study can be seen as representative of a large, currently well-funded OER program with state-wide reach and high community recognition.

Structure

SUNY OER Services supports all open textbook initiatives at all institutions within the State University of New York (SUNY) system, which includes "research universities, academic medical centers, liberal arts colleges, community colleges, colleges of technology, and an online learning network. [SUNY serves] nearly 1.3 million students." The SUNY consortium funds innovative projects being done in New York's state universities through the SUNY Innovative Instruction Technology Grants program; this is how SUNY OER Services came to be. SUNY Geneseo received a grant from the consortium, allowing them to begin creating OER and start building the capacity for a program. The SUNY OER Services team consists of four members: Alexis Clifton, Open Educational Resources Executive director; Allison Brown, Digital Publishing Services Manager; Laura Murray, OER Coordinator; and Leah Root, Publishing and Web Services Developer. Over the course of six years, the program has published 21 open textbooks.

Publishing is just one part of SUNY OER Services' mission. The primary goal of the program is to orchestrate and facilitate OER programs for the individual institutions within the system. SUNY OER Services provides consultation, as well as access to tools like Pressbooks, and mechanisms for distribution. However, the program also produces and publishes new OER, and adaptations.

^{1.} SUNY. "The Nation's Largest Comprehensive System of Higher Education." Binghamton University - SUNY. Accessed October 01, 2018. https://www.suny.edu/about/

^{2. &}quot;Open SUNY Textbooks." Open SUNY Textbooks OER Services. Accessed October 01, 2018. https://textbooks.opensuny.org/about/.

In the beginning, their methodology in many ways emulated that of a traditional publisher: composition, editorial, peer review, layout, et cetera. Now, with a few years of experience under their belt, they offer a more tailored process for each project. According to Brown, "Half the projects we work with are people that already have material. We say, okay, do you want a peer review? Some of them don't, some of them do." Likewise, many authors may come in with a completed book, or even a book that was previously published that the authors want to get their rights back for. The program facilitates these processes as well.

Funding

Since the beginning of 2017, SUNY OER Services has been funded by a portion of the 4 million dollars given to the SUNY system for open educational resources. The funding is a part of the Excelsior Scholarship program, an initiative led by New York state governor Andrew Cuomo, which mandates that all state-funded colleges and universities in New York would be tuition-free for residents of New York. In addition to funding for this particular program, support from the state has been helpful in getting faculty in New York to agree to author open textbooks. As Clifton states, "[The funding has] really shaped our interaction with the campuses. Every campus has a big financial incentive to work with us right now, because they need advice for how to spend their money, essentially." This funding was valid for the 2017-18 school year, and was renewed for the 2018-19 school year.

The program is currently looking into alternative revenue streams so that dependence on state funding isn't necessary and the program can sustain itself in the long-term. In the past, they've considered a membership model, and also thought about implementing a course fee of between \$10 and \$20 to be added to each student's tuition cost for classes that are taught with open textbooks. There are plans to make the office a shared service, perhaps by

^{3.} Brown, Allison and Alexis Clifton. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 20, 2018

^{4.} Jesse McKinley, "Cuomo Proposes Free Tuition at New York State Colleges for Eligible Students," The New York Times, December 22, 2017, accessed October 01, 2018, https://www.nytimes.com/2017/01/03/nyregion/free-tuition-new-york-colleges-plan.html.

^{5.} Brown, Allison and Alexis Clifton. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 20, 2018.

asking campuses to buy in to gain access to the consultation and resources that SUNY OER Services offers. This cost could come through each institution's library budget or through other funding lines. As of the 2018-19 academic year, these plans are on hold as the program offers what they can with the state funding they've been alloted. The six people on staff for the program are, however, still being paid by SUNY Geneseo.

Administration

The central OER program is hosted through the library at SUNY Geneseo, but often the institutions within the SUNY consortium run their own local OER programs through their library as well. In order for SUNY OER Services to come to fruition, libraries within the state banded together. While the central office is run through the SUNY Geneseo library, the program works with other SUNY libraries to pool money together to effectively publish books through the initiative. Clifton and Brown estimate that around 75 percent of the OER programs in connection with SUNY are driven by libraries. As Brown puts it, libraries are well respected and tend to work very closely with faculty. A key part of the mission of a library is also to make learning materials accessible to students. We felt that coming from a public institution, that the material that we create should be publicly available because it's publicly funded," says Brown.

The program quickly grew into a recognizable, respected brand. Brown explains that the process they established when the program first started in order to gain credibility with authors and instructors was fairly traditional: "We [did] a traditional peer review, this can be listed as a peer reviewed publication on a tenure packet." This was important for author-instructors who may otherwise have not been able to contribute to an open textbook if it didn't count for their job. The end result was a high quality product that helped solidify SUNY OER as a legitimate and respectable publisher. As the program progressed, SUNY shifted to offering more flexible, nontraditional workflows for OER production. Overall, the program prefers to focus on enabling accessibility,

^{6.} Ibid.

^{7.} Ibid.

^{8.} Ibid.

and then tailor the services they offer in order to make that accessibility attainable.

Community Relations

SUNY OER Services has built a relationship with the SUNY Press; they don't work closely, but can rely on one another for consultation and collaboration when the situation calls for it. A recent publication called for coordination on printing; SUNY OER Services worked with the SUNY Press to identify a printer, and has in the past sought guidance on other issues involving printing and distribution. SUNY Press has also helped train the SUNY OER Services in some aspects of the process.⁹

The program also builds relationships with faculty throughout the SUNY system, encouraging anyone interested in OER to ask questions. The team has maintained close relationships with some of their regularly active OER authors. As the question around funding resolves itself in the future, the program will be learning of the challenges of getting faculty to commit to writing OER without the major financial incentive currently offered. "[We want to] try and get faculty to work together and write things that need to be written rather than having the faculty member explicitly coming to us saying I want to write this or I have already written this," Brown says. "We haven't started that. But we have a good solid community who understands what OER is and what the impact could be." As Clifton puts it, faculty are great writers but terrible project managers; the infrastructure is a critical part of the OER process, and SUNY is better positioned because they can bring into the workflow a certain amount of experience that isn't yet possible at individual institutions.

The Role of Pressbooks at SUNY

SUNY OER Services first began using their open source Pressbooks instance in 2016. In the first years of the program, they used Open Monograph Press.

9. Ibid.

10. Ibid.

The transition to Pressbooks took time, says Brown. Pressbooks came into the open education scene at an integral time in the life of the program, as SUNY OER Services was looking to expand their resources to offer the affordance of a web-based textbook. "I spent a lot of time in 2013 and 2014 when we were just getting started, researching and trying to figure this out - make sense of how we could do this efficiently and have all the formats that we needed. It's like, 'Oh, here's this free thing that does all those things for us," says Brown. For some projects, SUNY OER Services now works with Lumen Learning, a courseware company that has built extra infrastructure into their own open source Pressbooks network. The fact that other big names in the OER community were using the Pressbooks platform became another large motivator for SUNY to opt for Pressbooks. In addition, they are able to support adaptable, editable texts, helped along by the cloning tool. Pressbooks addresses SUNY OER Service's barriers to success by offering a platform that has a heightened level of interactivity and low learning curve for faculty instruction, enabling the program to draw in faculty authors more easily.

Barriers to Success

SUNY OER Services faces various barriers to success, including funding, administrative buy-in, printing costs, and individual university culture.

One large barrier to success for SUNY OER Services is funding. As mentioned previously, SUNY OER Services currently has a well-funded program. However, they don't have full autonomy over how that money can be used or distributed. It's taken time to build up sufficient infrastructure to ease that process in the future. According to Brown, "[R]ight now we can't just pay peer reviewers. We can walk our campuses through how they can do that, but we haven't even tried again because of how hard it was the first time."

Another barrier is administrative buy-in within the SUNY system. Clifton and Brown have observed attitudes from administration that an OER project shouldn't be invested in if an open textbook already exists in the field. Clifton

^{11.} Ibid.

^{12.} Ibid.

^{13.} Ibid.

states, "[It's] frustrating, because there are many different ways to approach a single subject." Some also believe that the textbook is dead, and that all future investments should be in interactive, personalized learning materials. The program's perspective is that investing in creation is just as important as investing in adoption, because in three years the people who have adopted the older materials are going to be looking for newer ones or updated ones.

Clifton also says it has been a fight to get the print piece of the program up and running. Print can be an effective tool for enticing faculty authors into opting for open textbook creation over the traditional publication process. Faculty will in some cases refuse to work on an open textbook until there's a print version that they can see or review. In addition, it's important that students who don't have electronic access have access to print copies of textbooks. This is especially true for rural schools in the state. "Not everyone has a smartphone, or even internet access at home," Brown says. "Moving to print-on-demand was really crucial."

SUNY OER Services has also found that local culture can affect how OER functions and how it is accepted on a campus. Brown states that community colleges tend to adopt textbooks more often because of their focus on student learning, access and affordability. Research campuses and four-year universities, alternatively, tend to focus on publishing. In some cases, however, they've found that four-year campuses won't see affordability as a part of their mission. Single individuals can also have a large effect on an institution's stance on OER. As Clifton states, "While there are broad trends, a very small community college in our system basically had one person that managed to flip the whole school OER [program] in two years."

Association with a Consortium

Each of the 64 institutions in the SUNY system are eligible to work with SUNY OER Services. Though some programs do function as an independent unit, like Tompkins Cortland Community College, most tend to work with the central

^{14.} Ibid.

^{15.} Ibid.

^{16.} Ibid.

^{17.} Ibid.

SUNY program. The independent model is, however, what the program seeks to encourage over time. "Our whole model is working with the campus mentors and faculty mentors so they can create a program on their own campus. We really try to support them in a way that makes sense for their campus." Some schools have installed their own Pressbooks instances to facilitate this work as well. They tend to see independent Pressbooks networks more often among universities than community colleges, who are more likely to benefit from a consortial effort. They propose that it's more difficult to build and maintain a structure for OER production and publication at the community college level.

4. eCampusOntario: Seneca College, University of Guelph, and Ryerson University

eCampusOntario is an educational not-for-profit corporation that supports all public institutions in the province of Ontario. They specialize specifically in learning technologies and finding digital solutions to common problems in higher education. The following case studies can be seen as representative of the experiences an OER program may have when working with a not-for-profit consortium to create OER. In addition, these case studies can be representative of Canadian institutions of various sizes, types, and modes of administration.

Structure

eCampusOntario is "a not-for-profit corporation [...] funded by the Government of Ontario to be a centre of excellence in online and technology-enabled learning for all publicly-funded colleges and universities in Ontario." One such technology that the eCampusOntario corporation provides for its schools is access to a hosted Pressbooks network for open textbook production. The reach of eCampusOntario covers 21 Ontario universities and 24 colleges to total 45 institutions with Pressbooks access in all. Among these are Seneca College, University of Guelph, and Ryerson University.

Funding

Seneca College has begun to invest resources into an open educational resources program, but the program itself is in its beginning stages. Funding authors for open educational resources is a challenge that the school faces:

^{1. &}quot;About." ECampusOntario. Accessed October 01, 2018. https://www.ecampusontario.ca/about/.

"Seventy percent of our faculty are either part-time or partial load – they're not full-time faculty," Peters states. Full-time faculty qualify for course releases, and part-time faculty do not, which adds an extra layer to the difficulty of finding willing authors on campus.

The University of Guelph OER program has funded two projects so far. The program paid \$8,000, which was the cost of a course release, to have a faculty member create one of these projects. Another project had funding from three different sources on campus. Verluis finds that funding efforts for the program can be a challenge because of changes in the government of Ontario; in the wake of a more conservative provincial government, Guelph sees finding a sustainable funding structure for their OER production program as a time-sensitive goal.

Ryerson has received grants through eCampusOntario in order to actualize projects, helping to establish credibility for the program as they push off the initiative. No centralized funding currently exists at Ryerson for OER, though individual departments may operate differently within the institution. The library also has a grant model coming into effect soon.⁴

Administration

The OER program at Seneca College has not yet produced an open text, though one faculty member is using the eCampusOntario Pressbooks network to adapt an already existing text. The Seneca OER Committee is a subcommittee of the Educational Technology Advisory Committee at Seneca College. Jennifer Peters, eLearning and Digital Literacies Librarian at Seneca, is a major part of the OER initiative on the campus and leads the OER subcommittee. Seneca has the benefit of a top-down OER initiative, according to Peters, with the push for open textbooks coming from the Academic VP of the college.⁵

The OER program at the University of Guelph itself is a consortium of three

^{2.} Peters, Jennifer. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 10, 2018.

^{3.} Versluis, Ali. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 21, 2018.

^{4.} Ludbrook, Ann and Sally Wilson. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 9, 2018.

^{5.} Peters, Jennifer. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 10, 2018.

Ontario institutions' libraries: the University of Guelph, the University of Waterloo, and Wilfrid Laurier University. This program just had their first major text adoption on campus as of September 2018. Ali Versluis, Open Education Resources Librarian at the university has been forefront in the open text initiatives on the campus. According to Versluis, a few faculty members have used Pressbooks independently: "But this is sort of the first project the library has been involved in. It's the first project in what will be an OER publishing program. So we're really figuring a lot of stuff out." In this preliminary stage, their workflow involved helping the authoring faculty member learn the Pressbooks interface and connecting them with other individuals and resources, including the eCampusOntario consortium, through which the university currently accesses Pressbooks.

Guelph has major plans for the future, however; the institution plans to establish and run their own local instance of Pressbooks in order to facilitate workflows that are currently difficult or impossible while working under the eCampusOntario umbrella, due to their restrictions on non-derivative creative commons licenses, and other issues. Versluis states, "I would really like us to have a local instance because it would heighten visibility, be easier for tracking for our purposes – knowing who is using this tool on campus, rather than having to pester the eCampusOntario people to find out. Also, it would give us the opportunity to host things that are licensed in a specific way." Versluis believes that the university will acquire their local Pressbooks network either sometime during the fall 2018 academic semester or by the end of the following year, but sees the network as an inevitability for the institution. Versluis also foresees the benefits of having a brandable, standalone network for Guelph in helping boost visibility on campus.

Copyright and Scholarly Engagement Librarian Ann Ludbrook, as well as Web Services Librarian Sally Wilson have been at the forefront of the OER efforts at Ryerson University. Ryerson's OER program isn't entirely run through the library, but rather is a decentralized system that connects the library, the Office of eLearning, and the Learning and Teaching Office, though much of the program's Pressbooks-centric work is done in the library. The program will sort

^{6.} Versluis, Ali. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 21, 2018. 7. Ibid.

OER projects into different platforms, like Pressbooks, according to need. They also work on campus outreach.⁸

Community Relations

In the OER program's nascent stage at Seneca College, an OER committee serves as a central resource point for faculty who are interested in authoring an open textbook. Authors talk to liaison librarians, who then become consultants for OER. Peters states, "If the faculty is really interested in adapting something they actually want to either customize a text or change examples, or add something to it, that's when they can speak to the OER committee. They can talk about potential platforms." Currently, only a few individuals have been interested in that level of consultation, and only one project has gone forward. In the program's current iteration, more of a focus is placed on reuse than creation and adaptation. Liaison librarians are not expected to participate in the publishing aspects of the workflow. In the program's nascent stage, the committee serves as a central resource point for faculty who are interested in authoring an open textbook. Authors talk to liaison librarians, who then become consultants for OER. Peters states, "If the faculty is really interested in adapting something – they actually want to either customize a text or change examples, or add something to it, that's when they can speak to the OER committee. They can talk about potential platforms." Currently, only a few individuals have been interested in that level of consultation, and only one project has gone forward. In the program's current iteration, more of a focus is placed on reuse than creation and adaptation. Liaison librarians are not expected to participate in the publishing aspects of the workflow.

The library at University of Guelph is in an ideal position to assist with the technological aspects of OER creation, like licensing and software. Versluis admits that currently the workflow is scattered as the library adjusts to the new program. They're also trying to figure out how to make the program sustainable in the long term, while building visibility and strengthening relationships with faculty who may be interested in developing open

^{8.} Ludbrook, Ann and Sally Wilson. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 9, 2018.

^{9.} Peters, Jennifer. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 10, 2018.

educational resources. Versluis summarizes the goal of the program: "Further down the line, I'd love to see it as more of an expertise and an advisory capacity. It would be great to have the program be the one-stop shop." The librarian would assist in outlining workflows, provide technical support, and help faculty authors figure out who they need to contact to move forward with their project.

Ryerson University's main role as publisher is to host Pressbooks for their faculty's OER. Ludbrook and Wilson state that "We host Pressbooks, so that's our primary publishing platform. Right now I think we have three books that we've published on that platform. And there are other ones that received grants from eCampusOntario, and once those books are completed they will also be published on that platform." Publication management has the potential to vary from case to case in the future, however. The Ryerson OER program currently only offers assistance for OER projects when they're approached by individuals on campus who are creating OER. Grants have become a major motivator on the campus for faculty to get involved in authoring open texts. The university also conducts workshops for faculty through the Ryerson Learning and Teaching Office, and other miscellaneous outreach efforts are conducted on a regular basis.

The Role of Pressbooks at eCampusOntario

Seneca College, the University of Guelph, and Ryerson University perceive their use of and intentions for Pressbooks in different ways.

Seneca's Pressbooks network isn't particularly active, with one author currently working on an adapted text. Peters feels that the network will in the future play a larger part in Seneca's OER production, though they are likely to cater their consultation to each faculty's skills and comfort with technology.¹²

The University of Guelph's opted for Pressbooks in part because they were interested in investing in a Canadian company for their OER creation tool.

^{10.} Versluis, Ali. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 21, 2018.

^{11.} Ludbrook, Ann and Sally Wilson. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 9, 2018.

^{12.} Peters, Jennifer. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 10, 2018.

"The nice thing about using Pressbooks as a tool is that it is Canadian. So, we're investing in Canadian infrastructure that's in our country already," states Versluis. She also acknowledges that Pressbooks has been responsive, and excels at adapting and changing to accommodate clients' requests. The University of Guelph also benefits from seeing that there are successful OER programs using Pressbooks to model themselves after, such as BCcampus.

Ryerson University finds that Pressbooks may not currently meet all of their needs when it comes to offering a platform for interactive, digital open textbooks. The Ryerson OER staff state, "[Users] don't want the traditional textbook – very flat, no interactivity. You can still add a little bit with H5P," Ludbrook states. H5P is a form of interactive content known as HTML5 Package, often used to integrate quizzes and other educational media in webbased texts. Currently, the program facilitates a more traditional approach to open resources through Pressbooks by replicating the format and function of a typical printed textbook. However, other methods may be used on the different platforms that Ryerson incorporates into their OER production program.

Barriers to Success

The three represented institutions associated with eCampusOntario experience various barriers to the success of their OER production programs. Lack of resources like time or money is just one reported impediment to the growth of a program. These schools also face challenges in finding texts to adopt, navigating intricate organization structures, and promoting open education as a viable alternative to commercial texts.

The largest barrier to success at Seneca College, according to Peters, is the ratio of part-time to full-time faculty eligible for OER course releases. Funding is a big part of this. Seneca College's OER program. The program isn't yet funded in a tangible way, aside from the librarians' employment through the institution. Currently, faculty interested in creating an open textbook have to approach their department chairperson and ask about potential course releases or other

^{13.} Versluis, Ali. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 21, 2018.

^{14.} Ludbrook, Ann and Sally Wilson. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 9, 2018.

funding streams. Possible funding may come from eCampusOntario as they put out calls for funded projects. In one case, Seneca had plans for an OER funded by eCampusOntario that fell through. "We were supposed to be doing an accounting OER last year, and then we had labor disputes, so we were on strike," Peters says. "I'm not sure what happened with the project, but I have not seen anything come through." Other calls from eCampusOntario have been too last-minute for Seneca College to apply.

Another big issue the college faces is a lack of existing resources out there that are applicable for college courses taught on the Seneca campus. Peters states, "A lot of the OERs are meant for university programs. They don't have that real practical, contextual type of stuff that we need at colleges." Colleges like Seneca also tend to have niche programs that are more difficult to find texts for. Finding a niche text that's openly licensed is even more difficult.

The University of Guelph's major obstacle to tackle in the coming years is sustainability. According to Versluis, "It's super time-intensive to do this work. Not only is it super focused on relationships, and raising awareness, and educating people on what OER is and why they should care about it, but if you have to do that – which is time-intensive enough – and also be the point person for helping people with adaptation and creation, both from the technical side of things and the copyright side of things, it takes up a huge portion of time."

The work also requires skills that aren't necessarily in the skill set of a librarian. OER librarians may have gaps in expertise when it comes to some facets of the process, such as pedagogy or educational design.

The program has also had to push back against institutional barriers. While most at the institution believe that OER is good, politics can affect choices surrounding the mechanisms for the program. Not all units on campus are positive or even neutral about OER; bookstores, for instance, are revenue-generating organizations, which means that freely accessible open textbooks can pose serious competition and negatively impact revenue from traditional textbook sales. While the OER program has the support of the provost and president of the university, that support doesn't completely mitigate the need to delicately navigate institutional politics, as administrators still seek to balance the needs of the entire campus. In addition, the university has faced

^{15.} Peters, Jennifer. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 10, 2018. 16. Ibid.

^{17.} Versluis, Ali. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 21, 2018.

administrative-level changes, as each of the three institutions within the consortium are fairly independent. While course buyouts may be more feasible for one university, it may be a challenge for another. Versluis states, "It makes things harder to organize across the institution because the actual admin people don't have a lot of power, because [individual] colleges have all the power." This complex organizational structure can complicate university-wide change. Versluis identifies institutional culture as a major barrier in this way.

The primary barrier to success for the open educational resources program on Ryerson University's campus is faculty buy-in. There are many causes for this; for one, open textbooks are not currently considered as part of Ryerson's tenure process. Another factor is part-time faculty's ineligibility for the sort of grants that the program can offer at this time. Ludbrook and Wilson have also found that more onboarding needs to be done in the future in order for faculty to truly understand what OER is, as many times they don't understand Creative Commons licenses: "Creative Commons CC BY licenses, which [are] what eCampusOntario has expected in their grants, [are] much more restrictive than what [faculty] could do in even a textbook that they could be doing for a commercial publisher." Ryerson intends to include more instruction on copyright information in their onboarding process for future faculty authors.

Association with a Consortium

The relationships that Seneca College, the University of Guelph, and Ryerson University have with the eCampusOntario educational consortium differ from case to case as each institution balances its need for a local network with its participation in the central eCampusOntario network and various resources that eCampusOntario offers.

Seneca College desires a few things from its partnership with eCampusOntario. Among these are: administration, trainings, and accessibility consultation. A disadvantage of the partnership with a provincially funded

^{18.} Ibid.

^{19.} Ludbrook, Ann and Sally Wilson. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 9, 2018.

program is that the funding is beholden to the changes in government. Peters acknowledges this, saying "We had a really good year under the liberals, funding through ecampus. Who knows what's going to happen now. Ford doesn't seem like he'll be supportive of OER. Most faculty and students agree it's the direction to go in, but resources are necessary." Though Seneca College has just acquired their own standalone Pressbooks network separate from eCampusOntario's central Pressbooks network, the program maintains a relationship with eCampusOntario's OER initiative. "For us, it's great to have a consortium to rely on."

The University of Guelph finds advantages in sourcing Pressbooks through the eCampusOntario consortium, but for them the advantages of running a local network outweigh the consortial benefits. Versluis attributes this mostly to differences in ideology, a lack of communication, and the inability to track certain data. "eCampusOntario is not great at pushing out information to its member institutions," Versluis states. "It's great that it's a consortial effort, but I think that it also makes it harder for the institutions that are just kind of spinning this up on their own, to figure out what's happening, because there's not a lot of communication happening."

Discoverability and advocacy are also big selling factors for independence. Versluis acknowledges that eCampusOntario's Pressbooks access can potentially offer more of a benefit for smaller schools, who unlike Guelph may not be able to build the infrastructure for a local network. Versluis states that the University of Guelph is sizable enough that they can run their own shop; other smaller institutions may benefit more from the eCampusOntario infrastructure in this respect.

Ryerson University's OER program sees benefit in eCampusOntario's network most especially when it comes to funding and distribution. According to Ludbrook and Wilson, "The funding structure is great. Ryerson helped build DSpace repository, so that is where everything is going to be stored. And then, eCampus does support through education and outreach." eCampusOntario is also in a good position to build on top of the work that was done at BCcampus. "We definitely are influenced by what's happening in BC, because it's more

^{20.} Peters, Jennifer. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 10, 2018. 21. Ibid.

^{22.} Versluis, Ali. Interview with Taylor McGrath. Personal interview. Montreal, QC, September 21, 2018.

vibrant. For sure, we've looked to the West." Ryerson has worked closely with the consortium when it's come to involvement with Pressbooks; however, Ryerson has their own local network, and will continue to opt for the local network regardless of eCampusOntario's offered access. They add that the choice to host one's own network may be dependent on a number of factors, including size, funding, and priorities.

^{23.} Ludbrook, Ann and Sally Wilson. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 9, 2018.

5. University of Washington

The University of Washington is a large state university with a student population of more than 46,000 as of the fall semester of 2017. The following case study can be seen as representative of a large state-funded institution in the very first stages of an OER program's development.

Structure

The University of Washington's (UW) OER publishing program is still in a nascent stage as of September 2018. The program was conceived of in 2015; an OER steering committee was formed on the UW campus, which conducted an environmental scan to collect information on what other universities were doing. Open Educational Librarian Lauren Ray has been spearheading the open education initiative at the University of Washington. A large focus of their program has to this point been advocacy and outreach. The University of Washington OER program has worked with the Open Textbook Network to raise awareness of open education amongst UW faculty. As the publishing program is just now starting out, many of the relationships with other departments and individuals on campus have yet to be cemented. The university press recently came under the purview of the library, which may offer opportunities for a symbiotic relationship in the future once the UW OER publishing program has become more established.

Funding

The library is funded through the state of Washington, as is the majority of the University of Washington; though there is a fee-based wing of the university, they're not likely to take on an OER production program. The program's first foray into publishing involved the library creating and funding a one-time

^{1. &}quot;Fast Facts: 2018," University of Washington Office of Planning & Budgeting, accessed Nov 14, 2018, http://opb.washington.edu/sites/default/files/opb/Data/2018_Fast_Facts.pdf

grant program. The grants were awarded to four faculty members at the University of Washington. Each faculty member is to create an open educational resource, and has the opportunity to use Pressbooks in order to do so. As of September 2018, these projects are still in preliminary stages.

Administration

The UW OER program's role has so far been to meet with faculty authors and learn their goals and needs. Ray has also been in contact with various people who may be able to offer support for the projects. However, much of the workflow is in development, and these four grant recipients are in many ways the pilot or experimental stage for the OER program. As Ray states, "We don't have a defined, you know, 'here, our service model is helping you with your workflow, or 'our service model is being your project manager.' Because we're a big university – this is half of my role. We haven't yet gotten to that point."

Ray attributes the decision to host the university's OER program in the library to the open education movement's alignment with the library's mission and core values. Ray states that, "Being the campus unit that addresses that access to information, equity is part of our mission and our strategic direction." In addition, the library works closely with the Learning Services unit of UW's Information Technology department, and has built that relationship with them as learning management systems have changed and instructors have begun to integrate technology into the classroom.

Community Relations

The relationship that the library has with other departments on campus is an advantage of their current structure, and helps to establish their credibility to faculty on campus as well. "I am in the process of building on a mailing list we have of faculty on campus who have expressed at some point an interest in open educational resources and open textbooks, and reaching out to them to find out how they want to be involved," says Ray. However, advocacy is a

^{2.} Ray, Lauren. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 12, 2018.

^{3.} Ibid.

large part of the charge than Ray hopes to lead: "Looking at ways that we can advocate for OER adoption is a big charge of my work and of our campus OER steering committee, which includes various units on campus." Before Ray came into her position, other OER advocates on campus were attending faculty senate meetings and working with student organizations to increase buy-in across public forums on the UW campus. These individuals also took part in events like Open Access week, and the library's scholarly communications outreach team played a part in the public efforts. Over the coming year, Ray hopes to work with the subject librarians for each individual department in order to raise awareness of OER.

The Role of Pressbooks at the University of Washington

The University of Washington acquired a Pressbooks network in 2018. They intend for the four recipients of UW's one-time grant program to use Pressbooks to create their open educational resources. The University of Washington currently has two network managers for their Pressbooks network, and is looking into bringing on a third from outside of the library. Pressbooks is the main tool that UW will be using to promote and centralize their OER production. Pressbooks aids in addressing the University of Washington's barriers to success by centralizing the institution's open textbook efforts. According to Ray:

I think it'll maybe help with kind of centering people who were already willing and interested in authoring OER around something that they can work with. Before Pressbooks, every faculty member who wanted to author an open educational resources had to work with their department or work on their own, or work with university IT to do that. I think it'll hopefully make it easier for those who like Pressbooks and want to use it.

^{4.} Ibid.

^{5.} Ibid.

^{6.} Ibid.

However, the two-year subscription model does produce some wariness from faculty, who are dubious about publishing content on a platform that two years from now the school may no longer support. If subscription to Pressbooks lapsed, the authors or book administrators would be required to migrate their books off of the network in order to maintain them, and faculty view this as a potential problem with the longevity of their Pressbooks-hosted texts.

Barriers to Success

The main barriers to success for the University of Washington OER program are time and money. As per prior explanation, the only production efforts on the campus at this time are being funded by a one-time grant offered by the institution's library. Ray is hopeful that successful adoption and use of these resources within the institution will help make the case for more funding in the future, though it's not yet certain where that funding will come from as the program works on scaling up to meet the needs of a large university. Though the state of Washington has offered funding for OER efforts, and there is a good attitude within the state toward open education in general, it's yet unknown how that funding will affect UW. Size can also be a challenge for the university: "We've got many departments and many faculty, and the [faculty-to-librarian] ratio is pretty big, so there's only so much that we can do," says Ray.⁸ It won't be possible on a campus as large as the University of Washington for the program to reach out individually to each faculty member or even department. To address this barrier, the library has worked on collecting data on the needs of the campus, and plans to use this data to address the most frequent and significant issues. The program also plans to do as much advocacy work as they can with faculty who have expressed interest in OER already.

One particular challenge the University of Washington library faces is how to staff a full OER program. According to Ray, "We're a really big university, and I think in terms of what support looks like, what building a program of support looks like, all of the [OER-related] units that I was talking about [...] there's never enough staff there to do everything that needs to be done." As the University

^{7.} Ibid.

^{8.} Ibid.

^{9.} Ibid.

of Washington OER program looks forward, Ray hopes to build a program that can grow to meet the needs of a campus with as many students and departments as her university has.

6. University of Texas at Arlington

The University of Texas at Arlington (UTA) is a large university of nearly 42,000 students. Their OER production program has already successfully produced a number of open resources. The following case study can be seen as representative of a more established OER program in a state with relatively healthy institutional support for the open education movement.

Structure

The OER program at University of Texas at Arlington was a result of a top-down decision to increase the scope of scholarship from UTA staff and students. The UTA scholarly communication department is far larger than normal for a university library, with near one-third of the library personnel working under that umbrella. The OER publishing program is a smaller subsect of the scholarly communications department, led by Director of Publishing Jody Bailey. Open Education Librarian Michelle Reed is in charge of UTA's OER publishing efforts, and facilitates production with faculty authors on campus.

Funding

The program is focused on both adaptation and creation. In the beginning of the program, interested authors were more excited about the prospect of creation. According to Reed, "We couldn't really get as much traction as we wanted to with [adaptation], particularly related to our grant program. We decided to really needed to focus on understanding what kind of infrastructure our faculty needed to support their creation – their desire to create." UTA

^{1. &}quot;Fast Facts," The University of Texas at Arlington, , accessed November 28, 2018, https://www.uta.edu/uta/about/fastfacts/.

^{2.} Reed, Michelle. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 26, 2018.

formed a grant program, funded by the library, called UTA CARES: University of Texas at Arlington Coalition for Affordable Resources in Education for Students. This grant program offers funding to authors who write or adapt a text for the classroom that is less costly than existing options. The program has developed to offer larger awards for faculty authors who choose to create new OER content. The library currently funds 100% of OER efforts through this program.

Administration

Reed's role primarily involves educating faculty who are interested in creating OER about facets of open textbooks including intellectual property rights, accessibility measures, and software. For example, onboarding training for a faculty member may involve being run through what types of different Creative Commons licenses exist, or how to use Pressbooks. The library itself serves more as a facilitator than as a publisher. However, as Reed states, open education was a natural fit with what libraries have always done. Their interdisciplinary nature within the context of a college or university helps facilitate a growing program as well."

Community Relations

The OER program has established credibility by forming relationships with supportive UTA faculty. Reed mentions that one focus of the program is finding and connecting with early adopters on the UTA campus by identifying common motivators for engagement:⁴

Sometimes that's a message of empowerment of faculty. We have some faculty members who've really responded to that and want to take control of their course materials back – so this is really exciting work for them to do. In some cases it's the student success and affordability component.

In either case, the program works to support those people and their projects to

^{3.} Ibid.

^{4.} Ibid.

the best of their abilities. This method has resulted in strong examples that can be used to showcase the program's successes to the rest of the community. It also helps to establish a high level of credibility and give a sense of what the program's intentions and goals are in the long run. The program forms long-term relationships with faculty authors through the evolution of an OER project. UTA encourages that process, and enables creators to change and improve texts over time. "We see the creation of OER as being iterative by nature," says Reed. "We're not trying to create something perfect off the start. We're trying to do our best, and then continue to invest our time and our energy to make it better every year, or as necessary for the content."

Reed attributes some of the success of the program to support from the government of Texas. "We have had some successes that I don't know that we would have seen if we were in a state that hadn't taken a step toward OER at a state legislative level." In 2017, the government of Texas passed a bill for OER that required institutions to distinguish courses that used open educational resources in all academic schedules. Information about which courses were "OER courses" had to be made publicly available. The same bill also established a grant program for OER and called for a feasibility study into the concept of an institutional repository. Reed claims there's been a high level of interest in open educational resources within the UT system as well.

The Role of Pressbooks at the University of Texas – Arlington

Access to Pressbooks has allowed UTA to standardize their OER program. Prior to the acquisition of their Pressbooks-hosted network, the program was facilitating use of the Pressbooks "Sandbox" network through the Open Textbook Network. The Open Textbook Network (OTN) is an organization that "promotes access, affordability, and student success through the use of open textbooks"; Pressbooks has a partnership with OTN that entitles OTN members, like UTA, to test out Pressbooks on the "Sandbox" network, and also receive a discount on the annual cost of a Pressbooks network. Other OER

5. Ibid.

6. "Home," Open Textbook Network, accessed November 30, 2018, https://research.cehd.umn.edu/otn/.

efforts on the UTA campus were disparate – some faculty worked on Google, or Word, or even YouTube. Pressbooks has created a structured, central location for OER production. Reed states that "It's really allowed us to standardize our program in a very helpful way. It's kind of chaos when everyone's just off on their own doing whatever they want to do. It's impossible to support that kind of program in my opinion. Difficult, I should say – not impossible." Reed has also found that faculty may find the Pressbooks interface challenging when they first encounter it. To combat this, UTA's OER program offers onboarding training for faculty who intend to write OER on the platform. This is a required training for recipients of the library's grants.

Barriers to Success

One of the biggest barriers to success UTA faces for the sustainability of their program is time. According to Reed.⁸

That's usually what I'm asked about. If I'm talking to someone about OER, whether it's [adaptation] or creation, the first thing I hear about is time. And so, my response to that is 'Obviously, I can't help you with time. I don't have that capability – but I have money.' And money – usually that's good enough to end the conversation. But not always.

One solution that Reed has considered to address this problem are course releases. However, as the program is run through the library, they don't have the jurisdiction to offer course releases to interested authors. Faculty can in theory use their grant funding to acquire a course release, but currently there is no standardized approach, as administrators at the institution have to sign off on any course release decisions independent of the OER program. Reed has in the meantime advocated for a more streamlined approach to course releases.

Aside from considerations for faculty time, the program's success is also dependent on the time of its employees. Learning new infrastructure can be challenging and time consuming, and technology tends to be in constant development. Another pressing issue is the question of how to sustain the

^{7.} Reed, Michelle. Interview with Taylor McGrath. Personal interview. Montreal, QC. September 26, 2018. 8. Ibid.

program as it scales up. "We have five grantees this year, so it's next year we bump to ten," Reed says. With a program fully funded through the library, it's necessary to keep their mind on the future. Other concerns involve advocacy; it's never possible to connect with everyone, though UTA tries their best to reach as many as possible.

III. ANALYSIS OF COMMONALITIES

A few key areas emerge as convergences in the experiences of OER production programs across different sizes, regions, and networks. These overlapping experiences can shed light on what may eventually become industry standard processes and perspectives.

7. Structure

The Mission of the Library

Most, if not all, interviewees stated that the library was the natural selection as the home of a university's open educational resources program because of how closely the movement falls in line libraries' focus on education and public access to knowledge. Facilitating open access education and publication can in many ways be seen as an extension of what libraries have always done.

The Position of the Library

Institutions agree that the library is in an ideal position on campus to run an OER program because of its interdisciplinary nature. Libraries – especially at larger institutions, but even at smaller ones – have relationships with all departments on campus. Some have dedicated faculty for each department, who can serve as open education liaisons. Aside from the practical function that the library plays in connecting all academic fields, the library also holds significance as a traditionally well-respected, credible institution. This makes it easier to create connections with faculty, increase campus-wide advocacy and awareness, and garner interest from students and faculty alike.

Government Funding

Out of the six cases in this study, five explicitly described their program as being funded in part or in full by their state or province. Of particular note are the two consortium cases (eCampusOntario and SUNY). Both consortia are publicly funded and their services are currently available and open to all public colleges and universities in their respective regional boundaries. The structure of these programs provides its own set of challenges, and its own rewards. The University of Texas at Arlington also claimed that much of their success is due

to a major push for OER on the part of the Texas legislature. Legislators at the regional level can have a significant impact on the funding an OER program receives, and funding plays a large part in the success of a program; advocacy is important not only at the university level, but at the regional level as well. Building passionate communities of OER advocates has the potential to create real change.

Grant-Driven Projects

One of the largest costs to an open educational resource production program, outside of staffing the program itself, is likely the funding of individual projects through grants. Many programs will themselves facilitate a grant program, or otherwise participate in a larger consortium's grant program. Though each institution differs in the breadth, depth, and longevity of its grant program, the incentive has been found to be a successful method to get faculty interested in and involved with open educational resource projects.

Advocacy

Though each of the cases in this study were OER production programs, there's an element of advocacy included in the overall mission of each program. Many faculty don't know what open educational resources are, or have misconceptions about their creation and use. Many believe that OER aren't vetted rigorously enough to be used effectively in a classroom. Each program focuses some if not the majority of their effort on educating the faculty about what it means for a textbook to be open.

8. Barriers to Success

The Effects of Government Funding

Public funding and government support is beneficial for OER programs. However, this presents a problem for programs' solvency and sustainability. Because governments change over time, funding cannot be guaranteed even year to year. Even programs like SUNY that are currently well-funded by state grants are actively planning ahead for ways to create a sustainable business model and decrease their dependency on unreliable funding.

Incentivizing Authorship

While in most cases getting faculty to believe in and support the OER movement is just a matter of education and advocacy, getting faculty to create open educational resources is a more complex issue. Not all institutions have the infrastructure in place to give faculty enough incentive to take on a project. One such incentive is course releases. Institutions like UTA do not yet have clear processes in place to allow faculty to dedicate their time to OER production. At Seneca, only a small number of faculty can qualify. Another incentive is recognition of a publication for inclusion in review and tenure packets. Though the process may differ from program to program, open educational resources are not guaranteed to count toward a faculty author's tenure application. This can discourage faculty from wanting to sacrifice the substantial amount of time it takes to author a text.

A Search for Sustainability

Many of the OER efforts described in this study are nascent. In current stages, these schools' thoughts are first and foremost focused on building workflows that are financially sustainable and can be grown over time. In some cases,

this involves increasing advocacy and building relationships with faculty or other departments on campus. In other cases, the demand for OER may soon exceed what the program is capable of providing, and there's a need to either grow the program or establish what maximum capacity looks like. Institutions are experimenting with business models that they hope will allow them to build lasting OER programs that aren't dependent on unreliable third-party grants or government funding and will allow them to meet the needs for open resources at their institution.

9. Use of Pressbooks

Most institutions are in consensus that a major draw of Pressbooks is its ability to centralize OER production on their campus. The software enables the key components necessary for OER: ability to create openly licensed texts and make them publicly available, options for interactive media, and the ability to duplicate other openly licensed texts. Most programs agree that there's a learning curve that's necessary to address with the software, and many offer Pressbooks-focused training while onboarding new OER authors and adaptors.

IV. IMPEDIMENTS TO STANDARDIZATION

No two institutions face the exact same barriers when it comes to public awareness, funding, or size. The unique administrative and student environment of each institution plays a large part in the success of an OER program. However, it's possible to isolate some of the variances in the structure and experiences of these model OER programs and attribute them to specific causes. By recognizing these differences, institutions can acknowledge where and why it is necessary to structure an OER production program differently in order to meet their particular institution's needs.

10. Regional Differences

Though there are differences between the experience of a Canadian program and an American program when it comes to starting up and maintaining an OER program, much more can be seen in the differences from province to province and state to state. States and provinces with prominent legislative and executive support of open education will, of course, typically find it easier to start a program. This is thanks to both funding and a generally higher institutional opinion of OER and awareness of its existence. Programs in provinces and states that don't have this level of support often spend a larger portion of their time on advocacy than their counterparts, who may focus more on the production or adaptation of open educational resources.

SUNY and University of Texas at Arlington are both good examples of programs that have flourished in part due to their governing region's support of open education; both programs are in states which have in recent years seen major government-driven progress for open education. Both states have dedicated funding specifically to improving and accelerating the creation of open educational course materials and courses. In general, funding was less of a barrier to success for these two entities than others in the study. eCampusOntario institutions (including Ryerson University, Seneca College, and the University of Guelph) are in an interesting position of existing in a province which used to provide more funding for open education than they do now. With a recent change in government came a new funding structure and a change in how eCampusOntario issues calls for new projects.

Government commitment to open education also helps to establish top-down administrative investment at affected institutions. Reed from University of Texas at Arlington states that not only is the state of Texas committed to OER, but the University of Texas system itself has shown a marked dedication to open education. Other interviewees note that support from high-level administrators at their institution had a significant positive effect on the program's perceived credibility and general on-campus awareness of open education.

By recognizing how regional politics and attitudes affect open education, program leaders can effectively structure OER production programs in a way that addresses the correlating need for advocacy in their area. For instance, a

program in a state or province that does not yet promote open educational resources may dedicate more time and resources to advocacy and education than production for the first years of their program.

11. Consortium Affiliation or Independent Program

Regardless of whether an institution is affiliated with a consortium's open educational resources program more broadly or their Pressbooks network more specifically, any institution with the requisite resources seeks to establish their own independence. Of the three eCampusOntario schools interviewed for this study, two – Ryerson University and Seneca College – already have their own institutional Pressbooks networks. The third, the University of Guelph, intends to acquire theirs sometime in the next year. SUNY OER Services also makes it a part of their mission not only to facilitate OER production through their own platform and program but to assist in establishing local OER programs on the individual campuses under their purview.

The motivation to acquire local, independent networks can be attributed to many causes, but the answer may lie in an institution's ability to brand their own network for public use and track their own data. A local, independent network can be used to increase advocacy by serving as a public face of the OER program. Network managers at that institution also have the oversight of the entire network; they can monitor what books are being created and how users are registered. Independent networks can also integrate into an institution's learning management system. Consortia may also enforce different restrictions on what content is created on their network. However, consortium networks are still an effective and useful tool for institutions that may not otherwise be able to create OER.

The choice to build an OER program in association with a consortium comes down to the needs and resources available to an individual institution. There is a great amount of value to be gained in partnership with a consortium, particularly in enabling OER production and use at institutions that would not otherwise be able to support a program.

12. Institution Type

This study involved four universities, one college, and one consortium organization housed within a university. A general consensus among the interviewees is that smaller institutions, community colleges, and pre-baccalaureate schools are more likely to benefit from membership in a consortium than a larger institution will. They may not have the time, staff, and resources necessary to establish a local OER program, which is the case for some of the institutions underneath the SUNY umbrella. Otherwise, they may have an OER program but partner with the consortium for access to software like Pressbooks.

Institution type does not dictate how successful an OER production program may be. This factor, combined with others, can be used to shape the choices that a program makes; for instance, program leaders may choose to focus more on adaptation than creation, or partner with other organizations for projects.

13. The Effects of Time

More nascent efforts, like University of Washington and Seneca College, are still establishing a workflow. In these first steps of the program, advocacy and relationship building are more of a focus than OER production. Programs may have a handful of projects underway, but are conscientiously in pilot mode as they establish themselves in a new environment. Established programs like SUNY or University of Texas at Arlington tend to have higher rates of publication.

Age is relative, however. Open education is still across the board a new space for academia. The oldest of these programs is around six years old. As observable here, every single one of the programs interviewed is still in the process of establishing a method to sustain their program financially. Each program has yet to solidify their workflow, though some have successfully published a large number of open textbooks.

Younger programs can learn from the few that have been around the longest to learn from their successes as well as their failures. Communication between programs, in the form of conferences, research, and more, can foster a healthy and interdependent community of open educational resources and practices that can be shared, adapted, and shared again.

V. CONCLUSION

The cases studied here represent a fragment of a much larger community. As the OER movement gains momentum in the US and Canada, more and more libraries may see themselves becoming publishers. As impossible as it is to get a completely comprehensive set of data, the institutions represented in these interviews were Canadian and American, large and small, from historically conservative regions and historically liberal ones, and from different institutional types. These differences can provide a broad view of what each OER production program may have in common, and what could eventually become an industry standard. However, those differences can also highlight the barriers to standardization; how one program differs from another is as important as what they have in common.

This report serves as a contemporary record of the information available at the time, and is meant to provide a foundation for further study as the programs represented in the study improve and build on their current processes in order to adapt to the changing landscape of open education. Over time, it will become more clear which workflows are effective, and the open education movement will grow to fulfill a clearly recognized need in higher education.

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